Allen-Bradley

VersaView CE Terminals

6182H
(700H, 100H, 1250H, 1500H)

User Manual

Rockwell Automation

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. *Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls* (Publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.ab.com/manuals/gi) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

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Throughout this manual, when necessary we use notes to make you aware of safety considerations.

WARNING

Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.

IMPORTANT

Identifies information that is critical for successful application and understanding of the product.

ATTENTION

Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you:

- identify a hazard
- avoid a hazard
- recognize the consequence

SHOCK HAZARD

Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that dangerous voltage may be present.

BURN HAZARD

Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that surfaces may be dangerous temperatures.

Table of Contents

Objectives

This preface provides information on:

- Intended audience
- Parts list
- Contents of manual
- Additional Resources
- Software and firmware upgrades
- European Communities (EC) Directive Compliance

Intended Audience

Use this manual if you are responsible for installing, operating, or troubleshooting the VersaView CE terminals.

No special knowledge is required to understand this manual or operate the terminal. However, it is important that you understand the functions and operations of Machine Edition applications that will run on the terminal. Consult the application designer for this information.

Equipment installers must be familiar with standard panel installation techniques.

Parts List

The VersaView CE terminals ship with:

- Windows CE .NET operating system pre-installed with Terminal Services and Internet Explorer
- Accessory CD with utilities and software development kit for C++
- Power terminal block
- RSView Machine Edition Runtime (preloaded)
- Mounting clips (quantity 4 to 8)
- Microsoft Windows CE License Agreement
- Installation instructions
- Panel cutout template

Manual Contents

Chapter	Title	Description
1	Overview	Provides an overview of the terminals including features and product components.
2	Installation	Gives instructions on how to install the terminal in a panel or enclosure.
3	Connect Power	Describes how to connect power to the terminal, and reset the terminal.
4	Using RSView ME Station	Shows how to use RSView ME Station to load and run applications, and configure terminal settings.
5	Windows CE .NET Operating System	Covers general information on Windows CE .NET, its use with the terminal, and control panel applications for configuring the terminal.
6	Install and Replace Components	Shows how to install and replace components of the terminal. • Logic module • Communication module • Display module • RAM/Internal compact flash • Battery • Display module bezel • Backlight • AC power supply • Product label • Keypad legend inserts • External compact flash card
7	Terminal Connections	Describes connections on the base unit of the terminal and the communication modules.
8	Transfer Files	Shows how to transfer files, create an ActiveSync connection, and use the Firmware Upgrade Wizard to upgrade terminal firmware.
9	Troubleshooting	Provides assistance on isolating and correcting problems.

Additional Resources

For additional information, refer to these publications which you can download from:

http://www.rockwellautomation.com/literature

Publication	Publication Number
Software Development Kit for VersaView CE Terminals	6182H-UM002
ControlNet Communications for VersaView CE Terminals.	2711P-UM003
Creating Modbus Applications for VersaView CE Terminals	2711P-UM002
Wiring and Grounding Applications for PanelView Plus and VersaView CE terminals	2711P-TD001

You may also want to refer to:

- Online help for RSView Studio or RSLinx
- Documentation for your logic controller or processor

Software and Firmware Upgrades

To receive software updates (software serial number required) and firmware upgrades for your terminal:

- Call your local Rockwell Automation sales office or distributor
- Call Rockwell Software at 1-440-646-7800 or fax 1-440-646-7801
- access www.software.rockwell.com

European Communities (EC) Directive Compliance

If this product has the CE mark it is approved for installation within the European Union and EEA regions. It has been designed and tested to meet the following directives.

EMC Directive

This product is tested to meet the Council Directive 89/336/EC Electromagnetic Compatibility (EMC) by applying the following standards, in whole or in part, documented in a technical construction file:

- EN 50081-2 EMC - Generic Emission Standard, Part 2 - Industrial Environment
- EN 61000-6-2 EMC - Generic Immunity Standard, Part 2 - Industrial Environment

This product is intended for use in an industrial environment.

Low Voltage Directive

This product is tested to meet Council Directive 73/23/EEC Low Voltage, by applying the safety requirements of EN 61131-2 Programmable Controllers, Part 2 - Equipment Requirements and Tests. For specific information required by EN 61131-2, see the appropriate sections in this publication, as well as the Allen-Bradley publication Industrial Automation Wiring and Grounding Guidelines For Noise Immunity, publication 1770-4.1.

Open style devices must be provided with environmental and safety protection by proper mounting in enclosures designed for specific application conditions. See NEMA Standards publication 250 and IEC publication 529, as applicable, for explanations of the degrees of protection provided by different types of enclosure.

Overview

Chapter Objectives

This chapter gives an overview of the VersaView CE 700H, 1000H, 1250H, and 1500H devices including:

- Hardware features
- Software support
- Modular components
- Base configured unit
- Communication modules
- Remote AC power supply
- Display modules
- Catalog number configuration and product components

Hardware Features

The VersaView CE terminals are operating and display devices that run RSView Machine Edition in an open Windows CE.NET environment. Features include:

- Graphic color display modules with keypad, touch screen, or keypad & touch screen support
- 650 MHz Celeron processor
- Analog resistive touch screen
- Field replaceable bezels
- Modular communications for easy add-on capability
- Memory expansion modules for field upgrades to 256 MB RAM and 512 MB compact flash.
- Compact flash card slot supports Type I compact flash cards
- USB ports provides connections for keyboard/mouse/printer
- Ethernet and serial communications
- Same panel cutouts as the PanelView Standard and PanelView Enhanced terminals

Software Support

The open Windows CE.NET (4.1) environment of the VersaView CE terminals offer:

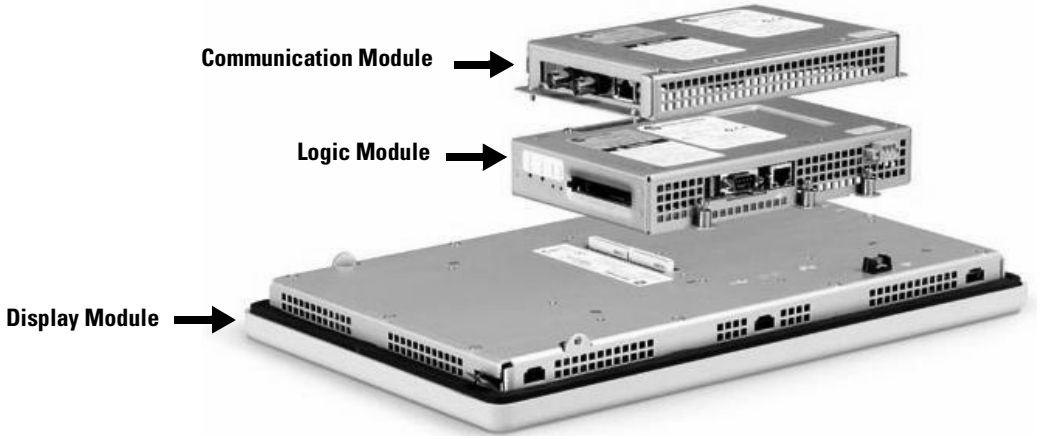
- Familiar Windows desktop and user interface
- Terminal Server Client support to configured servers
- Internet Explorer
- Software Development Kit to support custom C++ applications for Windows CE.NET
- Third party device support for Windows CE.NET
- Windows CE.NET contains the following programs:
  - File Viewers for MS Office: Excel, Word, PowerPoint
  - PDF File Viewer
  - WordPad Text Editor
  - WebServer
  - FTP Server
  - Support for the .NET Compact Framework

  Some of the above software applications are included on the VersaView CE Accessory CD.

RSView Machine Edition software is included with the VersaView CE terminal and does not require activation.

Modular Components

The terminals use modular components allowing for flexible configuration, installation, and upgrades. Items can be ordered as separate components or factory assembled per your configuration.



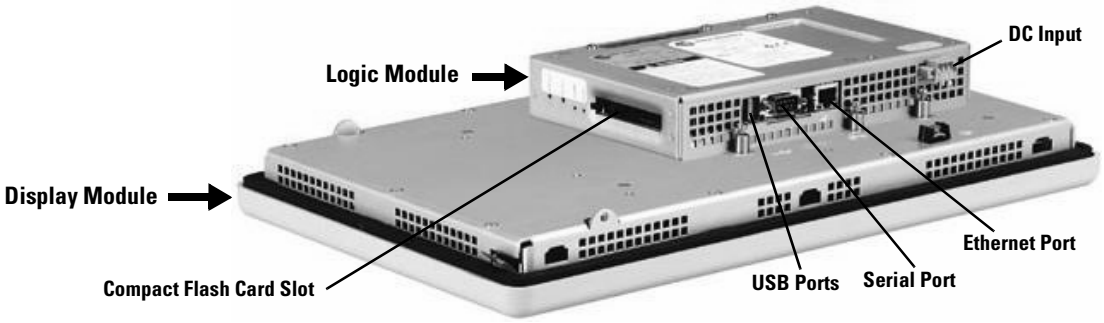
Base Configured Unit

The base configured unit of the terminal consists of:

- Display module (700H, 1000H, 1250H, 1500H) with keypad, touch or keypad & touch input
- Logic module

The logic module contains:

- 24V dc input (18 to 32V dc)
- SDRAM and flash memory (various sizes)
- Celeron 650 MHz processor
- 10/100BaseT Ethernet port
- Serial RS-232 port for file transfers, printing and logic controller communications
- Two USB ports for attaching mouse, keyboard or printer
- Compact flash card slot for Type I compact flash cards
- Battery-backed real-time clock

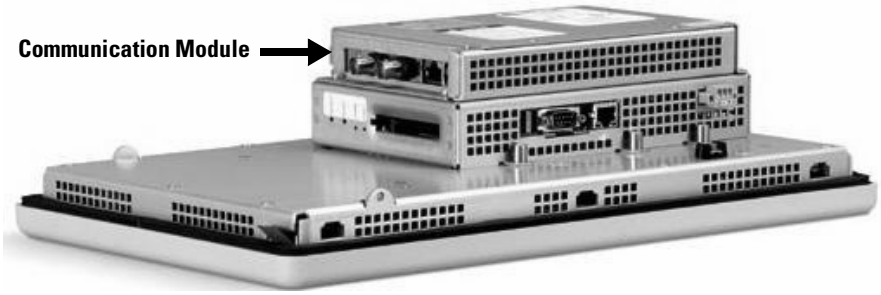


Communication Modules

You can attach a communication module with a network interface to the base configured unit of the terminal to increase your communications capability.

- DH+/DH485/Remote I/O
- DeviceNet
- ControlNet

The communication module installs easily on top of the logic module on the back of the unit.



Remote AC Power Supply

The logic module provides DC power input. For applications using AC power, a remote AC to DC power supply is available for DIN Rail mounting.

Display Modules

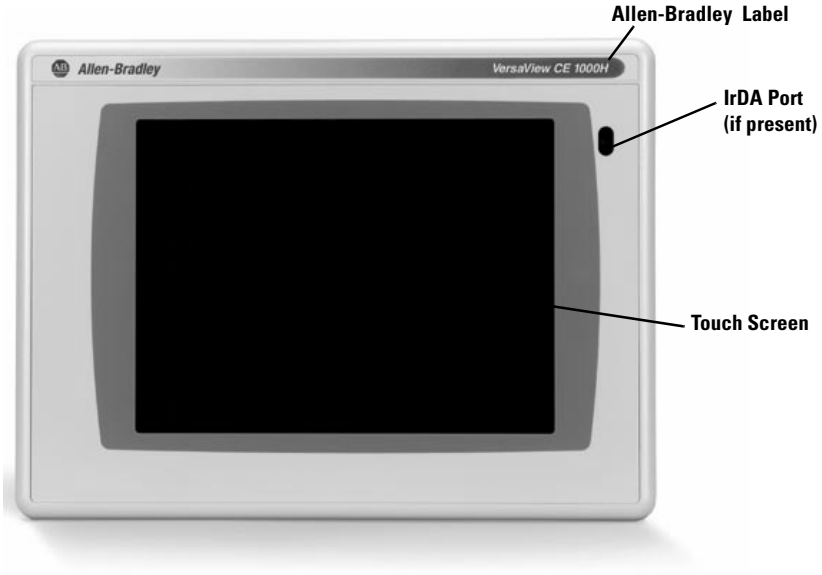
The terminals offer a range of TFT color graphic displays with either keypad, touch screen, or keypad & touch support.

- 700H (6.5 inch)
- 1000H (10.4 inch)
- 1250H (12.1 inch)
- 1250H High-Bright Touch (12.1 inch)
- 1500H (15 inch)

All displays have common features and firmware providing for easy migration to a larger display. Field replaceable bezels are also available.

Touch Screen

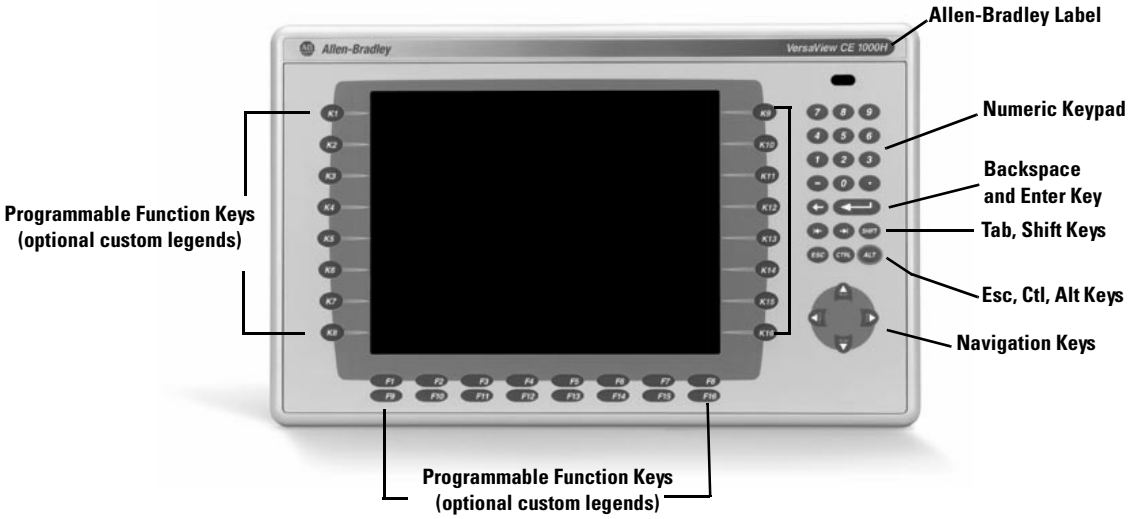
The illustration shows a 1000H touch screen display. All touch screen displays are analog resistive and similar except for size.



IMPORTANT Use a plastic stylus device with a minimum tip radius of 1 mm (0.040 in) to prevent damage to the touch screen.

Keypad or Keypad & Touch Screen

The illustration shows the features of the 1000H keypad or keypad & touch display. All displays are similar except for size and the number of function keys available.



The Kxx and Fxx function keys on the keypad terminals are programmable. Appendix B provides a list of the Windows virtual key codes for each key.

Feature	Description
Function Keys 700H (F1-F10, K1-K12) 1000H (F1-F16, K1-K16) 1250H (F1-F20, K1-K20) 1500H (F1-F20, K1-K20)	Programmable keys that initiate functions on terminal display. Replaceable legends are available for the terminals allowing for custom function key labels.
Label	Allen-Bradley or customer applied label.
Numeric Keypad	0-9, ., -, Backspace, Enter, Tab, Shift, Esc, Ctrl, Alt keys
Navigation Keys	Use the arrow keys to move cursor in lists, select objects, Alt+arrow key activates home, end, page up, page down functions.

Catalog Number Configuration

The table lists the catalog number configuration for the terminals.

	Size	Input	Flash/ RAM	Comms	Power
6182H-	**7** = 6.5 inch	**K** = Keypad	**RH** = 128 MB/128 MB	**4** = Standard Communication (Ethernet & RS-232)	**B** = AC DIN
	10 = 10.4 inch	**T** = Touch	**EH** = 256 MB/256 MB	**6** = DH+, DH-485, RIO & Standard Communication	**D** = DC
	12 = 12.1 inch	**B** = Both		**10** = DeviceNet & Standard Communication	
	15 = 15 inch			**15** = ControlNet & Standard Communication	

Product Components

Components are available as separate catalog numbers for field installation and replacement.

Display Modules

Cat. No.	VersaView CE Display Type
6189-RDK7C	700H Keypad Color Display
6189-RDT7C	700H Touch Color Display
6189-RDB7C	700H Keypad and Touch Color Display
6189-RDK10C	1000H Keypad Color Display
6189-RDT10C	1000H Touch Color Display
6189-RDB10C	1000H Keypad and Touch Color Display
6189-RDK12C	1250H Keypad Color Display
6189-RDT12C	1250H Touch Color Display
6189-RDT12H	1250H Touch and High-Bright Touch Color Display
6189-RDB12C	1250H Keypad and Touch Color Display
6189-RDK15C	1500H Keypad Color Display
6189-RDT15C	1500H Touch Color Display
6189-RDB15C	1500H Keypad and Touch Color Display

Communication Modules

Cat. No.	Description
2711P-RN6	DH+/DH-485/Remote I/O Communication Module
2711P-RN10H	DeviceNet Communication Module
2711P-RN15S	ControlNet Communication Module

Remote AC Power Supply

Cat. No.	Description
2711P-RSACDIN	AC to DC DIN Rail Power Supply, 85…265V ac, 47…63 Hz

Logic Module

Cat. No.	Description
6189-RP	Logic Module without Flash/RAM Memory
6189-RPRH	Logic Module with 128 MB Flash/128 MB RAM
6189-RPEH	Logic Module with 256 MB Flash/256 MB RAM

Internal Compact Flash Cards

Cat. No.	Description
6189-RW2	128 MB Compact Flash with RSView Machine Edition
6189-RW3	256 MB Compact Flash with RSView Machine Edition
6189-RW4	512 MB Compact Flash with RSView Machine Edition

RAM Memory

Cat. No.	Description
2711P-RR64	64 MB SODIMM Memory
2711P-RR128	128 MB SODIMM Memory
2711P-RR256	256 MB SODIMM Memory

Compact Flash Cards (Blank)

Cat. No.	Description
2711P-RC2	128 MB Blank Compact Flash Card
2711P-RC3	256 MB Blank Compact Flash Card
2711P-RC4	512 MB Blank Compact Flash Card
2711P-RCH	Compact Flash to PCMCIA Adapter

Legend Kits

Cat. No.	Description
2711P-RFK7	Replacement Legend Strips for 700H Keypad Terminal
2711P-RFK10	Replacement Legend Strips for 1000H Keypad Terminal
2711P-RFK12	Replacement Legend Strips for 1250H Keypad Terminal
2711P-RFK15	Replacement Legend Strips for 1500H Keypad Terminal

Protective Antiglare Overlays

Cat. No. (1)	Description
2711P-RGK7	Antiglare Overlay for 700H Keypad or Keypad/Touch Terminal
2711P-RGT7	Antiglare Overlay for 700H Touch Terminal
2711P-RGK10	Antiglare Overlay for 1000H Keypad or Keypad/Touch Terminal
2711P-RGT10	Antiglare Overlay for 1000H Touch Terminal
2711P-RGK12	Antiglare Overlay for 1250H Keypad or Keypad/Touch Terminal
2711P-RGT12	Antiglare Overlay for 1250H Touch and 1250H High-Bright Touch Terminal
2711P-RGK15	Antiglare Overlay for 1500H Keypad or Keypad/Touch Terminal
2711P-RGT15	Antiglare Overlay for 1500H Touch Terminal

(1) All catalog numbers ship with a quantity of three overlays.

Replacement Bezels

Cat. No.	Description
2711P-RBK7	Replacement Bezel for 700H Keypad Terminal
2711P-RTK7	Replacement Bezel for 700H Touch Terminal
2711P-RBB7	Replacement Bezel for 700H Keypad or Keypad/Touch Terminal
2711P-RBK10	Replacement Bezel for 1000H Keypad Terminal
2711P-RTK10	Replacement Bezel for 1000H Touch Terminal
2711P-RBB10	Replacement Bezel for 1000H Keypad or Keypad/Touch Terminal
2711P-RBK12	Replacement Bezel for 1250H Keypad Terminal
2711P-RTK12	Replacement Bezel for 1250H Touch Terminal
2711P-RBB12	Replacement Bezel for 1250H Keypad or Keypad/Touch Terminal
2711P-RBK15	Replacement Bezel for 1500H Keypad Terminal
2711P-RTK15	Replacement Bezel for 1500H Touch Terminal
2711P-RBB15	Replacement Bezel for 1500H Keypad or Keypad/Touch Terminal

Backlights

Cat. No.	Description
2711P-RL7C	Replacement Color Backlight for 700H Displays
2711P-RL10C	Replacement Color Backlight for 1000H Displays
2711P-RL12C	Replacement Color Backlight for 1250H Series A and B Displays
2711P-RL12C2	Replacement Color Backlight for 1250H Series C Displays
2711P-RL15C	Replacement Color Backlight for 1500H Series B Displays

Miscellaneous

Cat. No.	Description
2711P-RVT12	Solar Visor for Outdoor High-Bright 1250H Touch Screen Display Modules
2711P-RY2032	Replacement Battery
2711P-RTMC	Mounting Clips
6189-2CONN	DC, AC and 6182 Relay Connectors

Adapter Plates

Cat. No.	Description
2711P-RAK7	Adapts a VersaView CE 700H Keypad Terminal to a PanelView Standard 900 Keypad Cutout
2711P-RAT7	Adapts a VersaView CE 700H Touch Terminal to a PanelView Standard 900 Touch Cutout
2711P-RAK10	Adapts a VersaView CE 1000H Keypad Terminal to a PanelView 1000/1000E Keypad Cutout
2711P-RAT10	Adapts a VersaView CE 1000H Touch Terminal to a PanelView 1000/1000E Touch Cutout
2711P-RAK12E	Adapts a VersaView CE 1250H (or PV1000/1000E) Keypad Terminal to a PanelView 1200/1400E Keypad Cutout
2711P-RAT12E2	Adapts a VersaView CE 1250H (or PV1000/1000E) Touch Terminal to a PanelView 1200E Touch Cutout
2711P-RAT12E	Adapts a VersaView CE 1250H (or PV1000/1000E) Touch Terminal to a PanelView 1400E Touch Cutout
2711P-RAK12S	Adapts a VersaView CE 1250H (or PV1000/1000E) Keypad Terminal to a PanelView Standard 1400 Keypad Cutout
2711P-RAT12S	Adapts a VersaView CE 1250H (or PV1000/1000E) Touch Terminal to a PanelView Standard 1400 Touch Cutout
2711P-RAK15	Adapts VersaView CE 1500H Keypad or Keypad & Touch Terminal to a PanelView 1200E/1400E Keypad Terminal
2711P-RAT15	Adapts a VersaView CE 1500H Touch Terminal to a PanelView 1400E Touch Cutout

Cables

Cat. No.	Description
2711P-CBL-EX04	Ethernet CAT5 Crossover Cable, Industrial Grade, 4.3 m (14 ft)
2711-NC13	RS-232 Operating Cable (9-pin D-Shell to 9-pin D-Shell), 5 m (16.4 ft)
2711-NC14	RS-232 Operating/Programming Cable (9-pin D-Shell to 9-pin D-Shell), 10 m (32.7 ft)
2711-NC21	RS-232 Operating Cable (9-pin D-Shell to 8-pin Mini DIN), 5 m (16.4 ft)
2711-NC22	RS-232 Operating Cable (9-pin D-Shell to 8-pin Mini DIN), 10 m (32.7 ft)
1761-CBL-AS03	DH-485 Operating Cable, 3 m (10 ft)
1761-CBL-AS09	DH-485 Operating Cable, 9 m (30 ft)

Communication Adapters

Cat. No.	Description
2711P-CBL-UP02	USB to PS/2 Adapter
1761-NET-AIC	AIC+ Advanced Interface Converter
1747-AIC	Isolated Link Coupler with DH-485 Communication Module (2711P-RN6)

Firmware Upgrade Kits

Cat. No.	Description
6189-RU310	VersaView CE Media Kit includes Firmware Upgrade Wizard, 1 Firmware License, Certificate of Authenticity, End User License Agreement.
6189-RUA310	VersaView CE Advanced Media Kit includes the 6189-RU310 Media Kit, PCMCIA to Compact Flash Adapter, and 32 MB Compact Flash Card.
6189-RUL01	Firmware Upgrade License Kit with (1) VersaView CE Firmware License. (1)
6189-RUL05	Firmware Upgrade License Kit with (5) VersaView CE Firmware Licenses. (1)
6189-RUL10	Firmware Upgrade License Kit with (10) VersaView CE Firmware Licenses.(1)
6189-RUL25	Firmware Upgrade License Kit with (25) VersaView CE Firmware Licenses. (1)
6189-RUL50	Firmware Upgrade License Kit with (50) VersaView CE Firmware Licenses. (1)

(1) Also includes Certificate of Authenticity, End User License Agreement, Installation Instructions.

Installation

Chapter Objectives

This chapter provides instructions on how to install the terminals. It provides information on:

- Hazardous locations
- Environment
- Enclosures
- Outdoor installation (1250H High-Bright Display only, cat. no. 6189-RDT12H)
- Required tools
- Clearances
- Panel cutout dimensions
- Panel installation
- Product dimensions

Hazardous Locations

This equipment is suitable for:

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2, Group IIC
- Class II, Division 2, Groups F, G
- Class III
- or ordinary (non-hazardous) locations

The following statement applies to use in hazardous locations.

WARNING

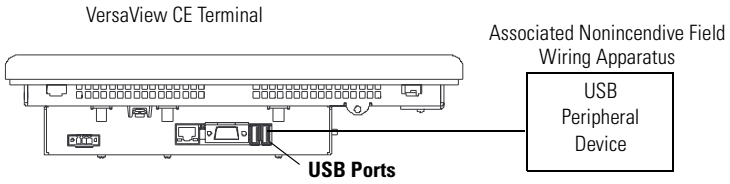
Explosion Hazard

- Substitution of components may impair suitability for hazardous locations.
- Do not disconnect equipment unless power has been switched off and area is known to be non-hazardous.
- Do not connect or disconnect components unless power has been switched off.
- All wiring must comply with N.E.C. articles 501, 502, 503, and/or C.E.C. section 18-1J2 as appropriate.
- Peripheral equipment must be suitable for the location it is used in.

The terminals have a temperature code of T4 when operating in a 55 °C (131 °F) maximum ambient temperature. Do not install the terminals in environments where atmospheric gases have ignition temperatures **less** than 135 °C (275 °F).

USB Ports

The terminals contain two Universal Serial Bus (USB) ports which comply with hazardous location environments. This section details the field wiring compliance requirements and is provided in accordance with the National Electrical Code, article 500.



The USB peripheral device must be rated for use in the hazardous location environment in which it is used and also comply with the circuit parameters in Table 2.2.

The circuit parameters in Table 2.1 define the maximum voltage and current of the USB ports on the terminal.

Table 2.1 VersaView CE USB Port Circuit Parameters

Parameter	Value	Parameter Definition
V_{oc}	5.25V dc	Open circuit voltage of the host USB port.
I_{sc}	1.68 A	Maximum output current of the host USB port.

The circuit parameters in Table 2.2 define the maximum voltage, current, capacitance, and inductance values for any peripheral device connected to a VersaView CE USB port in a hazardous location environment.

Table 2.2 Required Circuit Parameters for the USB Peripheral Device

Parameter	Value	Parameter Definition and Application Requirement
V_{max}	5.25V dc	Maximum applied voltage rating of the USB peripheral device. V_{max} shall be greater than or equal to V_{oc} in Table 2.1 ($V_{max} \geq V_{oc}$).
I_{max}	1.68 A	Maximum current to which the USB peripheral device can be subjected. I_{max} shall be greater than or equal to I_{sc} in Table 2.1 ($I_{max} \geq I_{sc}$).
C_a	10 µF	Maximum allowed capacitance of the USB peripheral device and its associated cable. The sum of C_{int} of the USB peripheral device and C_{cable} of the associated cable shall be less than or equal to C_a ($C_{int} + C_{cable} \leq C_a$).
L_a	15 µH	Maximum allowed inductance of the USB peripheral device and its associated cable. The sum of L_{int} of the USB peripheral device and L_{cable} of the associated cable shall be less than or equal to L_a ($L_{int} + L_{cable} \leq L_a$).

Application Information

Per the National Electrical Code, the circuit parameters of associated field wired apparatus for use in hazardous locations shall be coordinated with the host product such that their combination remains nonincendive. The VersaView CE device and the USB peripheral device shall be treated in this manner.

The circuit parameters of the VersaView CE USB ports are given in Table 2.1. The USB peripheral device and its associated cabling shall have circuit parameters with the limits given in Table 2.2 for them to remain nonincendive when used with the VersaView CE USB ports. If cable compliance and inductance are not known, use the following values from UL 913:

C_{cable} = 60 pF/ft
L_{cable} = 0.20 µH/ft

Environmental Considerations

The terminals are suitable for use in an industrial environment when installed in accordance with these instructions. Specifically, this equipment is intended for use in clean, dry environments (Pollution Degree 2)(1) and with circuits not exceeding Over Voltage Category II(2) (IEC 60664-1).(3)

(1) Pollution Degree 2 is an environment where, normally only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation shall be expected.

(2) Over Voltage Category II is the load level section of the electrical distribution system. At this level transient voltages are controlled and do not exceed the impulse voltage capability of the product's insulation.

(3) Pollution Degree 2 and Over Voltage Category II are International Electrotechnical Commissions (IEC) designations.

Enclosures

The terminals must be mounted in a panel or enclosure to protect the internal circuitry. The terminals meet IP54, IP65 and NEMA Type 12/13 and 4X (indoor) ratings only when mounted in a panel or enclosure with the equivalent rating. When the terminal is not mounted in a panel, it is not secure or safe for operation. You must comply with NEMA Type 4X (indoor) requirements for environmental specifications.

For more enclosure and certification information on the Outdoor High-Bright display module, refer to publication 2711P-IN026.

Outdoor Installation (cat. no. 6189-RDT12H only)

When using the High-Bright display module outdoors, important considerations in maximizing the field life of the front bezel and display are:

- Selecting proper enclosure
- Orientation of the terminal

Both ultraviolet and infrared radiation can reduce the field life of any electronic device. While the materials used in the terminal bezels provide long field life, that life can be improved by proper installation.

Ultraviolet radiation from the sun causes all plastics to fade or yellow and become brittle over time. Using an antiglare overlay, cat. no. 2711P-RGT12, will protect the front of the terminal from direct exposure to UV radiation and greatly increase its field life.

When installing the High-Bright display module in an environment where the front of the terminal will be in direct sunlight during the hottest part of the day and the external ambient temperature can exceed 40 °C (104 °F), use the visor kit, cat. no. 2711P-RVT12. The visor reduces the solar load on the front of the display and helps to maintain internal temperatures within specification.

The High-Bright display module has a built in temperature sensor that automatically reduces the backlight intensity if the temperature inside the cabinet exceeds 55 °C. This reduces the risk of damage to the display.

The paint color, size, and power dissipated by the internal components of an enclosure affect the temperature rise inside the cabinet. Hoffman, a Rockwell Automation Encompass Partner, has information to assist you with enclosure selection and heating/cooling accessories to meet the temperature requirements of the installed equipment. See website http://www.hoffmanonline.com.

Stirring fans or active cooling may be required in high altitude and high ambient temperature locations to keep the internal enclosure temperature below 55 °C (131 °F). Use a heater in installations where the ambient temperature is below 0 °C (32 °F).

The backlight of the high-bright display generates a significant amount of heat when set to full intensity. To minimize the amount of heat generated and extend the life of the backlight, decrease the display intensity by using the screen saver with a 5 to 10 minute delay.

Avoid placing the terminal on the south (north in the southern hemisphere) or west side of the cabinet, if possible. This will reduce the heat rise due to solar loading during the hottest part of the day.

Mount the terminal vertically to minimize solar loading on the display. Do not mount the terminal in a sloped enclosure if it will be exposed to direct sunlight.

Required Tools

- Panel cutout tools
- Small, slotted screw driver
- Torque wrench (in-lb)

Clearances

Allow adequate clearance around the terminal, inside the enclosure, for adequate ventilation. Consider heat produced by other devices in the enclosure. The ambient temperature around the terminals must be between 0 to 55 °C (32 to 131 °F).

Minimum clearances for ventilation are:

- Top clearance: 51 mm (2 in)
- Bottom clearance: 102 mm (4 in)
- Side clearances: 25 mm (1 in)
- Back clearance: 25 mm (1 in)

Minimum side clearance for insertion of memory card is 102 mm (4 in).

Cutout Dimensions

The table lists the panel cutout dimensions for each terminal. Use the full size template shipped with your terminal to mark the cutout dimensions.

VersaView CE Terminals	Height mm (in)	Width mm (in)
VersaView CE 700H Keypad or Keypad & Touch	167 (6.57)	264 (10.39)
VersaView CE 700H Touch	154 (6.08)	220 (8.67)
VersaView CE 1000H Keypad or Keypad & Touch	224 (8.8)	375 (14.75)
VersaView CE 1000H Touch	224 (8.8)	305 (12.00)
VersaView CE 1250H Keypad or Keypad & Touch	257 (10.11)	390 (15.35)
VersaView CE 1250H and 1250H High-Bright Touch	257 (10.11)	338 (13.29)
VersaView CE 1500H Keypad or Keypad & Touch	305 (12.00)	419 (16.50)
VersaView CE 1500H Touch	305 (12.00)	391 (15.40)

Mount the Terminal in a Panel

Mounting clips secure the terminal to the panel. The number of clips you use (4, 6 or 8) varies by terminal type.

ATTENTION

- Disconnect all electrical power from the panel before making the panel cutout.
- Make sure the area around the panel cutout is clear.
- Take precautions so metal cuttings do not enter any components already installed in the panel.
- Failure to follow these warnings may result in personal injury or damage to panel components.

1. Cut an opening in the panel using the panel cutout shipped with the terminal.

2. Make sure the terminal sealing gasket is properly positioned on the terminal.

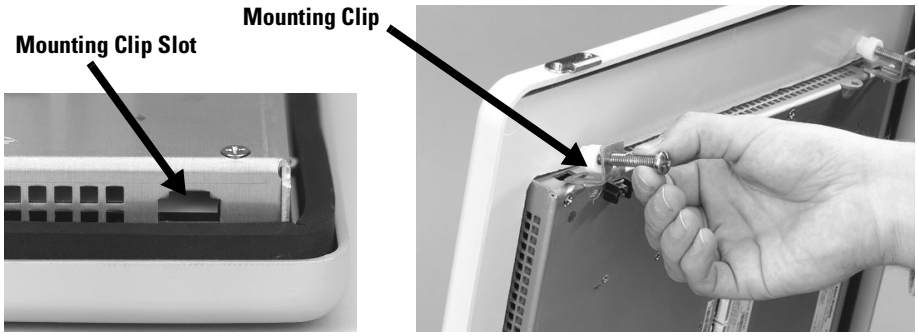
   This gasket forms a compression type seal. Do not use sealing compounds.

3. If using keypad legend strips on keypad terminals, we recommend that you install the strips before installing the terminal.

   Be careful not to pinch the legend strip during installation.

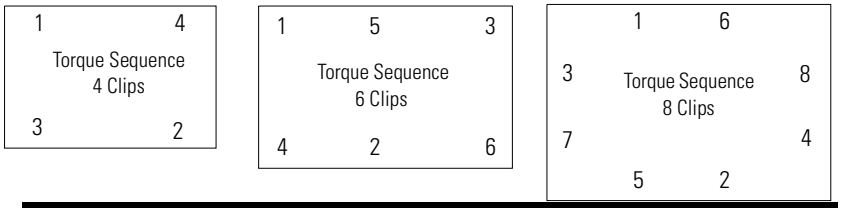
4. Place the terminal in the panel cutout.

5. Slide the ends of the mounting clips into the slots on the terminal.



6. Tighten the mounting clip screws by hand until the gasket seal contacts the mounting surface uniformly.

7. Tighten the mounting clips screws to a torque of 0.90 to 1.1 Nm (8 to 10 in-lb) using the specified sequence. Do not over-tighten.



ATTENTION

Tighten the mounting clips to the specified torque to provide a proper seal and to prevent damage to the product. Allen-Bradley assumes no responsibility for water or chemical damage to the product or other equipment within the enclosure because of improper installation.

Product Dimensions

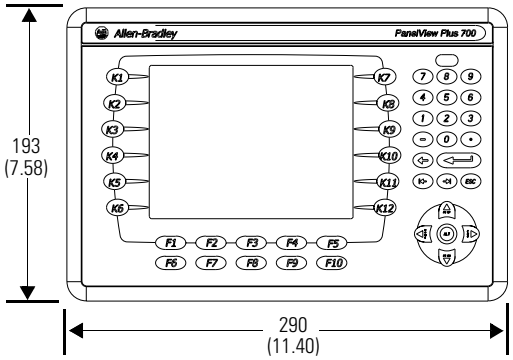
Product dimensions for each terminal are in mm (in).

Depth dimensions are shown for:

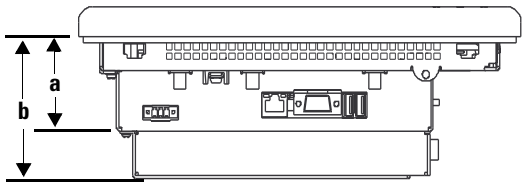
- Base configured unit (display module and logic module)
- Base configured unit with communication module

VersaView CE 700H

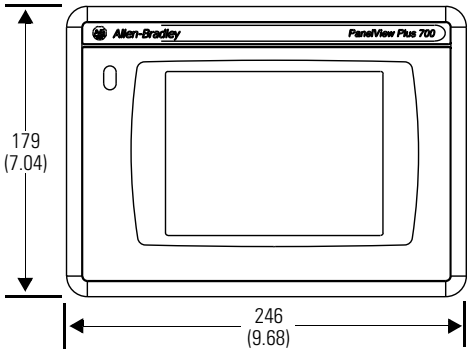
700H Keypad or Keypad & Terminal



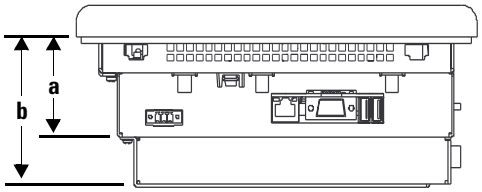
a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module



700H Touch Screen Terminal



a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module

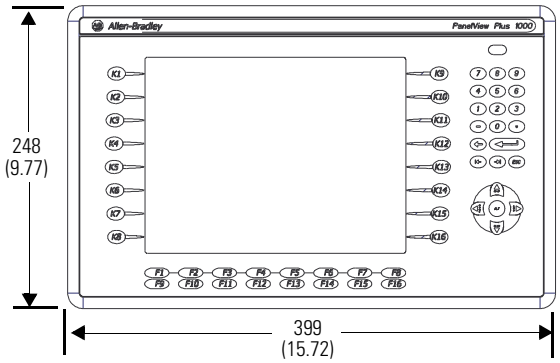


VersaView CE 1000H

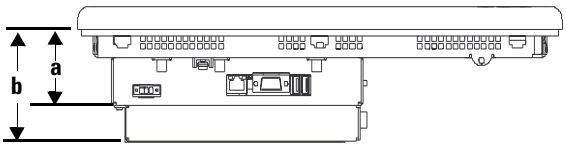
Depth dimensions are shown for:

- Base configured unit (display module and logic module)
- Base configured unit with communication module

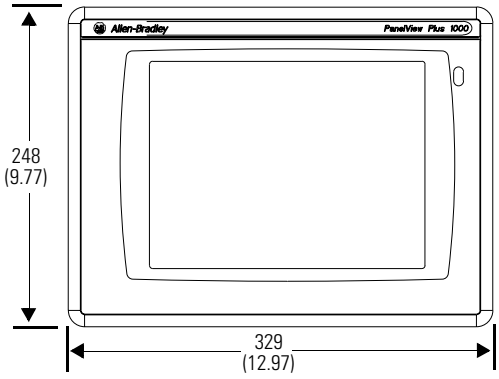
1000H Keypad or Keypad & Touch Terminal



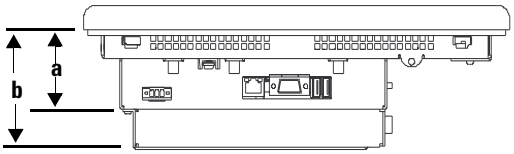
a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module



1000H Touch Screen Terminal



a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module

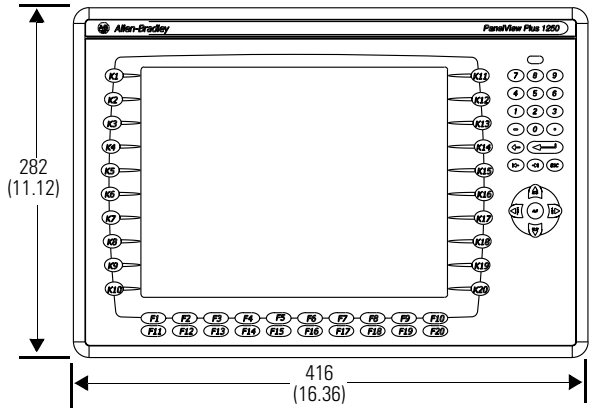


VersaView CE 1250H

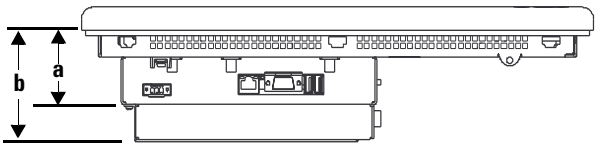
Depth dimensions are shown for:

- Base configured unit (display module and logic module)
- Base configured unit with communication module

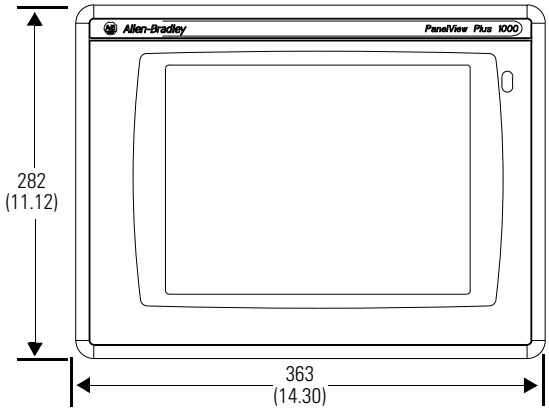
1250H Keypad or Keypad & Touch Terminal



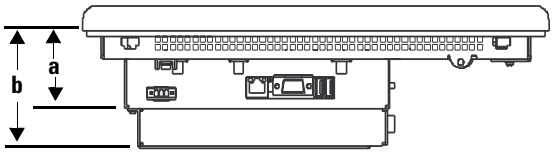
a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module



1250H Touch Screen Terminal

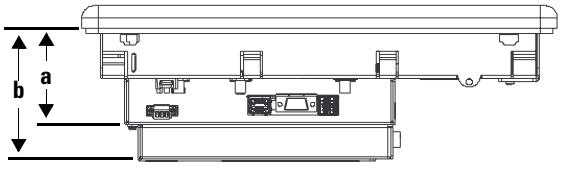


a 55 (2.18) Display to Logic Module
b 83 (3.27) Display to Communication Module



1250H

a 74 (2.90) Display to Logic Module
b 101 (3.99) Display to Communication Module



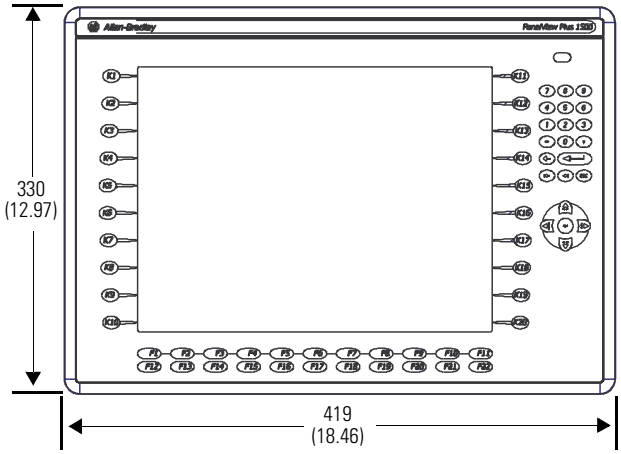
1250H High-Bright

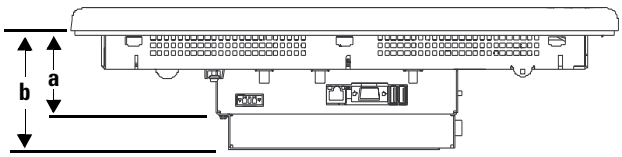
VersaView CE 1500H

Depth dimensions are shown for:

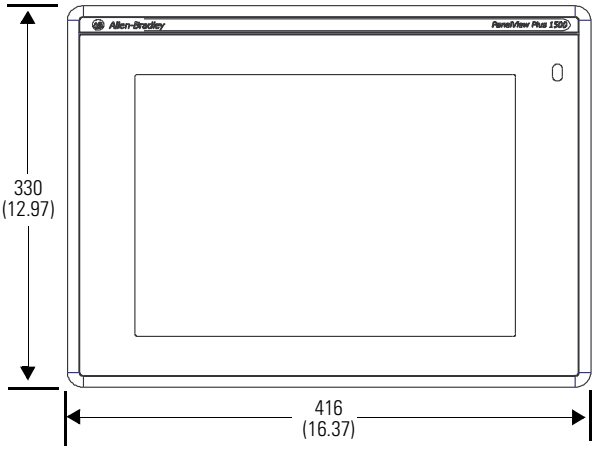
- Base configured unit (display module and logic module)
- Base configured unit with communication module

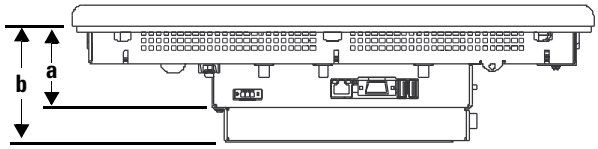
1500H Keypad or Keypad & Touch Terminal





1500H Touch Screen Terminal





Connect Power

Chapter Objectives

This chapter covers wiring and safety guidelines, and provides information on how to:

- Remove and install the terminal block
- Connect DC power
- Connect AC power
- Reset the terminal

Wiring and Safety Guidelines

Use publication NFPA 70E, 'Electrical Safety Requirements for Employee Workplaces', IEC 60364 'Electrical Installations in Buildings' or other applicable wiring safety requirements for the country of installation when wiring the devices. In addition to the NFPA guidelines:

- Connect the device and other similar electronic equipment to its own branch circuit.
- Protect the input power by a fuse or circuit breaker rated at no more than 15 A.
- Route incoming power to the device by a separate path from the communication lines.
- Cross power and communication lines at right angles if they must cross.

  Communication lines can be installed in the same conduit as low level DC I/O lines (less than 10V).

- Shield and ground cables appropriately to avoid Electromagnetic Interference (EMI).

  Grounding minimizes noise from EMI and is a safety measure in electrical installations.

For more information on grounding recommendations, refer to the National Electrical Code published by the National Fire Protection Association of Boston.

For additional information on terminal wiring and grounding applications, refer to publication 2711P-TD001. You can locate this publication in the literature library at:

www.rockwellautomation.com/literature

Remove and Install the Power Terminal Block

You can remove and reinstall the power terminal block for ease of installation, wiring, and maintenance. The terminals ship with the power block installed.

WARNING

Explosion Hazard

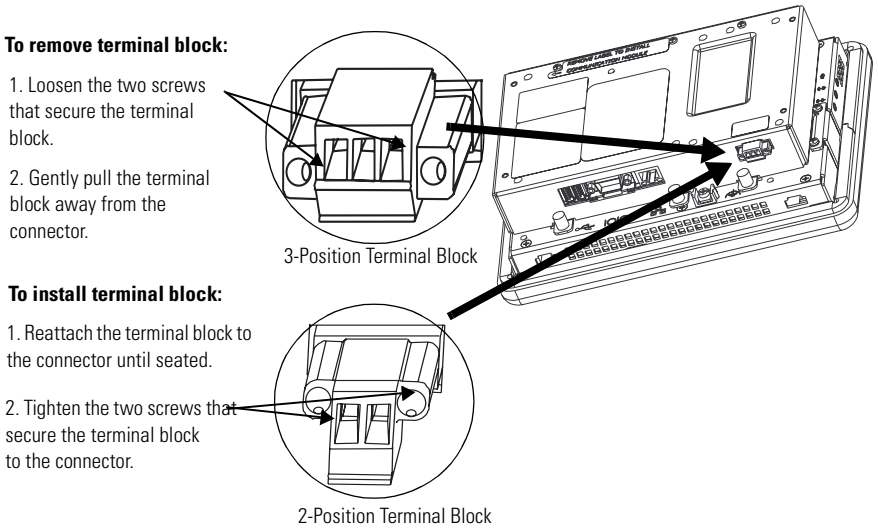
- Substitution of components may impair suitability for hazardous locations.
- Do not disconnect equipment unless power has been switched off and area is known to be non-hazardous.
- Do not connect or disconnect components unless power has been switched off.
- All wiring must comply with N.E.C. articles 501, 502, 503, and/or C.E.C. section 18-1J2 as appropriate.
- Peripheral equipment must be suitable for the location it is used in.

ATTENTION

Disconnect all power before installing or replacing components. Failure to disconnect power may result in electrical shock and/or damage to the terminal.

The terminals operate only on DC power.

- Series A-D logic modules use a 3-position terminal block.
- Series E or later logic modules use a 2-position terminal block.



DC Power Connections

Terminals that operate on 24V dc power are EN 61131-2 Equipment Class II devices. These terminals have an integrated, non-isolated, 24V dc power supply. The electrical input ratings are:

- 24V dc nominal (18 to 32V dc)
- 70 W maximum (2.9A @ 24V dc)

The power supply is internally protected against reverse polarity of the + and - connections. Connecting the DC positive (+) or DC negative (-) source to the Functional Earth (FE) may damage the terminal.

The input power terminal block on the integrated power supply is removable and supports these wire sizes.

Terminal	Wire Type	Dual Wire Gauge(1)	Single Wire Gauge	Terminal Screw Torque
Logic module, Series A-D	Stranded or solid	#22…#16AWG	#22…#14 AWG	0.23…0.34 Nm (2…3 in-lbs)
Logic module, Series E and later	Stranded or solid	#22…#16AWG	#22…#14 AWG	0.45…0.56 Nm (4…5 in-lbs)

(1) Two-wire maximum per terminal

The non-isolated power supply does not provide galvanic isolation. A Class 2 Safety Extra-Low Voltage (SELV) isolated power supply with a 24V dc nominal output voltage is required to power the terminal.

ATTENTION

Use a Class 2 SELV isolated and ungrounded power supply as input power to the terminal. This power source provides protection so that under nominal and single fault conditions, the voltage between conductors and between conductors and Functional Earth or Protective Earth does not exceed a safe value.

Functional Earth Connection

DC powered terminals have a Functional Earth (FE) terminal which you must connect to a low impedance earth ground. This connection is required for Electromagnetic Compliance (EMC) with the European Union (EU) EMC directive for CE-mark conformance.

The Functional Earth ground connection is on the back of the display module near the bottom.

The Functional Earth terminal wiring requires a minimum wire gauge.

Terminal	Wire Type	Wire Gauge	Terminal Screw Torque
700-1500	Stranded or solid	#14…#10 AWG	1.13…1.36 Nm (10…12 in-lbs)

The Functional Earth terminal may be internally connected to the DC negative (- DC) terminal within the VersaView CE terminal.

ATTENTION

A ground loop can occur when a voltage potential exists between two separate ground points. Make sure that the terminal does not serve as a conductive path between ground points at different potentials.

Use a single dedicated 24V dc source (power supply) to power each terminal, such as cat. no. 2711P-RSACDIN. Using a separate, isolated and ungrounded SELV source to power each terminal, prevents ground loop currents from damaging the terminals.

The terminals contain isolated and non-isolated communication ports. Refer to Chapter 7 for information on Communication Port Isolation.

IMPORTANT For more information on wiring and grounding the terminals, refer to publication 2711P-TD001.

Connect DC Power

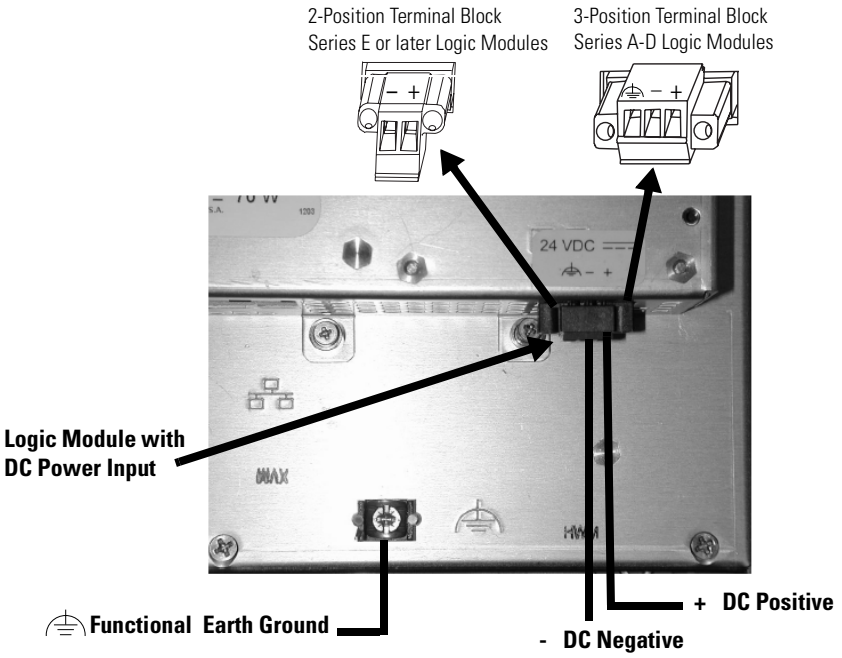
WARNING

Explosion Hazard - Do not connect or disconnect equipment while circuit is live unless area is known to be non-hazardous.

Disconnect all power before installing or replacing components. Failure to disconnect power may result in electrical shock and/or damage to the terminal.

1. Disconnect power to the terminal.
2. Secure the DC power wires to the terminal block screws.

   Follow the markings on terminal blocks and terminal for proper connections.
3. Secure the Functional Earth ground wire to the Functional Earth ground terminal screw at the bottom of the display.



4. Apply 24V dc to the terminal.

AC Power Connections

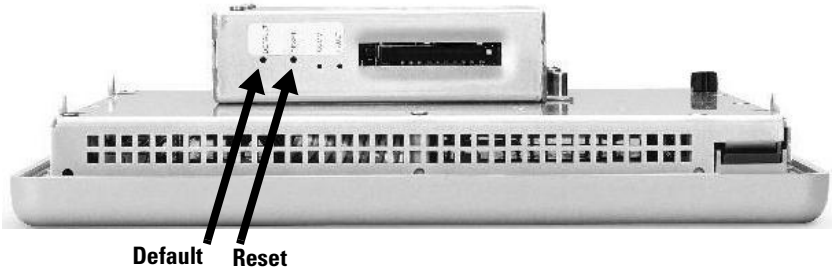
Terminals that operate on AC power are EN 61131-2 Equipment Class I devices. Connecting a 700-1500 terminal to AC power requires a separate power supply, cat. no. 2711-RSACDIN, which mounts to a DIN Rail. This power supply converts AC power to DC power and has these electrical input ratings:

- 85 to 264 V ac (47 to 63 Hz)
- 120 VA maximum

For more information, refer to the installation instructions shipped with the power supply.

Reset the Terminal

All terminals have a Reset switch and a Default switch on the side of the logic module. They are used to restart the terminal.



Reset

Use the Reset switch to restart the terminal without having to disconnect and reapply power.Insert a thin, nonconductive probe into the hole marked Reset and press the switch. The terminal performs a series of startup tests and opens the CE desktop or RSView ME depending on how the terminal is used and configured.

Default

Use the Default switch with the Reset switch to start the terminal in Safe Mode. This is a diagnostics mode where the system is reduced to a known state that allows recovery from a software problem. Safe Mode ignores all user changes to the system and avoids any problem that is due to interactions with end-user software or changes.

For more details on Safe Mode, refer to Chapter 9 on Troubleshooting.

1. Insert a thin, nonconductive probe into the hole marked Default and press the switch.

2. Insert the probe into the hole marked Reset and press the switch. The system will restart immediately into the Safe Mode.

ATTENTION

Use a nonconductive thin probe to press the Reset and Default switch. **Do not** use a conducting object such as a paper clip or you may damage the terminal. **Do not** use the tip of a pencil; graphite may damage the terminal.

Use RSView ME Station

Chapter Objectives

This chapter shows how to use RSView ME Station on your terminal. It includes topics on how to:

- Configure startup options
- Start RSView ME Station
- Load an ME application
- Run an ME application
- View application settings
- Modify terminal settings

Startup Options for RSView ME Station

RSView ME Station can start:

- without loading or running an .MER application.
- automatically loading an .MER application.
- automatically loading and running an .MER application.

Start RSView without Loading or Running .MER Application

To start RSView ME Runtime without loading or running an .MER application, do one of the following:

- Open the RSView ME Station icon from the desktop
- Select RSView ME Station from the Start menu

  Programs>Rockwell Software>RSView ME Station

- Type MERuntime.exe and its path in the Run dialog of the Windows Start menu.

  Path to MERuntime.exe

  If the path to RSView ME contains spaces, you must enclose the path in double quotes.

  Example:
  "Storage Card\Rockwell\Software\RSViewME\MERuntime.exe"

If you copy the RSView ME Station shortcut from the desktop to the Windows Startup folder (\Storage Card\Windows\Startup), RSView ME station will automatically run on startup.

Start RSView and Load .MER Application

To start RSView ME Station and automatically load an .MER application, type the appropriate shortcut path in the Run dialog on the Windows Start menu.

Path to MERuntime.exe, followed by a space, followed by the path to the .MER

If the path to RSView ME or the path to the application contains spaces, you must enclose the path in double quotes.

Example:
"Storage Card\Rockwell\Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell\Software\RSViewME\Runtime\MYAPP.MER"

If you place a shortcut to the .MER application into the Windows Startup (\Storage Card\Windows\Startup) folder, the ME Runtime will automatically start and load the .MER application on terminal startup.

If the application specified in the Run dialog or the Startup folder does not exist or is corrupted, the main RSView ME Configuration Mode screen will open.

Start RSView and Run .MER Application

To start RSView ME Station and automatically run an .MER application:

- In RSView Studio, select Tools>Transfer Utility and select Run application when download completes on the Download tab.
- type the appropriate shortcut path in the Run dialog on the Windows Start menu.

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r

  If the path to RSView ME or the path to the application contains spaces, you must enclose the path in double quotes.

Example:
"Storage Card\Rockwell\Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell\Software\RSViewME\Runtime\MYAPP.MER" **/r**

If you place a shortcut with the above command line in the Windows Startup folder (\Storage Card\Windows\Startup), the ME Runtime will start and automatically run the .MER application.

If the application specified in the Run dialog or the Startup folder does not exist or is corrupted, the main RSView ME Configuration Mode screen will open and display the following message:

Unable to load application

Other Shortcut Paths for RSView ME Station

IMPORTANT If the path to RSView ME or the path to the application contains spaces, you must enclose the path in double quotes.

- To run the .MER application and delete its log files without replacing the terminal's communication configuration with that of the applications, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/d

Example:

"Storage Card\Rockwell\Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell\Software\RSViewME\Runtime\MYAPP.MER" **/r/d**

- To run the .MER application and replace the terminal's communication configuration with that of the applications without deleting its log files, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/o

Example:

"Storage Card\Rockwell\Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell\Software\RSViewME\Runtime\MYAPP.MER" **/r/o**

- To run the .MER application, delete its log files, and replace the terminal's communication configuration with that of the applications, use the following path:

  Path to MERuntime.exe, followed by a space, followed by the path to the .MER, followed by /r/d/o

Example:

"Storage Card\Rockwell\Software\RSViewME\MERuntime.exe" "Storage Card\Rockwell\Software\RSViewME\Runtime\MYAPP.MER" **/r/d/o**

Start RSView ME from the desktop

If RSView ME Station does not automatically run on startup, you can access it from the Windows Start menu or the desktop icon.

To start RSView ME Station:

- Select RSView ME Station from the Windows Start menu.
  Start>Programs>Rockwell Software>RSView ME Station
- Select the RSView ME Station icon on the desktop.

To access RSView ME Station from a running application:

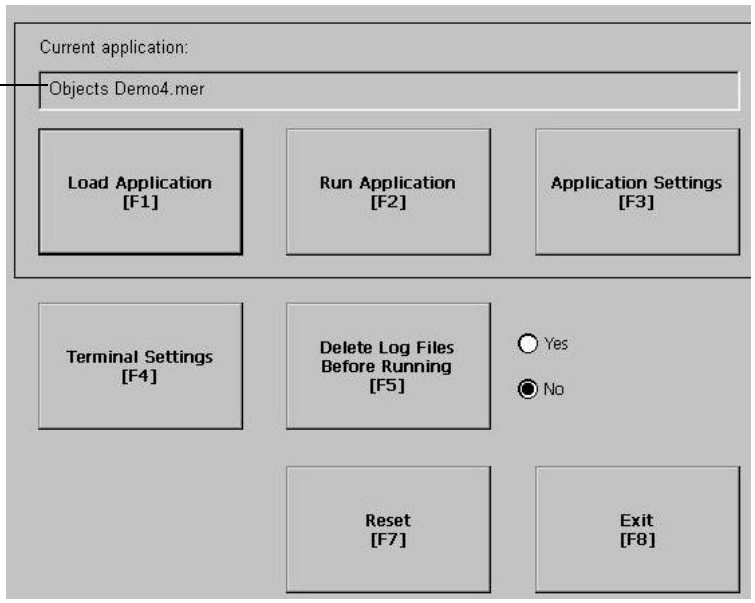
- Press the Goto Configuration Mode button.
  This button is added to application screen in RSView Studio.

The application stops running but is still loaded.

Name of application that is currently loaded. Only appears if application is loaded.

To activate buttons:

- on keypad terminals, select the corresponding function key [Fx]
- on touch screen terminals, tap the button with your finger or stylus.
- if a mouse is attached, make selections with the mouse.



Main Screen Button	Description
Load Application (F1)	Opens another screen where you select an application to load. Once loaded, the application name will appear under Current Application.
Run Application (F2)	Runs the .MER application displayed under Current Application. An application must be loaded before you can run it.
Application Settings (F3)	Opens a menu of application-specific configuration settings.
Terminal Settings (F4)	Opens a menu of options to configure non-application, specific terminal settings for the VersaView CE terminal.
Delete Log Files Before Running (F5)	Toggles between Yes and No. If you select Yes, all data log files, alarm history and alarm status files will be deleted before the application runs. If you select No, log files are not deleted.
Reset (F7)	Resets the terminal. The action that occurs on startup depends on whether shortcut paths are defined in the Windows Startup folder.
Exit (F8)	Exits RSView ME Station.

Screen Buttons

RSView ME Station uses screen buttons for data entry and navigation.

- On terminals with a touch screen, tap the button with your finger or stylus.
- On terminals with a keypad, select the function key listed on the button, or in some cases, the corresponding key on the keypad.

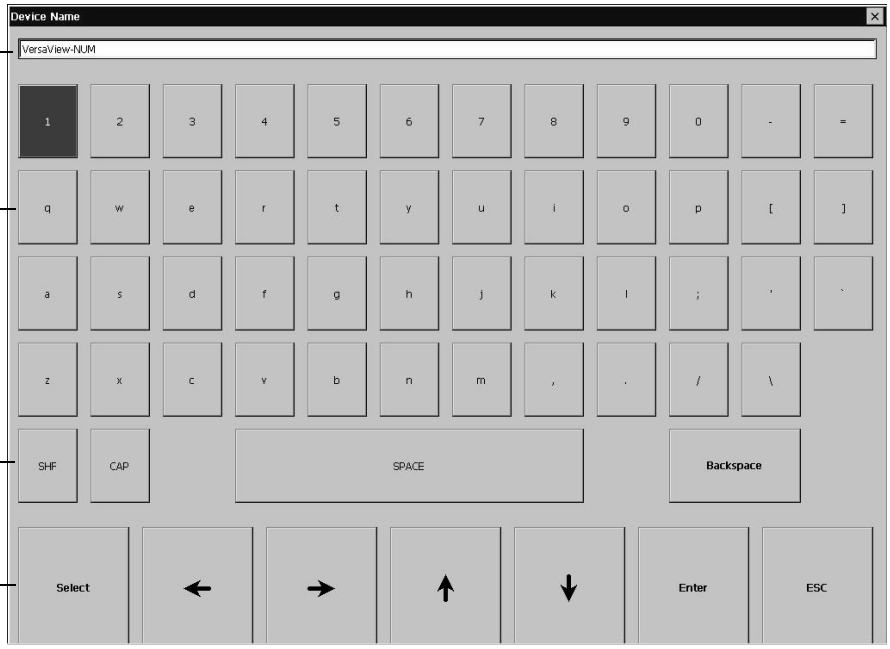
Besides operation specific buttons which are used to modify configuration data, most screens have a combination of these buttons.

Screen Buttons	Description
Close [F8]	Returns to the previous screen.
OK [F7]	Accepts modified values and returns to previous screen.
Cancel [F8]	Cancels the current operation without saving any changes.
▲ ▼	Moves highlight up or down a list.
↵	Selects a highlighted screen or item from a list.

Input Panel

Many screens have buttons that access fields where you must enter/edit data. When you press the button or function key, the Input Panel opens ready for you to input data.

If the field is restricted to a numeric value, only the 0-9 keys will be enabled. If the value is an IP address, the 0-9 and decimal point keys will be enabled. All other keys will be disabled.



- On a touch terminal, tap the keys.
- On a keypad terminal, use the arrow keys on the keypad to select keys.
- If a mouse is attached, use the mouse to select keys.

Controls	Function
SHF	Switches keys between their shifted and unshifted state. The initial default is shifted.
CAPS	Switches keys between lowercase and uppercase characters. The initial default is lowercase.
SPACE	Enters a space between characters in the Display Area.
Backspace	Deletes the previous character (to the left of the cursor) in the Display Area.
Select	Selects a character and enters it in the Display Area.
Arrows	Selects the character to the left, right, above or below the currently selected character.
Enter	Accepts the entered characters and returns to the previous screen
ESC	Cancels the current operation and returns to the previous screen.

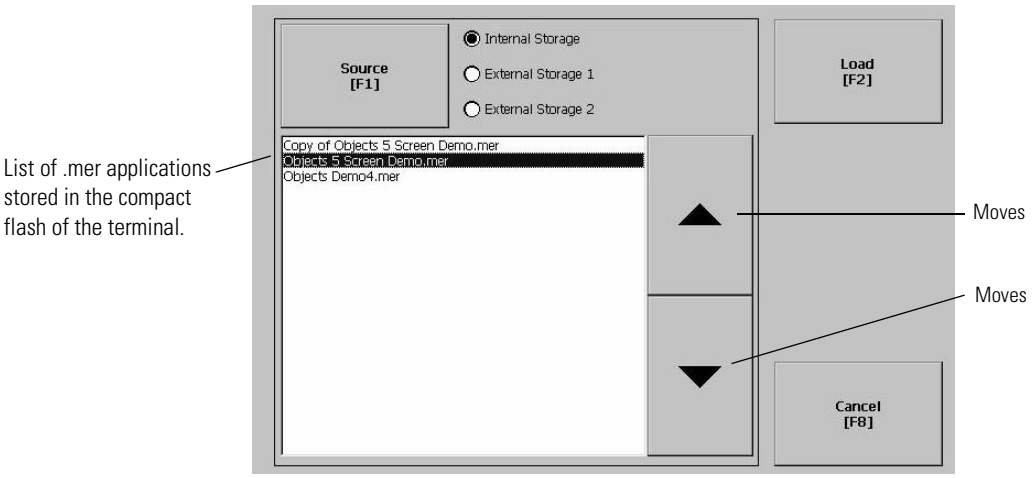
To enter characters in the Display Area:

1. Select a character on the Character Keyboard.
2. Press the **Select** button to copy the character to the Display Area.
3. When done entering all characters, press **Enter**. You will return to the previous screen.

You will return to the previous screen with the newly entered data.

Load an ME Application

To load an RSView ME .MER application, select the Load Application button on the main screen.



1. Select the Source button to select the storage location of the application file you want to load. The options are:
   - Internal Storage - the Internal Compact Flash in the terminal
   - External Storage 1 - the External Compact Flash card loaded in the card slot of the terminal
   - External Storage 2 - for future use

   TIP RSView ME only recognizes files located in the \RockwellSoftware\RSViewME\Runtime\ folder.

2. Select an .MER file from the list. Use the up and down cursor keys to select a file.

3. Select the Load button to load the application.

   You will be asked if you want to replace the terminals' current communication configuration with the application's communication configuration.

4. Select Yes or No. If you select Yes, any changes made to the device addresses or driver properties in the RSLinx Communications screen will be lost.

The name of the currently loaded application will appear at the top of the main RSView ME Station screen.

Run an Application

To run a loaded application, select the Run Application button on the main RSView ME Station screen. An application must be loaded, before you can run it. Log files generated by the application may be deleted if this option was selected on the main screen or enabled as a Startup Option under Terminal Settings.

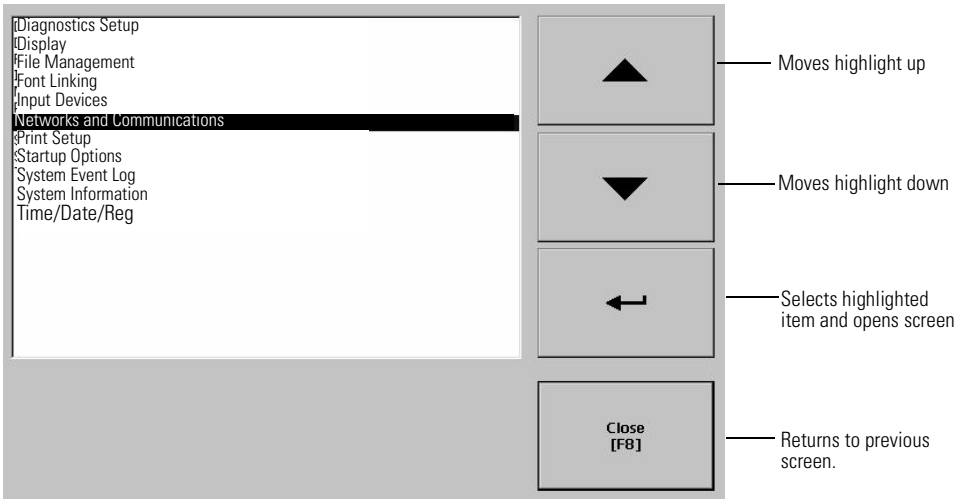
Application Settings

From the Application Settings screen, you can show device shortcuts defined for the loaded .MER application. For example, your .MER application might have SLC defined as a device shortcut name for the SLC 5/05. Device shortcuts are read-only and cannot be edited.

Terminal Settings

From Terminal Settings, you can open screens to configure and modify non-application settings for the terminal.

- On a touch terminal, tap the button.
- On a keypad terminal, press the corresponding key on the keypad



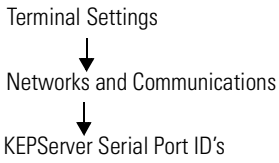
Terminal Setting	Description
Diagnostic	Forwards diagnostic messages form a remote log destination to a computer running diagnostics.
Display	Shows the temperature of the display, sets the intensity of the backlight, and enables/disables the screen saver.
File Management	Copies or deletes application files or font files from a storage location.
Font Linking	Links a font file to a base font loaded on the terminal.
Input Devices	Configures settings for the keypad, touch screen, or attached keyboard and mouse.
Networks and Communications	Configures network connections and communication settings specific to the application (DHPlus, DH485, Remote I/O, ControlNet, DeviceNet, Serial).
Print Setup	Configures settings for printing displays, alarm messages, and diagnostics messages generated by the application.

Terminal Setting	Description
Startup Options	Specifies whether the terminal starts up in configure or run mode. Also lets you enable/disable tests to run on the terminal at startup.
System Event Log	Displays a list of system events currently logged by the terminal.
System Information	Displays power, temperature, battery and memory details for the terminal. Also shows the firmware number for RSView ME and technical support information.
Time/Date/Regional Settings	Sets the date, time, language and numeric format used by the terminal and applications.

Networks and Communications

From the Networks and Communications screen, you can access settings for:

- KEPServer Serial Port ID's
- Network Connections
- RSLinx Enterprise Communications



KEPServer Serial Port ID's

To access the KEPServer Serial Port ID's screen, you must have KEPServer Enterprise installed on your terminal. Otherwise, you will get an error message when accessing this screen. If you plan on using KEPServer Enterprise and serial communications, you must specify which COM port to use.

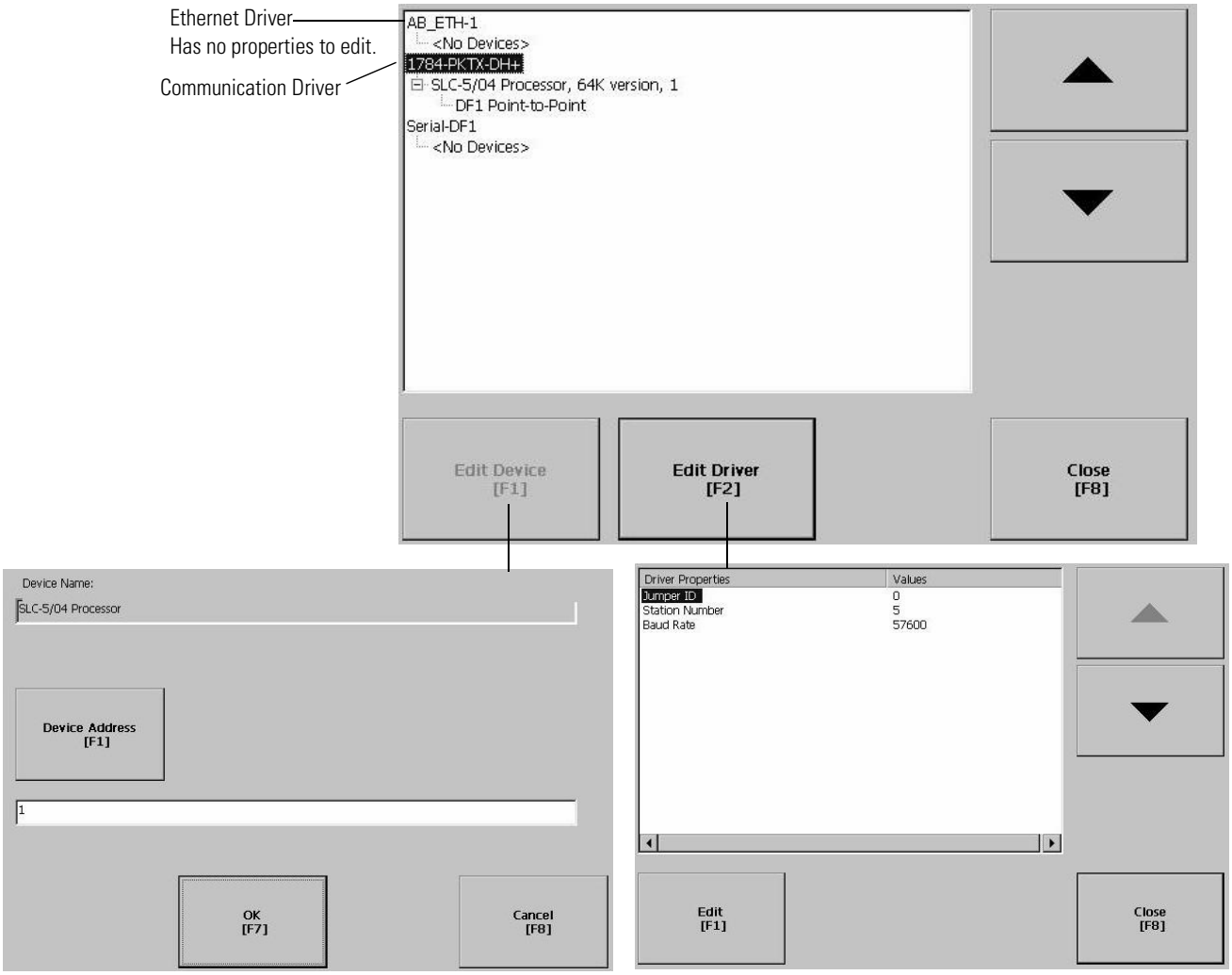
Terminal Settings
↓
Networks and Communications
↓
RSLinx Enterprise Communications

RSLinx Enterprise Communications

The RSLinx Enterprise Communications screen shows a treeview of installed communication cards and network configurations. You can:

- edit or view the driver settings for the communication protocol used by your .MER application.
- edit the device address of the controller on the network.

The procedure for editing these settings is the same regardless of the communication protocol. The only differences are the properties for each communication protocol and the device address of the logic controller. The properties for each communication protocol are defined immediately after this section.



To edit communication settings:

1. From the RSLinx Configuration Screen, select the communication card installed on your terminal.

2. Select the Driver Settings button.

   A properties screen opens showing the current communication settings for the driver.

3. To modify a setting, select the setting and then the Edit button. The Input Panel opens showing the current setting.

4. Using the Input Panel, modify the setting and then select the Enter button.

You return to the previous screen with the newly entered data.

To edit the device address of the logic controller:

1. From the RSLinx Configuration screen, select a device node.

2. Select the Edit Device button.

   A screen opens showing the name of the device and its current node address.

3. To modify the device address, press the Device Address button. The Input Panel opens showing the current address.

4. Using the Input Panel, modify the address and then select the Enter button.

You return to the previous screen with the new address.

IMPORTANT Modified settings do take effect until the terminal is rebooted.

DHPlus Properties

The DHPlus Properties screen lets you view or modify settings for a terminal connected to a DHPlus network.

Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0 - 3
Station Number	The unique address of the terminal on the DHPlus network.	0 - 77 (octal)
Baud Rate	The baud rate of the DHPlus network.	57600 (default) 115200 230400

DH485 Properties

The DH485 Properties screen lets you view or modify settings for a terminal connected to a DH-485 network.

Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0 - 3
Station Number	The unique station number of the terminal on the DH-485 network.	0 - 31 (decimal)
Baud Rate	The baud rate of the DH-485 network.	9600 19200
MaxStationNumber	The maximum station number on the DH-485 network. The value must be greater than or equal to the Station Number.	0-31 (decimal)

Remote I/O Properties

The RIO Properties screen configures communication settings for a terminal on a Remote I/O link.

Field	Description	Valid Values
Jumper ID	Identifies the communication card if multiple cards are installed on terminal.	0 - 3
Baud Rate	The baud rate of the Remote I/O network.	57600 (default) 115200 230400

ControlNet Properties

The ControlNet Properties screen configures communication settings for the terminal on a ControlNet network.

Field	Description	Valid Values
Device ID	Unique address of the PanelView Plus terminal on the ControlNet network.	1 - 99

DeviceNet Properties

The DeviceNet Properties screen configures communication settings for the terminal on a ControlNet network.

Field	Description	Valid Values
MacID	Unique address of the terminal on the DeviceNet network.	0 - 63
Baud Rate	The baud rate at which the DeviceNet driver communicates.	125K (default) 250K 500K

Serial Properties

The Serial Properties screen configures settings for serial communications (using the RS-232 serial port) on the terminal.

Field	Description	Valid Values
Device	The serial device your terminal is connected to.	PLC_CH0 KF2 SLC_CH0 KF3 KFC KFC15 AC_CH0
Error Check	Type of error checking used. Error checking is automatically configured if Use Auto Config is set to Yes.	BCC, CRC
Parity	Type of parity used. The parity is automatically configured if Use Auto Config is set to Yes.	None, Odd, Even
Stop Bits	Number of stop bits used.	1 or 2
Ack Timeout	Ack/Poll timeout value in milliseconds.	20 - 60,000 ms
Max Retries	Maximum number of retries before the serial driver fails.	0 - 255

Field	Description	Valid Values
Station	Station number based on a specific device.	PLC_CH0 0-77 (octal) KF2 0-77 (octal) SLC_CH0 0-31 KF3 0-31 KFC 1-99 KFC15 1-99 AC_CH0 0-255
Baud Rate	Data rate at which serial driver communicates. The baud rate is automatically configured if Use Auto Config is set to Yes.	110, 300, 600, 1200, 4800 9600, 19200, 38400, 115200
Use Auto Config	Automatically or manually configures the baud rate, parity and error checking parameters.	Yes (auto configure) No (manual configure)
Com Port	Communication port used on the terminal.	1 (COM1) 2 (COM2)

Terminal Settings
↓
Networks and Communications
↓
Network Connections

Network Connections

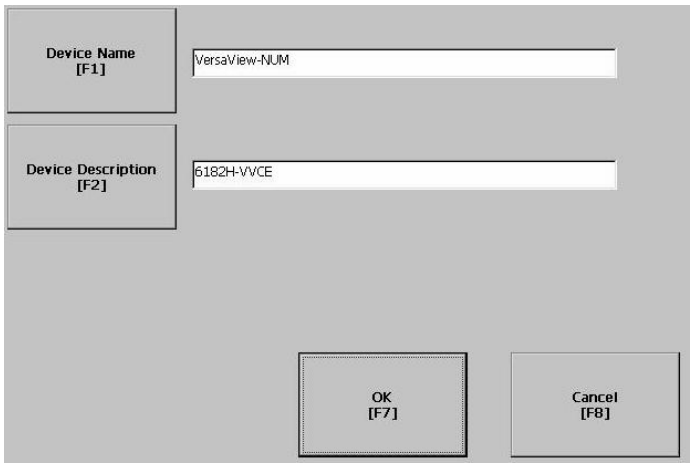
The Network Connections screen lets you configure these items for the terminal:

- Device Name
- Network Adapters
- Network Identification

Terminal Settings
↓
Networks and Communications
↓
Network Connections
↓
Device Name

Device Name

The Device Name screen identifies the terminal to other computers on the network.



Field	Description	Valid Values
Device Name (1)	Name that identifies the terminal to other computers on the network.	1 to 15 characters A leading character in the range 'a - z' or 'A - Z' Remaining characters in the range 'a - z', 'A - Z', '0 - 9', or '- ' (hyphen)
Device Description	Provides a description of the terminal.	50 characters maximum

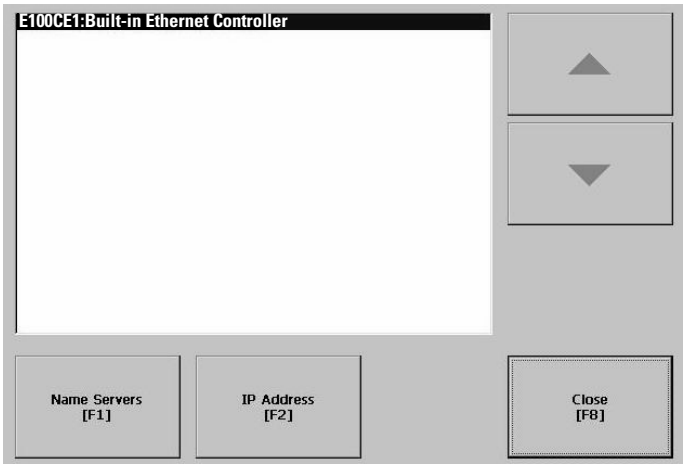
(1) Check with your network administrator to determine a valid device name.

Terminal Settings
↓
Networks and Communications
↓
Network Connections
↓
Network Adapters

Network Adapters

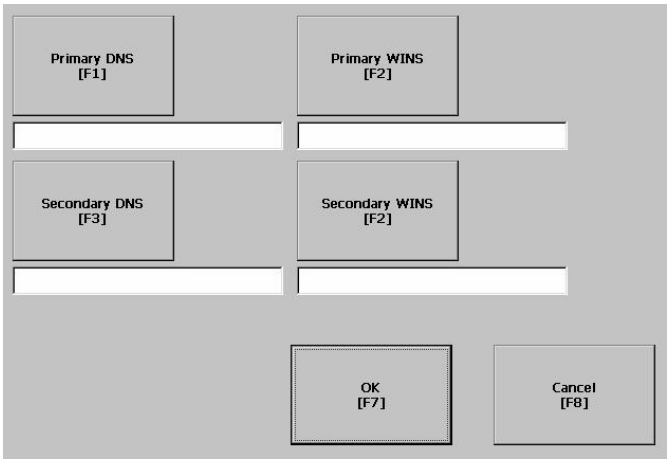
The Network Adapters screen configures driver settings for all network adapters installed on the terminal. The only network adapter on the terminal is the Built-in Ethernet Controller.

Press the Name Servers button and/or IP Address button to access driver settings.



Name Servers

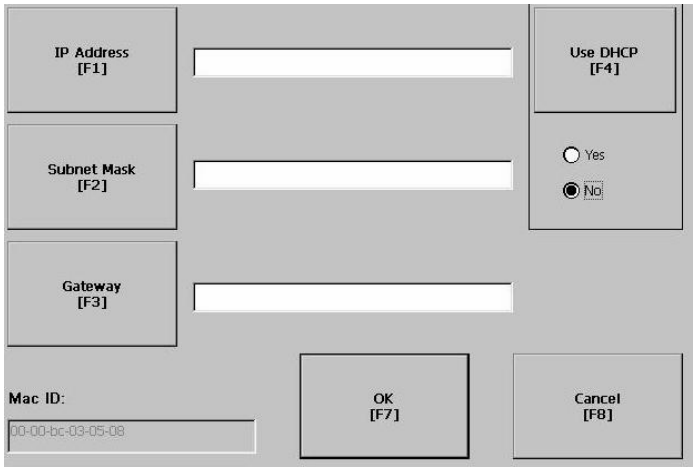
Defines Name Server addresses for the Network Adapter. These addresses are automatically assigned if DHCP is enabled for the network adapter.



Field	Description	Valid Values
Primary DNS	The address of the primary DNS resolver.	xxx.xxx.xxx.xxx
Secondary DNS	The address of the secondary DNS resolver.	xxx.xxx.xxx.xxx
Primary WINS	The address of the primary WINS resolver.	xxx.xxx.xxx.xxx
Secondary WINS	The address of the secondary WINS resolver.	xxx.xxx.xxx.xxx

IP Address

The IP Address screen identifies the IP address of the selected network adapter. If the network the terminal is connected to does not automatically assign an IP address, you can assign the address in this screen.

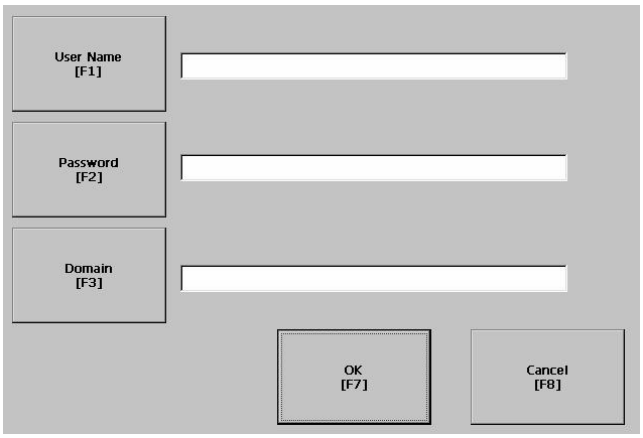


Field	Description	Valid Values
Use DHCP	Enables or disables DHCP (Dynamic Host Configuration Protocol) settings. DHCP automatically allocates network devices and configurations to newly attached devices on the network. If DHCP is set to Yes, the terminal is automatically assigned an IP address, Subnet Mask and Gateway. The fields are disabled. If DHCP is set to No, you can enter the IP address, Subnet Mask and Gateway address.	Yes (default) No
IP Address	A unique address identifying the terminal on the Ethernet network.	xxx.xxx.xxx.xxx 000.000.000.000 (default) Range of values for the first set of decimal numbers is 1-255 unless all fields are set to 000. The range of values for the last three sets of decimal numbers is 0-255.
Subnet Mask	Address must be identical to the server subnet mask.	xxx.xxx.xxx.xxx
Gateway	Optional Gateway address	xxx.xxx.xxx.xxx
Mac ID	Read only field	

Terminal Settings
↓
Networks and Communications
↓
Network Connections
↓
Network Identification

Network Identification

The Network Identification screen configures settings that enable the terminal to gain access to network resources. You can enter a user name, password and domain (provided by your network administrator).



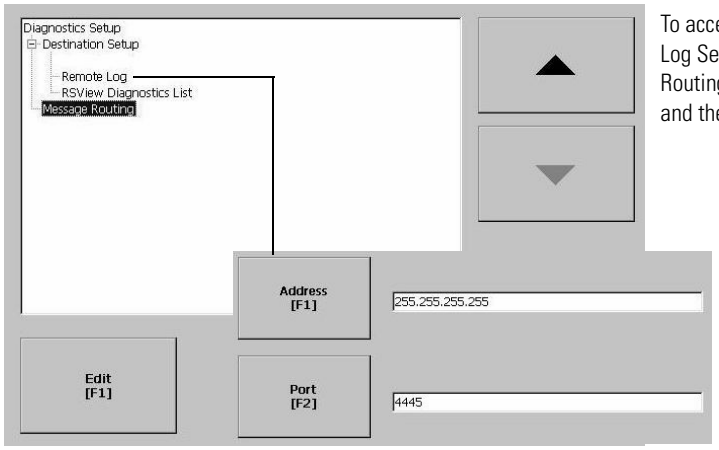
Field	Description	Valid Values
User Name	Identifies the user to the network.	70 characters maximum
Password	Characters that gain access to network along with the user name.	No character limitation
Domain Name	Provided by network administrator.	15 characters maximum

Diagnostic Setup

Terminal Settings
↓
Diagnostic Setup

The Diagnostic Setup screen configures diagnostics for the current computer. The screen shows a treeview of possible diagnostic nodes.

The Remote Log Destination forwards messages that it receives to a Windows 2000/XP computer running diagnostics. The location is determined by the IP address and port number.



To access the Remote Log Setup or Message Routing, select the node and then the Edit button.

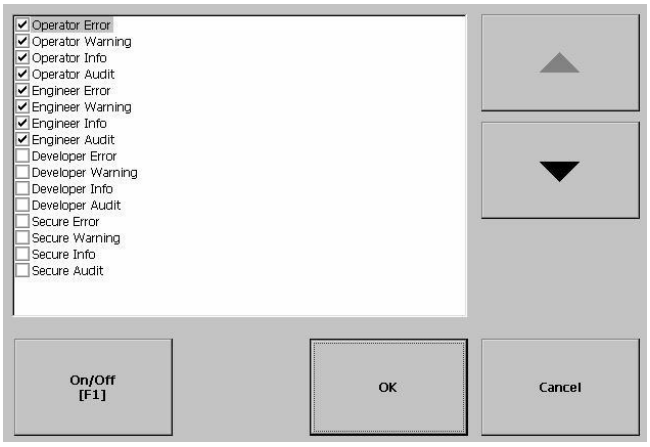
Field	Description	Valid Values
Address	Address of the remote Windows 2000/XP computer.	xxx.xxx.xxx.xxx
Port	The port used to communicate with the remote Windows 2000/XP computer.	4445 (default)

Message Routing

The Message Routing screen lets you access these screens:

- Remote Log
- RSView Diagnostics List

Each of the above screens shows a list of messages that can be sent to that destination. The list shows the On/Off status of each message type. Use the On/Off button to turn a message type on or off. A message type is enabled if it has a checked box.



File Management

The File Management screen lets you access screens to:

- Delete Files
- Copy Files

Terminal Settings
↓
File Management
↓
Delete Files

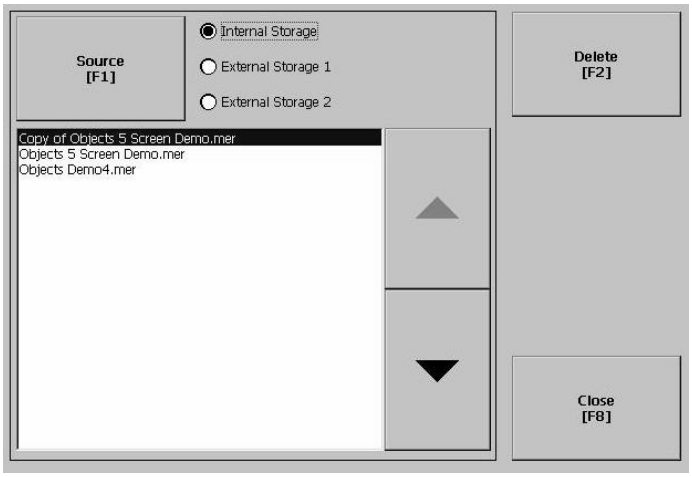
Delete Files

From the Delete Files screen you can select options to:

- Delete Applications - deletes an .MER application file from a storage location.
- Delete Fonts - deletes a font file from a storage location.
- Delete Log Files - deletes any data log files, alarm history files and alarm status files in the System Default location on the terminal.

Delete Application or Font Files

The process for deleting an application file or a font file is the same.



1. Select the Source button to select the storage location of the application or font file you want to delete.
   - Internal Storage - the Internal Compact Flash in the terminal
   - External Storage 1 - the External Compact Flash card loaded in the card slot of the terminal
   - External Storage 2 - for future use
2. Select a file from the list.
3. Select the Delete button.
4. You will be asked if you want to delete the selected application or font file from the storage location. Select Yes or No.

Delete Log Files

Select this option to delete any data log files, alarm history files and alarm status files in the System Default location on the terminal. You will be asked to confirm the operation.

Do you want to delete all of the RSView ME Station Log Files?

Select Yes or No. Any log files not located in the System Default location will not be deleted.

Terminal Settings
↓
File Management
↓
Copy Files

Copy Files

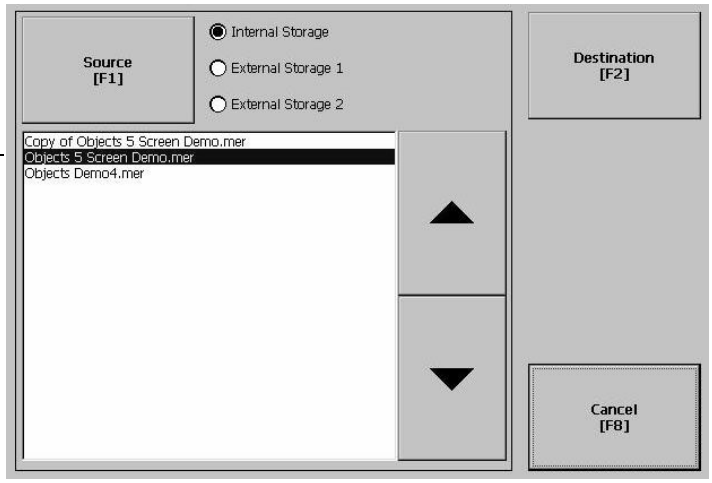
From the Copy Files screen, you can select options to:

- *Copy Applications* - copies an .MER application file from one storage location to another.
- *Copy Fonts* - copies a font file from one storage location to another.

Copy Applications or Fonts

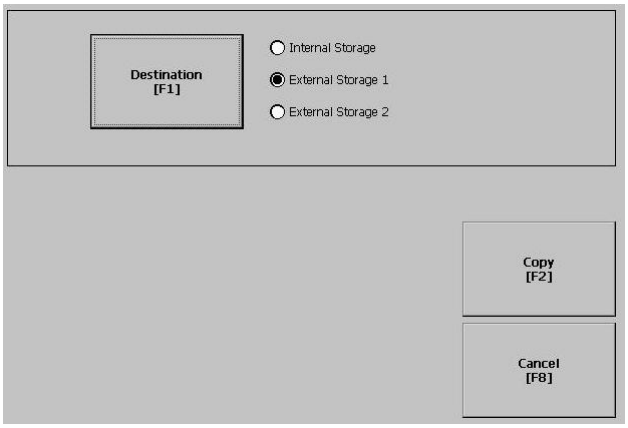
The process for copying an application file or a font file is the same.

List of files stored in Compact Flash of terminal.



1. Select the Source button to select the location of the application or font file you want to copy.
   - Internal Storage - the Internal Compact Flash in the terminal
   - External Storage 1 - the External Compact Flash card loaded in the card slot of the terminal
   - External Storage 2 - for future use

2. Select the Destination button on the same screen to open the following screen.



3. Select the Destination button to select the storage location where you want to copy the application or font file to. The destination cannot be the same as the source location.
   - Internal Storage - the Internal Compact Flash in the terminal
   - External Storage 1 - the External Compact Flash card loaded in the card slot of the terminal
   - External Storage 2 - for future use
4. Select the Copy button to copy the selected application or font file to the selected destination.

   If the file exists, you will receive a warning and will be asked if you want to overwrite the existing application.
5. Select Yes or No.

TIP RSView looks for .MER files in the \RockwellSoftware\RSViewME\Runtime folder and font files in the \RockwellSoftware\RSViewME\Fonts\ folder.

Display

The Display screen allows you to open screens to access:

- Display Temperature
- Display Intensity
- Screen Saver
- Cursor

Terminal Settings
↓
Display
↓
Display Temperature

Display Temperature

The Display Temperature screen shows the current temperature of the display.

The terminals have a CCFL (Cold-Cathode Fluorescent Lamp) backlight. This backlight requires temperature control when the internal temperature of the product is below 10 °C or above 60 °C. For proper backlight operation, the terminal monitors low and high temperature conditions.

- If the internal temperature of the product is below 10 °C, the backlight is set to overdrive or the full-rated current setting for at least five minutes.
- If the internal temperature is at or above 60 °C, the backlight is set to underdrive; 40% or less of full brightness. This reduces heat generation from the backlight.

Temperature monitoring begins when the terminal powers on, or when the backlight turns on, for example, exiting screen saver mode. The temperature control only affects display intensity; it does not restrict the use or operation of the terminal.

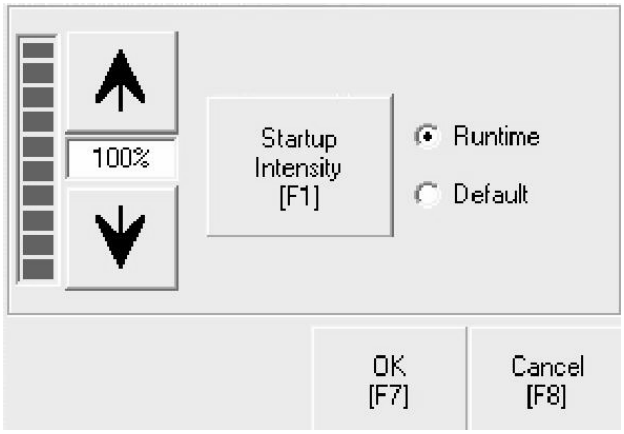
When a low or high temperature condition is detected, an error is sent to the system event log. If the temperature control is not functioning, a noncritical error is sent to the system event log but the terminal continues to operate normally.

TIP The CCFL backlight temperature control takes precedence over the application Backlight Settings.

Terminal Settings
↓
Display
↓
Display Intensity

Display Intensity

The Display Intensity screen lets you view or modify the current intensity of the backlight. The default intensity is 100%. When you change the intensity, the terminal temporarily changes to that intensity. The change is not permanent until you select OK.



The Startup Intensity button toggles between Runtime and Default. If Runtime is selected, the terminal startup screens will use the runtime intensity setting selected on the above screen. If Default is selected, the terminal startup screens will use the terminal default setting, which is near 100%.

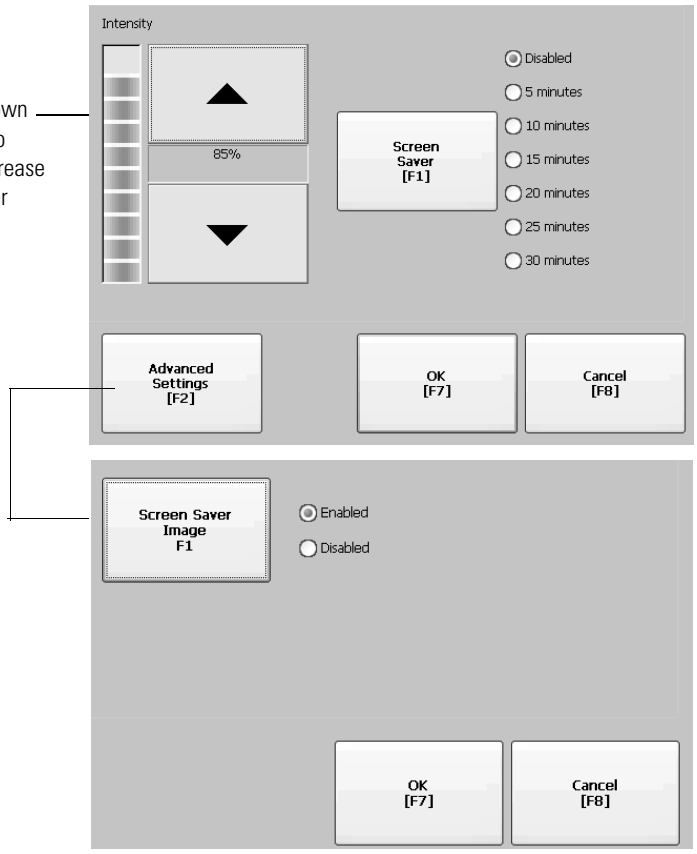
Terminal Settings
↓
Display
↓
Screen Saver

Screen Saver

The Screen Saver screen lets you:

- disable the screen saver.
- enable the screen saver after the selected idle time.
- adjust the brightness of the screen saver.
- enable/disable the screen saver bitmap.

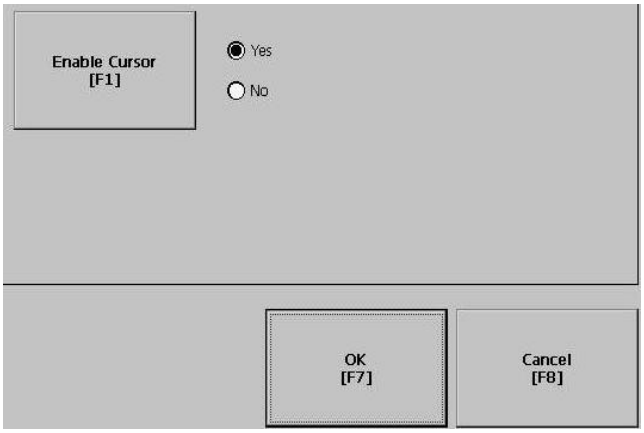
Select Up or Down Cursor button to increase or decrease the screen saver brightness



Terminal Settings
↓
Display
↓
Cursor

Cursor

The Cursor screen enables/disables the on-screen cursor.

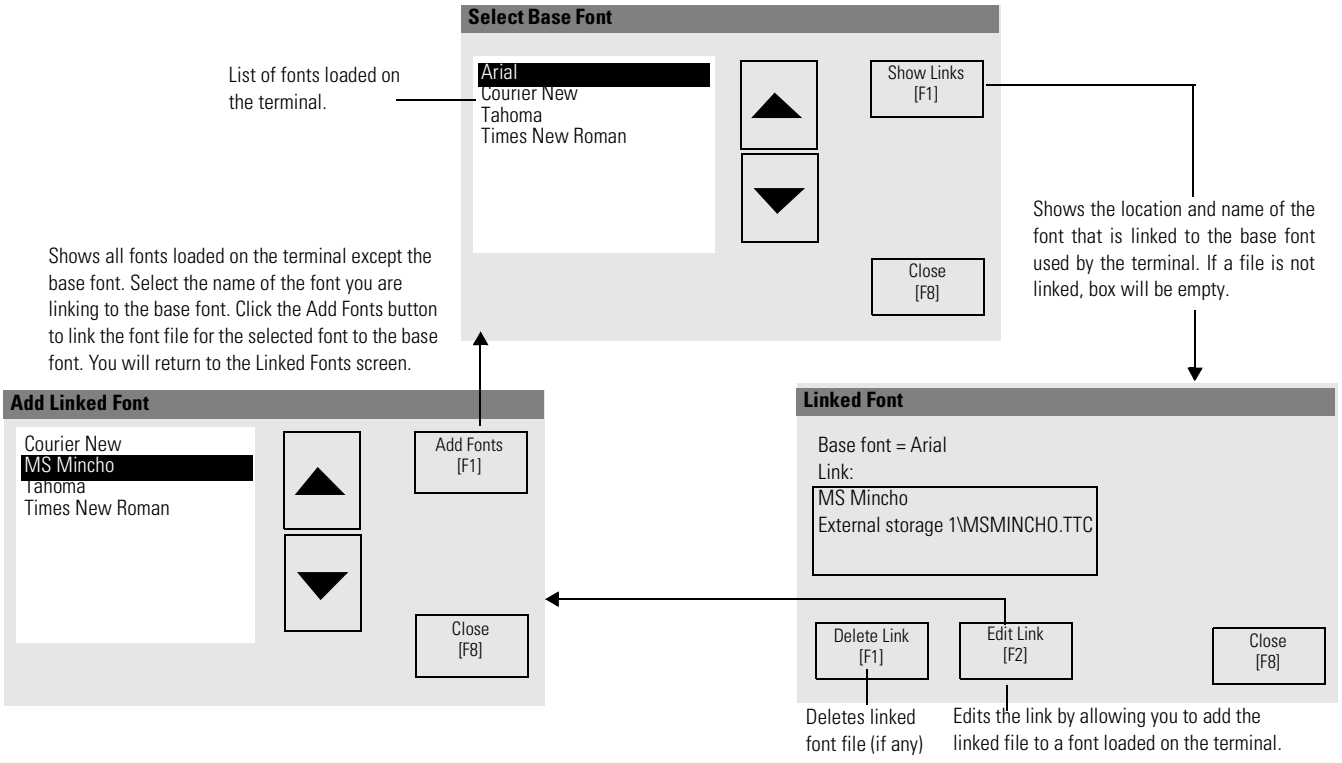


Font Linking

Terminal Settings
↓
Font Linking

Font linking allows you to run a translated application on the terminal by linking a font file to the base font (for example, linking a Chinese font file to the base font Arial).

For more details on pre-installed terminal fonts and additional fonts available for downloading, see Appendix E.



Input Devices

The Input Devices screen lets you access screens to view and modify settings for the:

- Keyboard
- Keypad
- Mouse
- Touch Screen

Keyboard and Keypad Setup

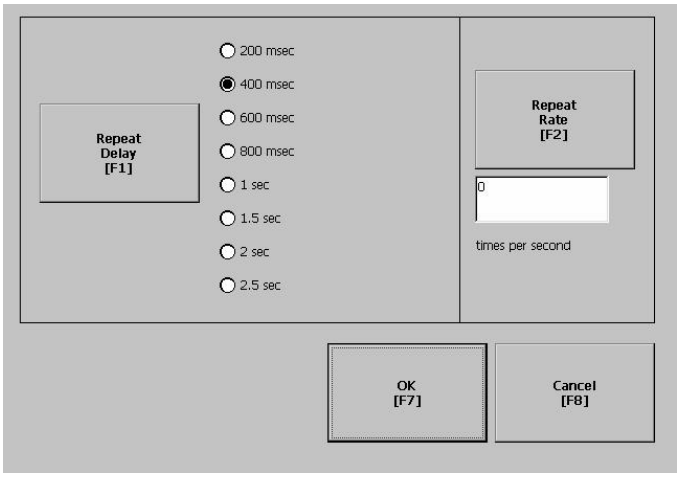
Terminal Settings
↓
Input Devices
↓
Keyboard or Keypad

From the Keyboard and Keypad screen, you can open the following screens to set:

- Key Repeat Settings
- Keypad Settings

Key Repeat Settings for Attached Keyboard and VersaView CE Keypad

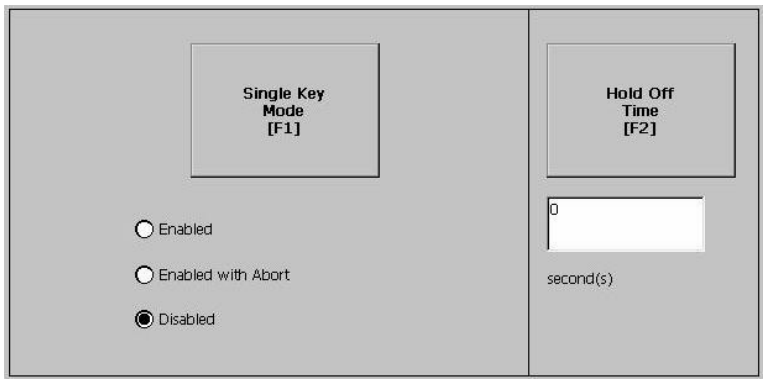
The Key Repeat Settings screen configures settings for keys on the VersaView CE terminal **or** keys an attached keyboard.



Field	Description	Valid Values
Repeat Rate	The number of times a key is repeated per second when you hold a key down.	Keypad: 0, 2 - 30 Keyboard: Device dependent, 0, 2-30 is typical
Repeat Delay	The amount time that elapses before a key is repeated.	200 ms 400 ms 600 ms 1 sec 1.5 sec 2 sec 2.5 sec Values are device dependent. An unsupported value is disabled (grayed).

Key Settings for VersaView CE Keypad

The Keypad Settings screen enables/disables Single Key Mode option which is used to restrict multiple or simultaneous key presses.



Field	Description	Valid Values
Single Key Mode	Enables or disables Single Key Mode. If enabled, any programmable key that is pressed inhibits all keys until the programmable key is pressed again. This includes the Alt, Ctrl, Shift keys. If enabled with abort, any secondary key press will terminate the initial key press immediately. If disabled, there are no restrictions on key presses.	Enabled Enabled with Abort Disabled (default)
Hold Off Time	The length of time to ignore multiple presses of the same key.	400 ms

IMPORTANT The keypad cannot produce Home, End, Page Up or Page Down when Single Key mode is enabled.

Terminal Settings
↓
Input Devices
↓
Touch Screen

Touch Screen

The Touch Screen lets you access these screens:

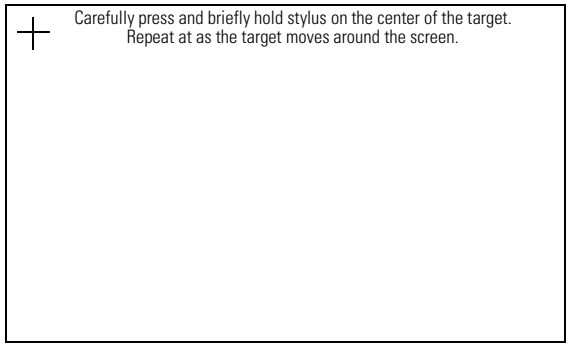
- Calibration
- Cursor
- Double-Tap Sensitivity

Touch Screen Calibration

IMPORTANT Use a plastic stylus device with a minimum tip radius of 1 mm (0.040 in) to prevent damage to the touch screen.

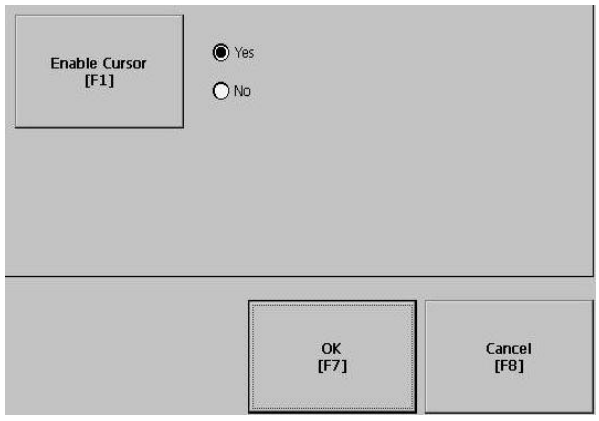
This screen calibrates the touch screen of the terminal. Touch the center of the target (+) each of the four times it appears. When the calibration is complete, you will see the message:

"Tap the screen to register saved data. Wait for 30 seconds to cancel saved data and keep the current settings."



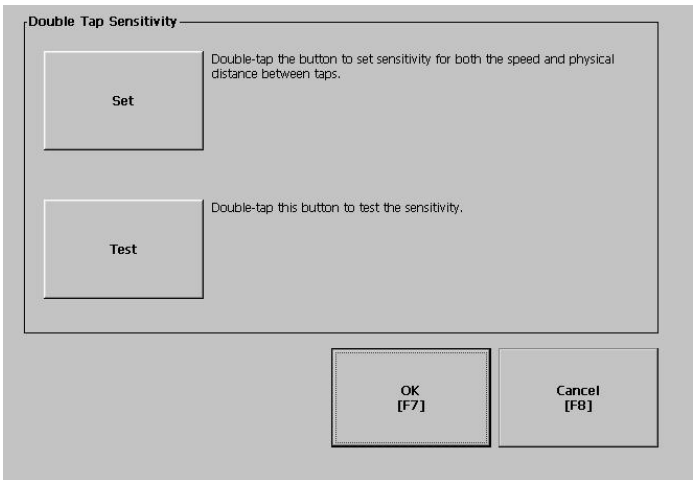
Cursor

This screen enables or disables the cursor on touch screen terminals. Disabling the touch screen cursor will not disable the mouse.



Double-Tap Sensitivity

This screen lets you set and test the sensitivity for both speed and physical distance between touch screen presses.



- The Set button sets the sensitivity of touch screen presses.
- The Test button tests the sensitivity of touch screen presses. If you double-tap the test button with the time set using the Set button, the Test button will reverse its foreground and background colors.

Terminal Settings
↓
Input Devices
↓
Mouse

Mouse

The Mouse screen sets and tests the sensitivity for both speed and physical distance between mouse clicks. This process is identical to that for setting Double-Tap sensitivity for the touch screen.

Print Setup

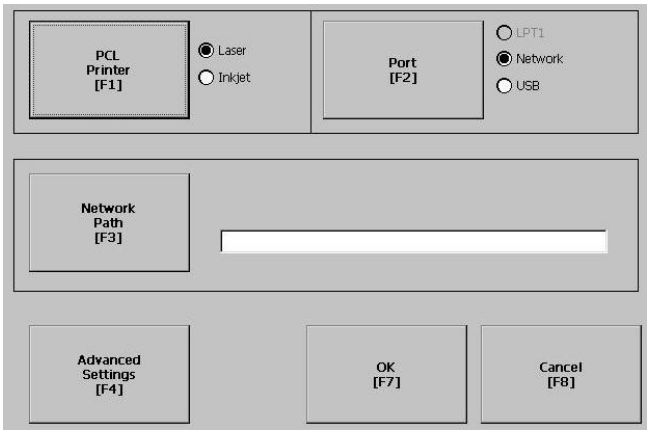
The Print Setup screen lets you access screens to configure print options for:

- Displays
- Alarms
- Diagnostic messages

Terminal Settings
↓
Networks and Communications
↓
Print Setup

Display, Alarm, and Diagnostic Print Setup

The setup for printing displays, alarm messages and diagnostics messages from an RSView .MER application is the same. The Advanced Settings for each function are different.



Field	Description	Valid Values
PCL Printer	Type of printer to use.	Laser (default) Inkjet
Port	Port to use for printing displays, alarm messages, and diagnostic messages.	Network (default) USB
Network Path	Network path of printer to use if the Port selection is Network.	519 characters maximum
Advanced Settings	Press this button to open additional settings.	

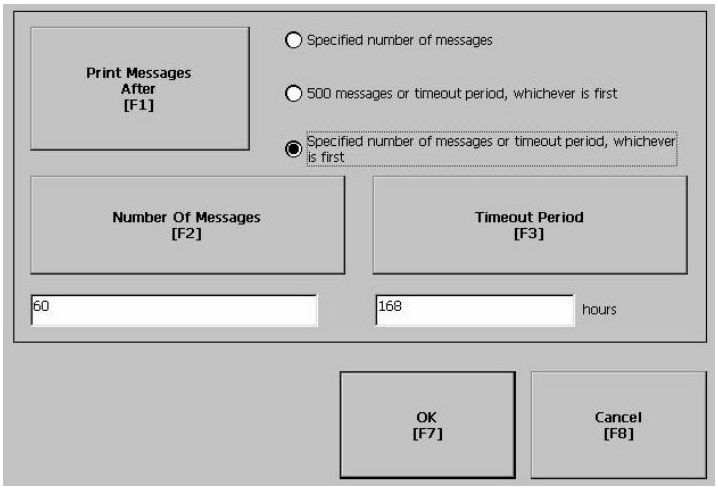
Advanced Settings for Display Print Setup

Select the Advanced Settings button to:

- change the print orientation (portait or landscape).
- enable or disable draft mode.

Advanced Settings for Diagnostic Messages and Alarm Messages

The following screen configures when to print diagnostic or alarm messages that are sent to the Network or USB port.



To configure how messages are queued for printing, select the Print Messages After button and set one of the following options.

- **Specified number of messages**

  Prints messages after 60 are queued or another specified value. The default is 60 (about one full page of messages.)

- **500 messages or timeout period, whichever is first**

  Prints after 500 messages are queued or a specific time period has elapsed, whichever comes first. The default time period is 168 hours (7 days). You can specify another value. For example, if 350 messages are in the queue and 7 days have elapsed, the 350 messages will print.

- **Specified number of messages or timeout period, whichever is first**

  Prints after a specified number of messages are queued or a specific time period has elapsed, whichever comes first.

  The default number of messages to queue is 60. The default timeout period is 168 hours (7 days). You can change both values. For example, the number of messages is set to 75 and the timeout period is set to 48 hours (2 day). If the queue has 75 messages after only 24 hours, these messages will print. If there are only 15 messages in the queue at 48 hours, the 15 messages will not print until the time period has elapsed.

Startup Options

The Startup Options screen accesses the following screens to modify:

- RSView ME Station Startup
- Startup Tests

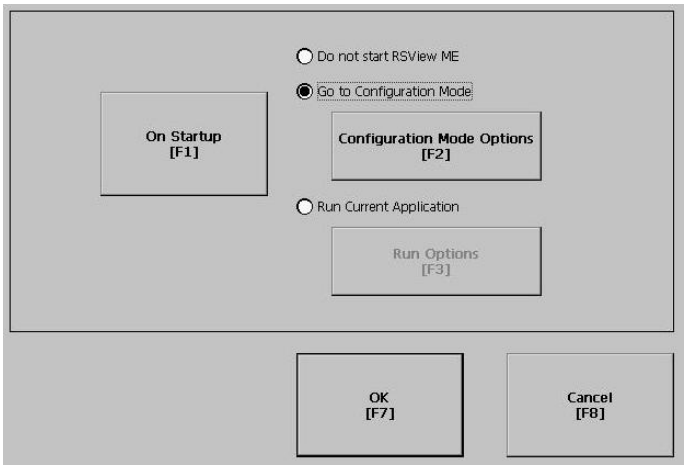
Terminal Settings
↓
Startup Options
↓
RSView ME Station Startup

RSView ME Station Startup

The RSView Machine Station Startup screen specifies what action the terminal takes on startup:

- Do not start RSView ME Station
- Go to Configure Mode of RSView ME
- Run the Current Application

  This option is available only if an application is loaded.



RSView ME Station will start up based on shortcuts in the Windows Startup folder and whether an application is loaded.

Select the On Startup button to switch between Do not start RSView ME, Go to Configure Mode, or Run the Current Application. Select the button under the last two options to configure specific settings for each mode.

Configuration Mode

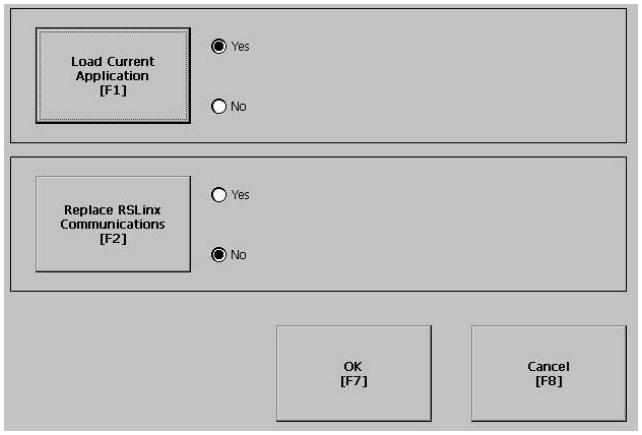
The Configuration Mode Options screen specifies whether the terminal will boot up in Configure Mode:

- with the current application loaded.
- with the communication configuration of the current application or the terminal's RSLinx communication configuration.

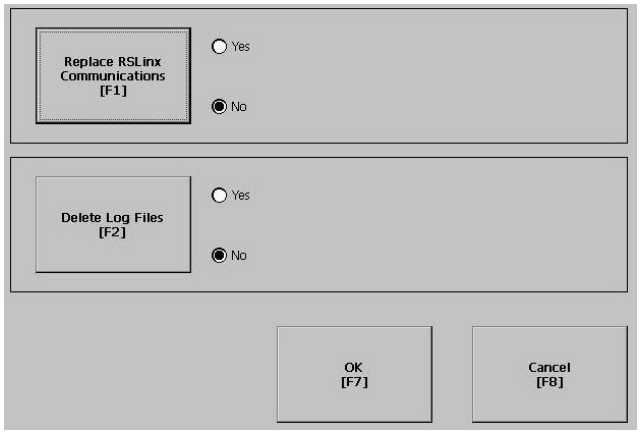
  If you select Yes to replace the terminal's communication configuration with that of the application, any changes made to the device addresses or driver properties in the RSLinx Communications screen will be lost.

These options are available only if an application is loaded in the terminal. If an application is not loaded, both options are disabled and set to No.

Configuration Mode



Run Options



Run Options

The Run Options screen specifies whether to:

- replace the terminal's communication (RSLinx) settings with application settings when the application is run.

  If you select Yes, any changes to the device addresses or driver properties in the RSLinx Communications screen will be lost when the terminal boots up.

- delete the log files (data, alarm history, alarm status) generated by the terminal from the System Default location before running the application.

Terminal Settings
↓
Startup Options
↓
Startup Tests

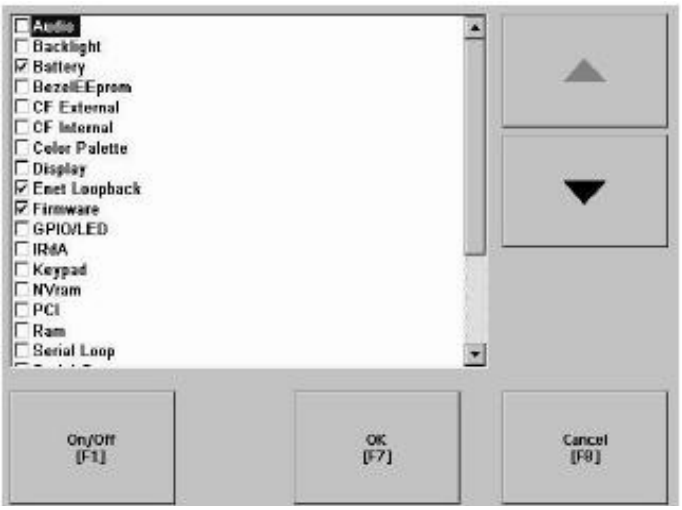
Startup Tests

The terminal can run extended tests on startup. The Startup Tests screen provides access to these screens:

- Select Tests
- Startup Tests Settings

Select Tests

The Select Tests screen shows a list of each test that can be performed on the terminal at startup and its current On/Off status. You can turn any test in the list on or off by selecting the On/Off button. The terminal will only run tests with a checked box.

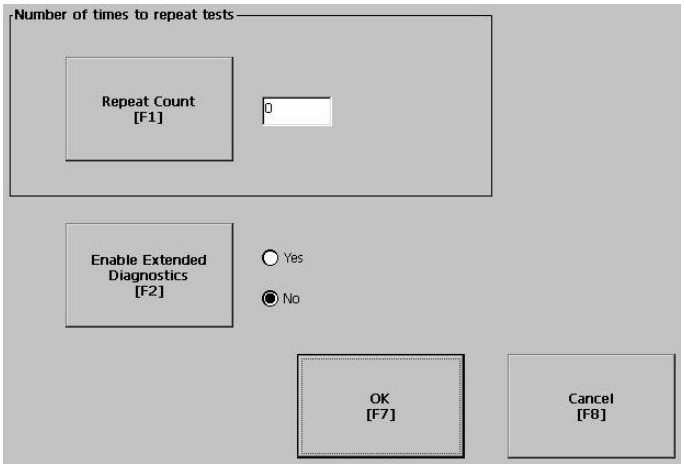


Startup Tests Settings

From the Startup Tests Settings screen, you can:

- enable extended diagnostics to run on the terminal at startup.
- disable extended diagnostics at startup.
- specify how many times to repeat the selected tests that are run on the terminal during startup.

The Repeat Count field shows the current value. You can enter a value in the range of 0 - 128.



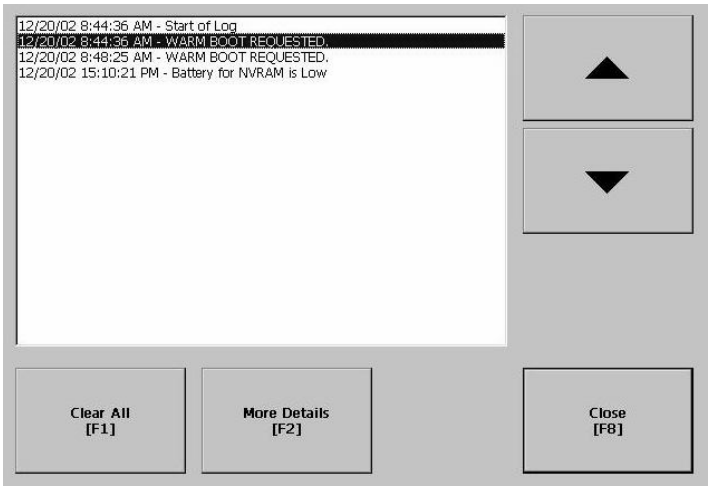
IMPORTANT Enabling Extended Diagnostics and setting a high Repeat Count will increase the time it takes the terminal to reboot.

The tests will run each time you reset or cycle power to the terminal until you disable Extended Diagnostics. Setting a low repeat count will also decrease the startup time.

System Event Log

The System Event Log screen displays a list of system events currently logged by the terminal.

Terminal Settings
↓
System Event Log



- To display System Event Log Details for a specific event, select an event and then select the More Details button.
- To clear all System Event Logs, press the Clear All button.

System Information

The System Information screen lets you access:

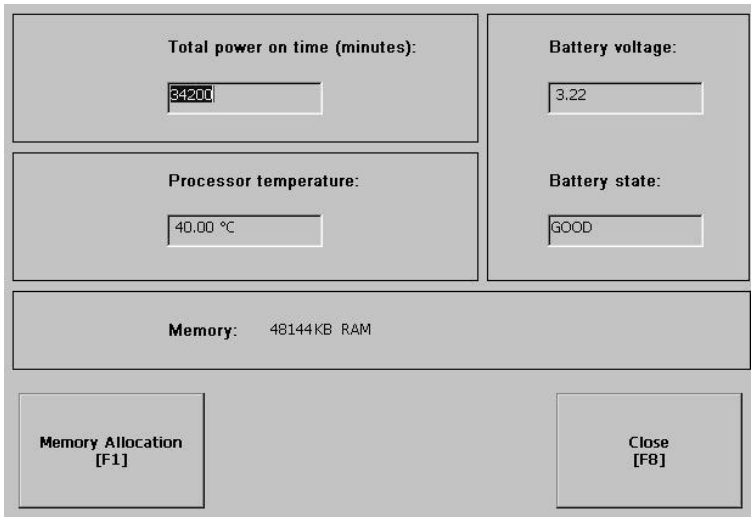
- RSView ME Station information
- Terminal Information

Terminal Settings
↓
System Information
↓
Terminal Information

Terminal Information

The Terminal Information screen displays the following details for the terminal.

- Total power on time
- Processor temperature
- Battery voltage and battery state
- Amount of memory on terminal



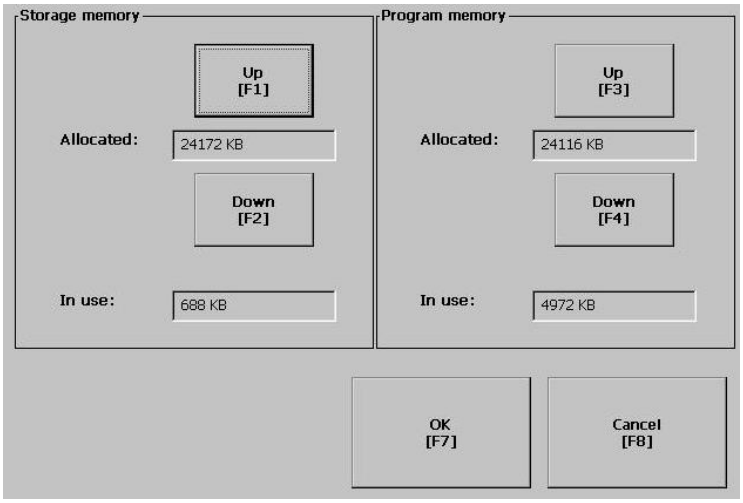
All fields are read only except for memory allocation.

To access details on Memory Allocation, select the Memory Allocation button.

Memory Allocation

The Memory Allocation screen displays the:

- amount of allocated storage or program memory.
- amount of storage or program memory currently in use.



You can modify the allocation of storage or program memory. Press the Up or Down button to increase/decrease the memory allocation. Each button press changes the allocation by a value of 4. If you change the allocation for one type of memory, the other is updated accordingly.

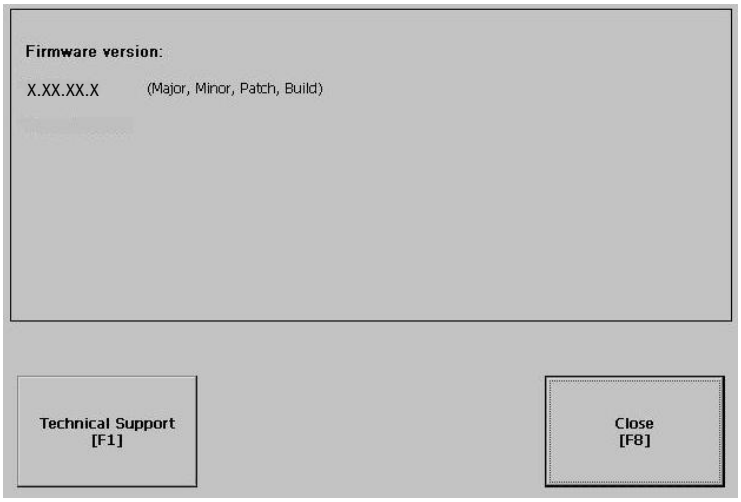
TIP These settings are not retained after a power cycle. The settings return to the defaults.

Terminal Settings
↓
System Information
↓
About RSView ME Station

RSView ME Station Information

The About RSView ME Station screen provides access to:

- RSView ME Station firmware number
- Rockwell Technical Support information



Time/Date/Regional Settings

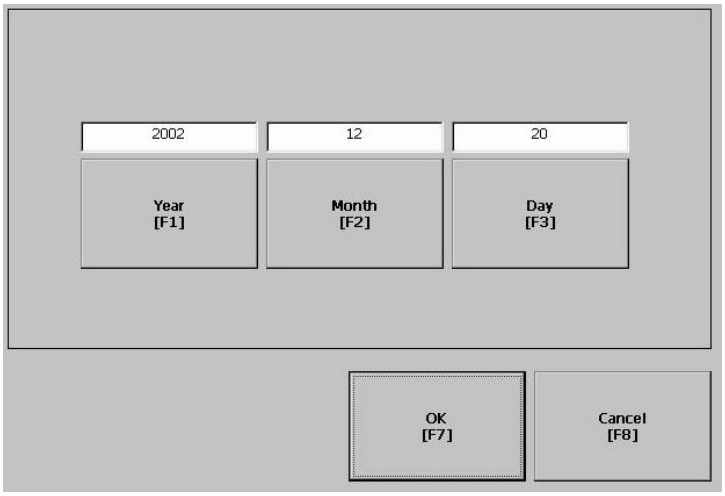
The Time/Date/Regional Settings screen lets you access these screens to set:

- Date
- Regional settings
- Time
- Time zone

Terminal Settings
↓
Time/Date/Regional Settings
↓
Date

Date

The Date screen shows and configures the current date in separate Year, Month and Day fields.

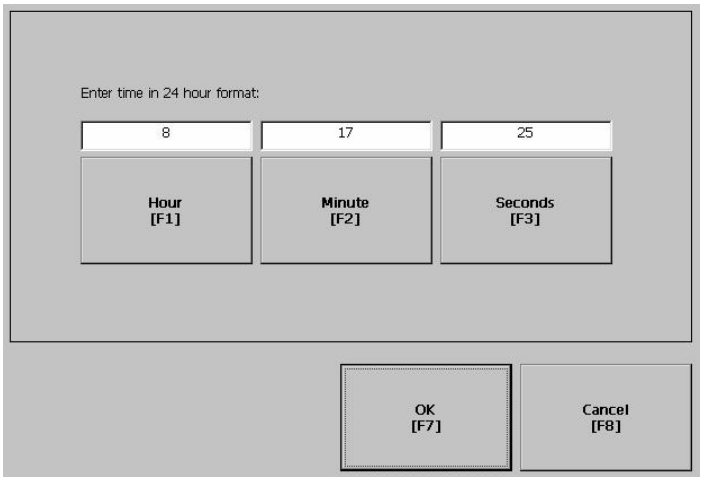


Field	Description	Valid Values
Year	The current year in a 4-digit format.	1980 - 2099
Month	The current month.	1 - 12
Day	The current day. The day of the month is validated based on the month.	0 - 31

Terminal Settings
↓
Time/Date/Regional Settings
↓
Time

Time

The Time screen shows and configures the current time in 24-hour format in separate Hour, Minute and Second fields.

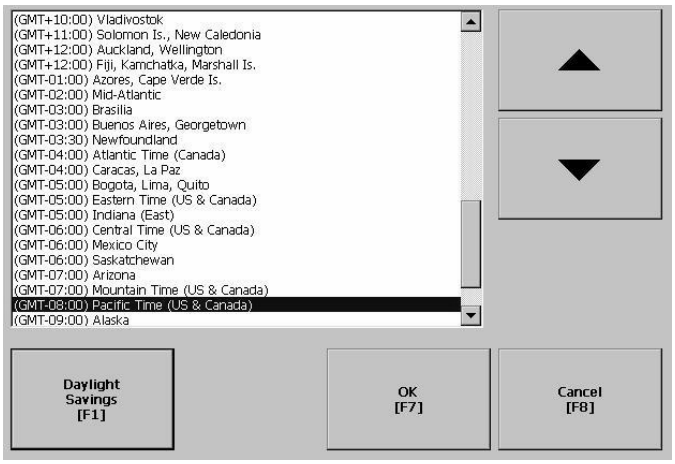


Field	Description	Valid Values
Hour	The current hour in 24-hour format.	0 - 23
Minute	The current minute in 24-hour format.	0 - 59
Seconds	The current second in 24-hour format.	0 - 59

Terminal Settings
↓
Time/Date/Regional Settings
↓
Time Zone

Time Zone

The Time Zone screen shows the current time zone that is installed on the terminal. Time zones are installed as a part of the operating system. Changing the time zone adjusts the current time and date to match the new time zone.

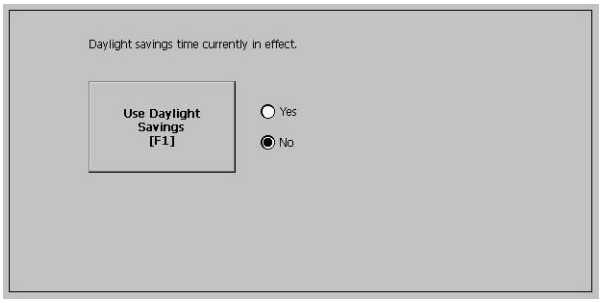


Language	Default Time Zone
English	(GMT -05:00) Eastern Time (US & Canada)
French	(GMT +01:00) Brussels, Copenhagen, Madrid, Paris
German	(GMT +01:00) Amsterdam, Berlin, Bern, Rome, Stockholm, Vienna
Japanese	(GMT +09:00) Osaka, Sapporo, Tokyo

If the selected time zone supports Daylight Savings, you can select the Daylight Savings button.

Daylight Savings

The Daylight Savings screen configures whether daylight savings time is in effect for the current time zone. Daylight Savings is set to Yes for all time zones except for Japanese, which does support daylight savings. Daylight savings changes are not permanently applied until you close the Time Zone screen.



Terminal Settings
↓
Time/Date/Regional Settings
↓
Regional Settings

Regional Settings

The Regional Settings screen lets you access screens to modify the current:

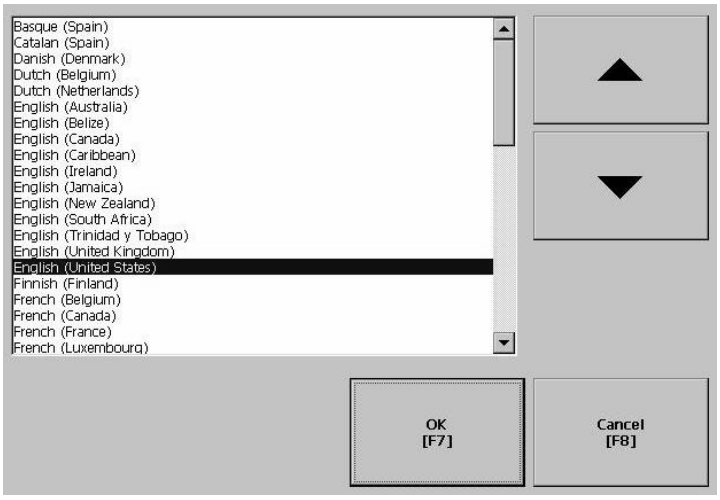
- Language
- Numeric Format
- Long Date Format
- Short Date Format
- Time Format

The current language is shown at the bottom of the Regional Settings screen.

Terminal Settings
↓
Time/Date/Regional Settings
↓
Regional Settings
↓
Language

Language

The Language screen allows you to select a language that is installed on the terminal. Languages are installed as a part of the operating system.



Terminal Settings
↓
Time/Date/Regional Settings
↓
Regional Settings
↓
Numeric Format

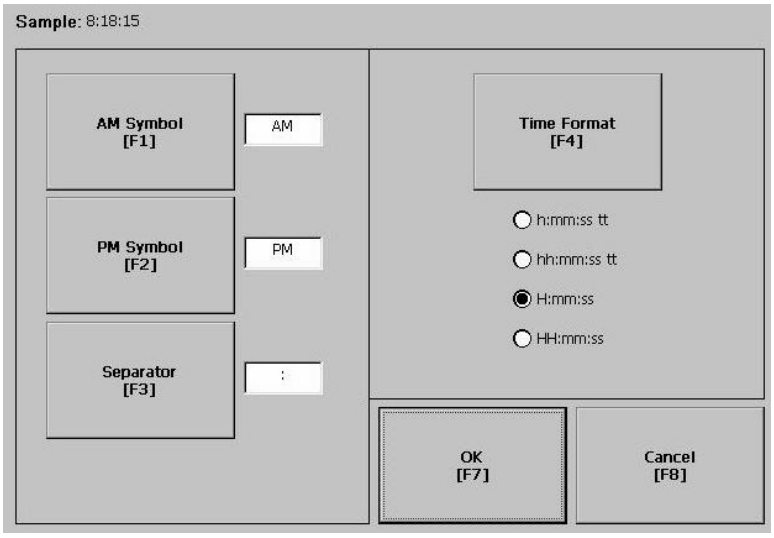
Numeric Format screen

The Numeric Format Screen allows you to modify the decimal separator used by the current language. The default decimal separator is ".". The field will accept a separator up to 3 characters.

Terminal Settings
↓
Time/Date/Regional Settings
↓
Regional Settings
↓
Time Format

Time Format

The Time Format screen configures the time format for the current language. A sample of the current time is shown using the currently selected format.

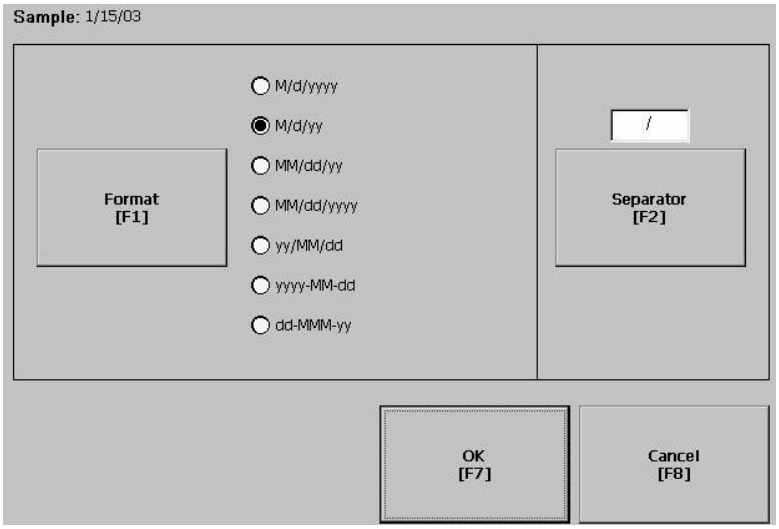


Field	Description	Example
Time Format	h:mm:ss tt (default) h = hour, no leading zero tt = AM or PM symbol	7:23:02 AM or 1:13:31 PM 11:43:59 AM
	hh:mm:ss tt hh = hour with leading zero tt = AM or PM symbol	07:23:02 AM or 01:13:31 PM 11:43:59 PM
	H:mm:ss H = hour in 24 hour format, no leading zero	7:03:42 or 1:13:32 23:43:59
	HH:mm:ss HH = hour in 24-hour format with leading zero	07:03:42 or 01:13:22 23:43:59
AM Symbol	Characters to indicate AM. If the time format is set to h:mm:ss tt or hh:mm:ss tt, you can modify the AM symbol.	AM (default) 12 character maximum
PM Symbol	Characters to indicate PM. If the time format is set to h:mm:ss tt or hh:mm:ss tt, you can modify the PM symbol.	PM (default) 12 character maximum
Separator	Character(s) that separate fields in time format.	: (default) 3 character maximum

Terminal Settings
↓
Time/Date/Regional Settings
↓
Regional Settings
↓
Short Date Format

Short Date Format

The Short Date Format screen configures the short date format used by the current language. A sample of the current date is shown using the currently selected short date format.

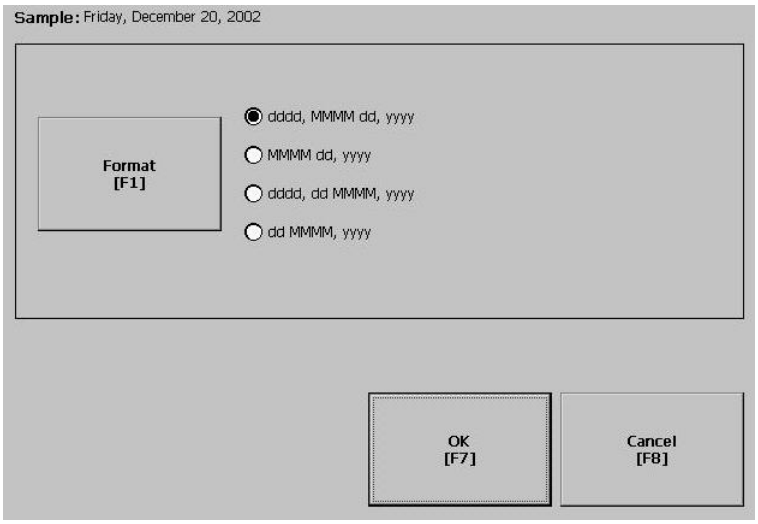


Field	Short Date Formats	Example
Format	M/d/yyyy (default) M/d/yy MM/dd/yy MM/dd/yyyy yy/MM/dd yyyy-MM-dd dd-MMM-yy	1/2/2003 1/2/03 01/02/03 01/02/2003 03/01/02 2003-01-02 02-Jan-03
Separator	Character(s) separator for fields in time format. The default separator is either - or / depending on short date format.	- or / (default) 3 character maximum

Terminal Settings
↓
Time/Date/Regional Settings
↓
Regional Settings
↓
Long Date Format

Long Date Format

The Long Date Format screen configures the long date format used by the current language. A sample of the current date is shown using the currently selected long date format.



Field	Short Date Formats	Example
Format	dddd, MMMM, dd, yyyy (default) dddd is name of week day MMMM is name of month dd is 2-digit day of month with leading zero yyyy is 4-digit year	Monday, January 01, 2003
	MMMM dd, yyyy MMMM is name of month dd is 2-digit day of month with leading zero yyyy is 4-digit year	January 01, 2003
	dddd, dd MMMM, yyyy dddd is name of week day dd is 2-digit day of month with leading zero MMMM is name of month yyyy is 4-digit year	Monday, 01 January, 2003
	dd MMMM, yyyy dd is 2-digit day of month with leading zero MMMM is name of month yyyy is 4-digit year	01 January, 2003

Windows CE .NET Operating System

Chapter Objectives

This chapter provides information on:

- Windows CE .NET architecture
- Windows CE .NET programs for the VersaView CE
- Using Windows CE .NET
- VersaView CE terminal memory
- Control Panel Applications for configuring the VersaView CE terminal

Windows CE .NET Architecture

The Windows CE .NET operating system from Microsoft provides a portable, scalable, real-time operating system for embedded devices. The modular design of Windows CE .NET allows the platform builder to include only those features required for the specific product application. However, Windows CE .NET is still a subset of the other Microsoft operating systems, and it runs Win32 applications.

Windows CE .NET Benefits

There are three major differences between Windows CE .NET and other Microsoft Windows operating systems. Windows CE .NET:

- has a small memory footprint requirement
- runs on a wide variety of processor architectures
- has a real-time scheduler

The small memory footprint allows Windows CE .NET to operate in small solid-state memory devices (8 MB typical). In contrast, PC-based Windows require hundreds of megabytes of storage space.

VersaView CE terminal has an x86 based processor to maximize the consistency between Windows 2000/XP and Windows CE .NET applications.

Compiling Windows CE .NET Applications

While the Windows CE .NET operating system brings a higher level of standardization to embedded computing devices, third-party software applications must still be compiled and tested to run on each Windows CE .NET device. The compilation is required to tailor the software application to the device's processor and unique hardware features.

Microsoft created hardware reference models for the Handheld (HPC) and the Pocket (PPC) PC so that third-party applications can run on these standard platforms. There are no hardware standards for embedded devices.

The VersaView CE terminal is largely compatible with HPC and PPC, so applications that are compiled for the x86 may run on the VersaView CE terminal.

Windows CE .NET Programs for the VersaView CE

The VersaView CE terminal includes RSView Machine Edition software. Refer to the user manual and online help shipped with RSView Studio for information about using this software.

The Windows CE .NET operating system and applications are stored on the Internal Compact Flash of the VersaView CE for permanent storage and can be accessed as the \Storage Card directory in Windows Explorer. (They are also available on the VersaView CE Accessory CD). The operating system and RSView Machine Edition are loaded into RAM on startup to improve response time.

Additional programs can be installed using ActiveSync or an External Compact Flash card on the VersaView CE terminal.

The VersaView CE ships with the following programs pre-loaded.

Application	Description
Microsoft Internet Explorer 5.5	Web browser
ActiveSync Support	Connects the VersaView CE to a desktop computer running ActiveSync.
Control Panel	Set of configuration tools for setting up the VersaView CE terminal
Windows Explorer (Shell)	User interface to the system much like a desktop PC
Remote Desktop Connection	Services for thin client applications included on the Accessory CD (formerly Terminal Server Client)
WordPad	Text editor
PDF Viewer	Reader for Adobe Acrobat PDF files

Other Windows CE .NET programs are available. Most of these programs have been written for PPC devices, and some may run on the VersaView CE. For more information on Windows CE .NET programs, see the Knowledgebase at http://support.automation.rockwell.com.

Installing Applications

The VersaView CE terminal allows field-installation of third-party software. Refer to Chapter 8 for details on how to use Microsoft ActiveSync to install and remove application programs on the VersaView CE. Each application program must be compiled for the x86 processor.

If the application program literature does not specifically identify the VersaView CE as a compatible hardware platform, take caution if trying to install and run it on the terminal. While the program may operate on the X86 processor, there could be conflicts with running it on the VersaView CE terminal. Testing is essential.

Using Windows CE .NET

The Windows CE .NET operating system provides a user interface similar to other Microsoft Windows operating systems. This user interface has been simplified to reduce the memory footprint. Therefore, minor differences exist between the desktop Windows interface and the Windows CE .NET interface.

The Windows CE .NET graphical interface simplifies interaction with the computer. You simply select and move objects on the screen by tapping and dragging them using your finger or stylus on the touch screen, or using an external mouse.

TIP If you have difficulty selecting objects using the touch screen, run the calibration program described on page 5-14.

The VersaView CE terminal has a keypad, touch screen, or input panel for operator input. In addition, an external keyboard or mouse can be connected to one of the USB ports of the terminal.

You may find it convenient to use the following shortcuts. These shortcuts work with the VersaView CE terminal keypad, an attached keyboard, or the input panel.

Shortcut	Description
Ctrl+Esc	Opens the Windows CE .NET Start menu. Use arrow keys to select a program and Enter to run it.
Alt+Tab	Starts the Task Manager.
Enter	This key is equivalent to double-tap. In a dialog box, you can select Enter or OK.
Shift + Tab or ⇤	Selects the previous control in a dialog.
Tab or ⇥	Selects the next control in a dialog.
Ctrl+Tab	Opens the next tab in a tabbed dialog.
Esc	Closes a dialog without saving changes.
Arrow keys	Selects controls or items from a list in a dialog.
Alt	Activates menus.

Start Menu and Taskbar

Use the Start menu to run programs, configure settings, and open recently-used documents. A single-click on the Start menu button on the bottom left of the screen brings up the menu. Subsequent clicks select the program or item you want to open. The key sequence Ctrl+Esc also activates the Start menu.

The taskbar across the bottom of the screen contains buttons for programs already running, along with a status area and a Desktop icon. You can alternately minimize and maximize an open application by clicking on its taskbar button. Double-clicking on any icon in the status area shows more information about that function. A single-click on the Show Desktop button (far right side of taskbar) minimizes all open windows and displays the VersaView CE computer desktop. You can close an application by clicking with the right mouse button on its taskbar button and choosing Close.

Command Bar

A Windows CE.NET program has a command bar located across its top. This command bar contains pull-down menu names and toolbar buttons for the application.

Click on a menu name or toolbar icon to interact with the specific program. The Help (?) button on the right side of the command bar provides application-specific help. The Exit (X) button on the far right side of the command bar exits the application.

Windows CE .NET command bar does not have a Minimize button. Click the taskbar button to minimize a program window, or use the Show Desktop button to minimize all open program windows.

Finding Files

Select Start>Programs>Windows Explorer to locate files on the VersaView CE terminal. You can alternately double-click the My Computer icon on the Desktop to open the Windows Explorer program. Windows Explorer allows you to browse and manipulate the VersaView CE files and folders. The Edit menu allows you to move files from one location to another using the Copy or Cut and Paste commands. When you create and save a new file, it is stored in the My Documents folder unless you specify another location.

TIP The VersaView CE file system resides in RAM and flash memory. RAM is volatile and is not persistent after a power cycle. Save files that must be persistent to the\Storage Card Folder that resides on the internal Compact Flash Card.

Browsing Web Pages

Select Start>Programs>Internet Explorer to view Web pages. You can alternately double-click the Internet Explorer icon on the Desktop to open the Internet Explorer program. To access pages stored on the VersaView CE, use the File>Open command and select the Browse button to locate the file. To view Internet or Intranet pages, type a URL in the Address box.

Before you can access remote Web pages, the VersaView CE must be connected to a network. See page 5-12 for details on configuring the Ethernet interface. Additional network settings such as a Proxy Server can be configured in the Internet Explorer application using the Options command under the View menu.

The Microsoft Internet Explorer application is similar to the PC version. It offers many of the same features of the PC version, and can be used to view most Internet HTML web pages. Some advanced web features may not be fully supported.

Printing

Some VersaView CE software applications may support printing. To print from these applications, select the File>Print command. A PCL compatible printer must be connected to the USB or Ethernet port on the VersaView CE terminal.

VersaView CE Memory

The VersaView CE has the following memory areas.

- Boot ROM
- Internal Compact Flash
- Dynamic RAM
- External Compact Flash Cards
- USB Mass Storage Devices

Boot ROM

The boot ROM is used to power-up the VersaView CE, perform power-up self tests, and load the Windows CE .NET operating system into dynamic RAM. The boot ROM code is not user accessible.

Internal Compact Flash

The Internal Compact Flash is the main storage memory in the VersaView CE terminal. The Windows CE .NET operating system and user applications are stored in flash memory. On powerup, the operating system and any auto-start applications are transferred to dynamic RAM, where they are executed.

The remainder of the flash memory is a FAT partition that appears as a folder named "\Storage Card" in Windows CE .NET. Files stored here are persistent (saved even after a reset or power cycle).

WARNING

Only programs and files loaded in the \Storage Card folder are permanently saved to flash memory. All other folders or files existing in RAM are lost when power is cycled.

Dynamic RAM

The RAM memory is split into two segments: Storage and Program memory. The System application in the Control Panel has a slider control that determines the allocation mix between Storage and Program memory.

The Storage memory segment is a virtual RAM disk known as the Object Store. It provides specialized storage for the Windows CE .NET Registry, the file system, and system databases. The RAM-based Storage memory segment is ***not*** persistent as in HPC devices, so all files stored here must be re-created at every startup.

The Program memory segment provides traditional computer RAM-like functions for holding application code, heaps, stacks, and data at runtime. The VersaView CE loads the Windows CE .NET operating system and any auto-start applications from flash memory into the Program memory at powerup.

External Compact Flash Cards

External Compact Flash cards are available for the VersaView CE terminal to increase the space for storing files. When a Compact Flash Card is installed in the card slot of the VersaView CE, a StorageCard2 icon is displayed under My Computer, and files on the memory card can be manipulated using the Windows Explorer program.

The card slot on the VersaView CE supports Type 1 Compact Flash cards. The cards (2711P-RCx) are available in different sizes. For details on how to install/remove cards from the card slot, refer to Chapter 6.

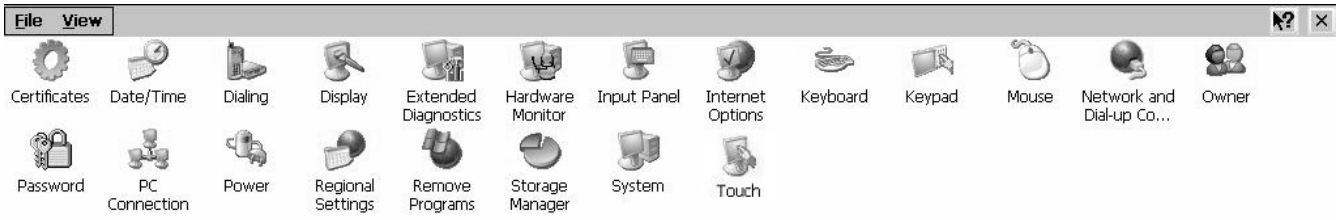
USB Mass Storage Devices

USB devices that comply with the "USB Mass Storage Class Specification, Version 1.0" are supported to enable a wide variety of USB-based storage devices such as hard drives, floppy disks, CD-ROM drives and ATA flash readers. Up to 10 devices are supported, concurrently. DVD drives are not supported.

Control Panel Applications

The VersaView CE terminal has user-configurable settings which are accessed from the Windows CE .NET Control Panel applications. These applications are similar to other Microsoft Windows operating systems. Select Start>Settings>Control Panel to open the Control Panel window.

Control Panel Applications on the VersaView CE



Application	Description	See page
Certificates	Manages digital certificates used by some applications for establishing trust and secure communications.	5-27
Date/Time	Sets the date and time on the terminal.	5-25
Dialing	Configures dialing rules for telephone and modem communications.	5-11
Display	Configures the display and color settings, the brightness of the backlight, and the screen saver.	5-18
Extended Diagnostics	Enables tests to run on the terminal at each startup and the number of times to run each test.	5-20
Hardware Monitor	Views the current voltage and temperature, and system events logged on the terminal.	5-22
Input Panel	Configures an input panel for entering/editing data on a touch screen terminal.	5-17
Internet Options	Configures Start and Search pages, clears Cache and History, and specifies connection and security settings for Internet Explorer.	5-27
Keyboard	Configures settings for an attached keyboard.	5-15
Keypad	Configures settings for keys on the VersaView CE terminal.	5-16
Mouse	Sets the sensitivity of the mouse, if attached.	5-17
Network and Dial-up Connection	Configures ActiveSync and Ethernet network connections between your terminal and a computer.	5-12
Owner	Configures network and user identification information for your terminal.	5-10
Password	Sets a password to protect your terminal against unauthorized use. The password can be enabled at system startup or when the screen saver is activated.	5-11
PC Connection	Selects a configured connection for connecting your VersaView CE terminal to another computer.	5-13

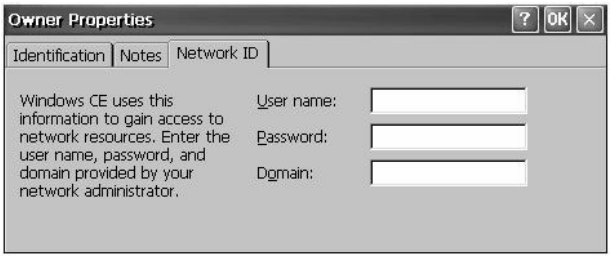
Application	Description	See page
Power	Provides information on the battery condition of the terminal and other power management features.	5-22
Regional Settings	Sets the clock, date and language, and configures formats for numbers, currency, time, date and regional settings.	5-25
Remove Programs	Removes programs installed on your terminal.	5-28
Storage Manager	Displays information on terminal's hard drive, Also reformats and manages partitions for hard drive.	5-28
System	Lists system properties like memory allocation, device information, operating system version.	5-23
Touch	Calibrates the touch screen, sets the sensitivity of touch screen taps, and enables/disables the touch screen cursor.	5-14

Owner

The Owner dialog provides network and user identification information for your VersaView CE terminal.

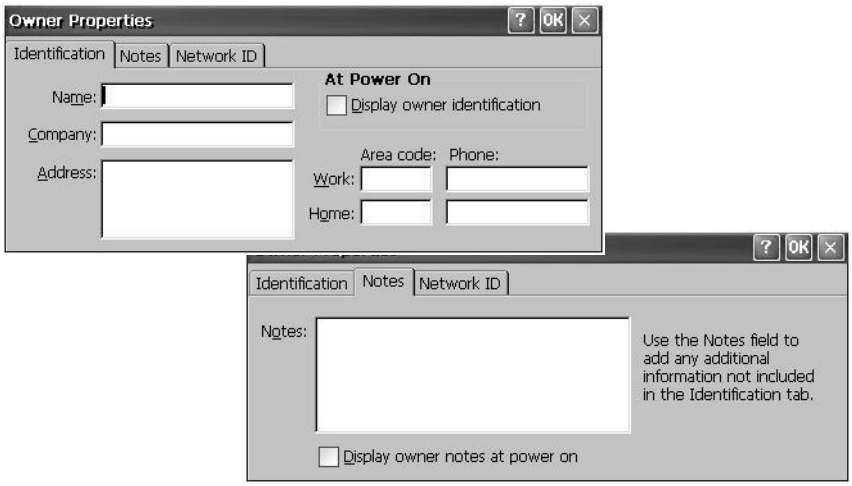
Network ID

The Network ID tab identifies the VersaView CE terminal to a network so it can gain access to network resources. A username, password, and domain may be necessary; if so, contact your system administrator. When done, click OK.



Identification and Notes

The Identification tab defines optional user information for your VersaView CE terminal. Use the Notes tab if it is necessary to document additional information.



Password

The Password dialog lets you define a password to protect your terminal against unauthorized use. You can require that the defined password be entered each time the terminal is restarted and/or when the screen saver is activated. Select OK to activate settings.

Dialing

The Dialing dialog is a standard Windows control panel application that configures dialing rules for modem communications on your VersaView CE terminal.

Network and Dial-up Connections

The Network and Dial-up Connections application lets you configure:

- ActiveSync connection between your VersaView CE terminal and another computer.
- Ethernet network connection

ActiveSync Connection

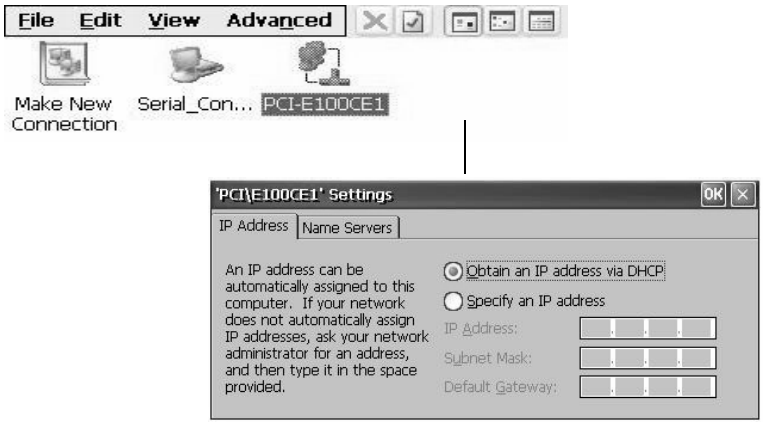
For details on establishing an ActiveSync connection between your VersaView CE and a computer, see chapter 8.

Serial Connect is the default, pre-configured ActiveSync connection.

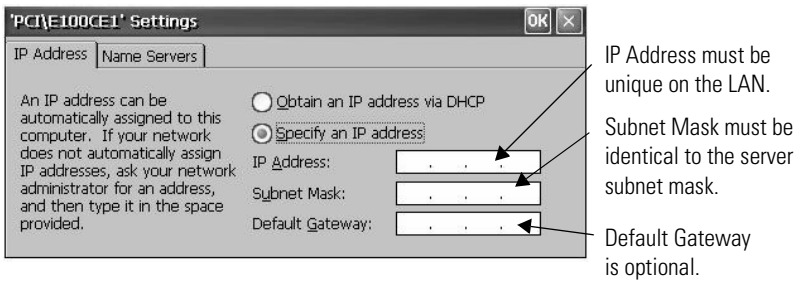
Configuring Ethernet Connection

To configure an Ethernet network connection:

1. Select the Network and Dial-up Connections application.
2. Select the PCI-E100CE1 icon to configure Ethernet settings.



3. On the IP address tab, select Obtain an IP address via DHCP or Specify an IP Address
   - IP addresses may be automatically assigned if DHCP is enabled for the Ethernet adapter.
   - If you select Specify an IP Address, complete the three text boxes with information from your network administrator.



4. Select OK in the title bar. A window will prompt you to either remove and reinstall your card or restart the device for the new settings to take effect. Select OK in the notification window.

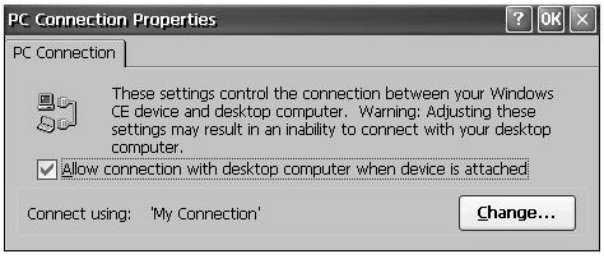
   For the Built-in Ethernet Controller, you must restart the terminal.

5. Select OK to close the Network Configuration dialog.

TIP If DHCP is enabled for the adapter, Name Server addresses may be automatically assigned. You can specify additional WINS or DNS addresses on the Name Servers tab.

PC Connection

The PC Connection dialog lets you select and enable a configured connection between your VersaView CE terminal and another computer. The current connection is listed at the bottom of the tab. To change the connection to another computer, press the Change button. A dialog will open allowing you to select another configured computer.Click OK when done to activate change.



WARNING Adjusting the PC connection named "Serial_Connect" may result in an inability to connect with your desktop computer via ActiveSync.

Touch

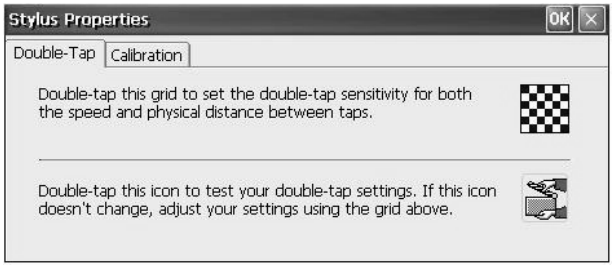
The Touch Properties dialog lets you perform the following operations for VersaView CE touch screen terminals:

- set double-tap sensitivity
- calibrate the touch screen

When done performing operations, remember to select OK in the title bar to activate settings.

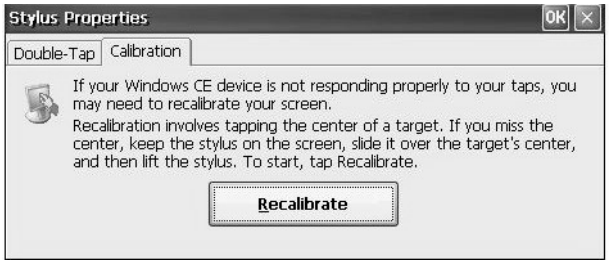
Double-Tap Sensitivity

The Double-Tap tab sets the sensitivity for both the speed and physical distance between screen taps. Double-tap the top grid to set the sensitivity. Double-tap the bottom grid to test the setting.



Calibration

The Calibration tab provides instructions on how to calibrate the touch screen. You may have to do this if the terminal is not responding to your taps. Select the Recalibrate button. Touch the center of the target as it moves around the screen. When the target returns to its initial position, the calibration is complete.



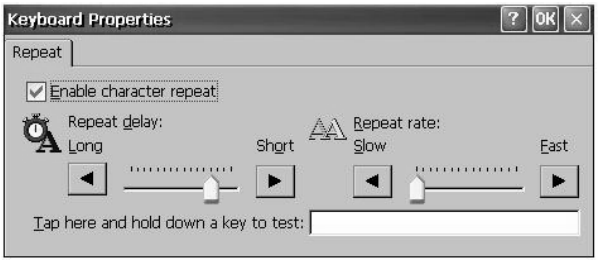
Keyboard

The Keyboard dialog configures key settings for a keyboard that is attached to the USB port of the VersaView CE terminal. You can adjust the:

- rate for repeating a key press
- delay from the first key press to when repeating begins

To adjust key repeat settings, select the Enable character repeat check box. Adjust how often a key repeats by moving the slider between Slow and Fast. To adjust the delay between key repeats, move the slider between Long and Short. Tap the field at the bottom of the dialog and then hold down a key to test the new settings.

When done performing operations, remember to select OK in the title bar to activate settings.



Keypad

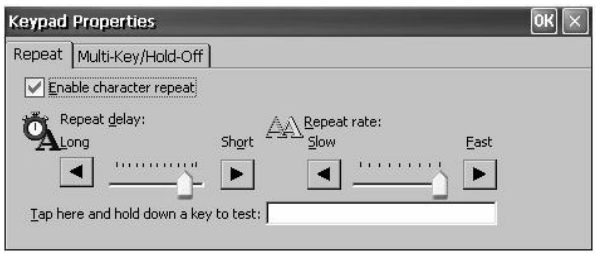
Use the Keypad dialog to:

- configure key settings for keys on the VersaView CE terminal.
- adjust the rate for repeating a key press and the delay from the first key press to when repeating begins
- enable/disable multi-key lockout.

When done performing operations, remember to select OK in the title bar to activate settings.

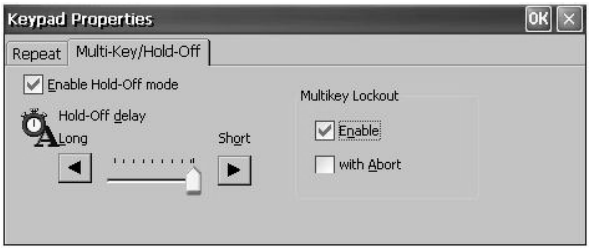
Key Repeat

To adjust repeat settings for keys on an attached keyboard, select the Enable character repeat check box. Then adjust how often a key repeats by moving the slider between Slow and Fast. To adjust the delay between key repeats, move the slider between Long and Short. Tap the field at the bottom of the dialog and then hold down a key to test the new settings.



Multi-Key/Hold-Off Lockout

The Multi-Key/Hold-Off tab restricts multiple or simultaneous key presses on the VersaView CE terminal and specifies a hold-off delay between presses of the same key.



Multi-Key Lockout
Under Multi-Key Lockout, select one of the following options:

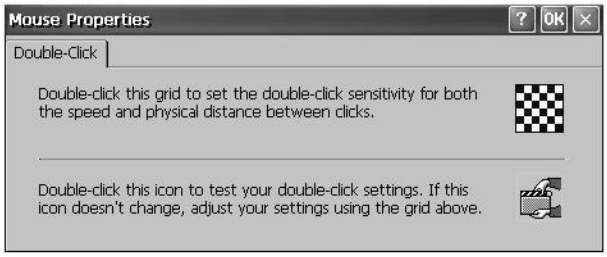
- Enabled - any programmable key that is pressed inhibits all keys until the programmable key is pressed again. This includes the Alt, Ctrl, and Shift keys.
- Enabled with Abort - any secondary key press will terminate the initial key press immediately.
- Disable - places no restrictions on key presses. Clear both check boxes.

IMPORTANT The keypad cannot produce Home, End, Page Up or Page Down when Multi-Key Lockout is enabled.

Hold-Off Delay
If enabled, this option will ignore multiple presses of the same key for a specified length of time. To enable this option, select the Enable Hold-Off mode check box. Then adjust the delay time by moving the slider to the left or right to increase or decrease the hold off time.

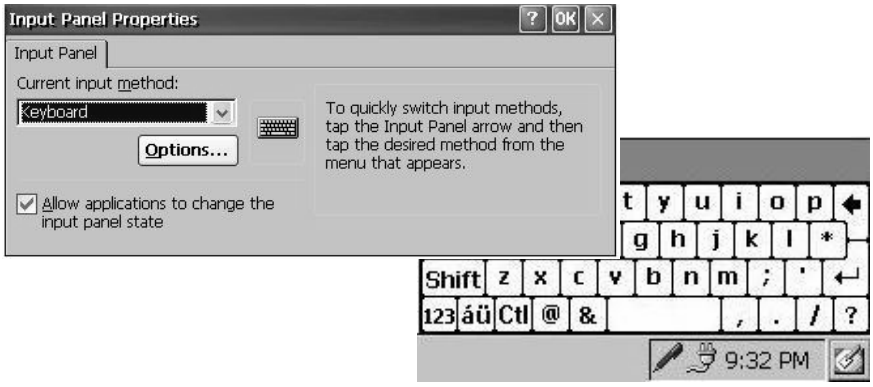
Mouse

If a mouse is attached to one of the USB ports of the VersaView CE terminal, you can set the sensitivity for both the speed and physical distance between mouse taps. Double-tap the top grid to set the sensitivity. Double-tap the bottom grid to test the setting. Click OK



Input Panel

The Input Panel dialog sets properties for the soft Keyboard input panel. Use the Options button to select Large or Small keys, and other soft key options. Click OK after making any changes.



Display

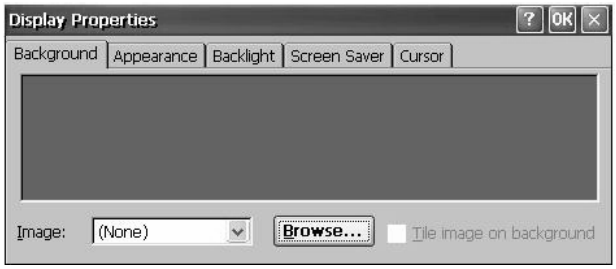
The Display dialog set the following display properties for the VersaView CE terminal:

- background
- appearance
- backlight
- screen saver
- cursor

When done performing operations, remember to select OK in the title bar to activate settings.

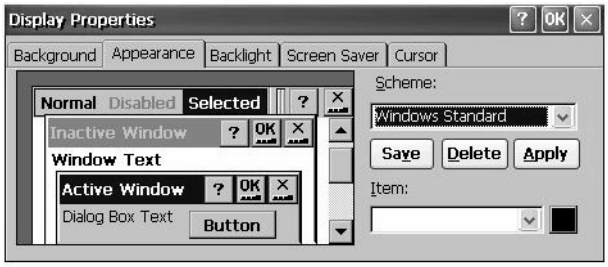
Background

The Background tab lets you select an image to use for the VersaView CE desktop and whether the image should be tiled.



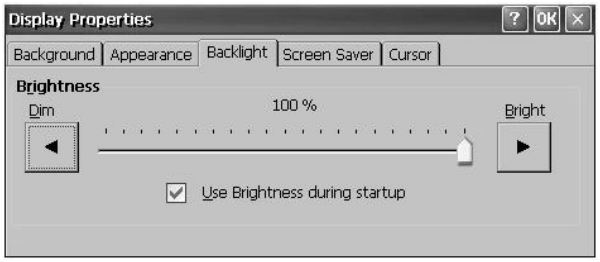
Appearance

The Appearance tab let you change the color scheme of your desktop.



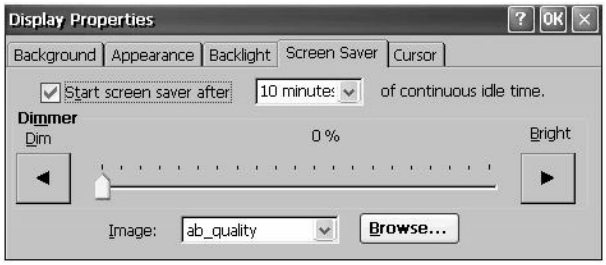
Backlight

The Backlight tab adjusts the brightness of the terminal's backlight. To adjust the brightness of the terminal's backlight, move the slider to the left or right. To use the adjusted brightness when the terminal starts up, select the Use Brightness at startup check box.



Screen Saver

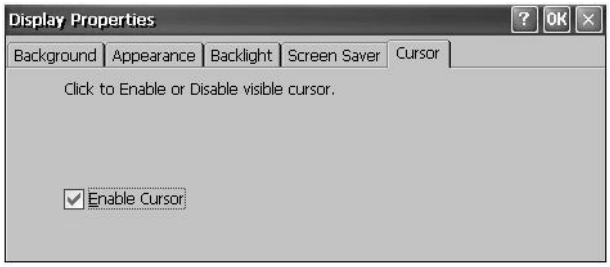
The Screen Saver tab enables and disables the screen saver. To enable the screen saver, select the check box and then select an idle time. This will activate the screen saver after the terminal has been idle for the specified time. You can also select a screen saver image. To adjust the brightness of the screen saver, move the slider to the left or right.



To add a custom image for the screen saver, copy the bitmap (.bmp file) to the \Storage Card folder and then use the Browse button to select the image. You can disable the screen saver bitmap by selecting (None) from the Image drop-down list.

Cursor

Use the Cursor tab to enable or disable the visible screen cursor.



Extended Diagnostics

From the Extended Diagnostics dialog, you can:

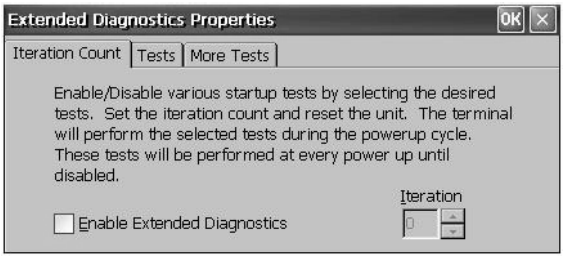
- enable/disable extended diagnostics to run on the VersaView CE terminal at each reset or power cycle.
- select specific tests to run.
- specify the number of times to repeat each test.

When done performing operations, remember to select OK in the title bar to activate settings.

Iteration Count

From the Iteration tab, select the Enable Extended Diagnostic box to run selected tests on the VersaView CE terminal at each reset or startup. You can also specify how many times to run each test. The tests are selected from the Tests and More Tests tab.

The selected tests will run each time the VersaView CE terminal is reset until disabled (by clearing the Enable Extended Diagnostics check box).



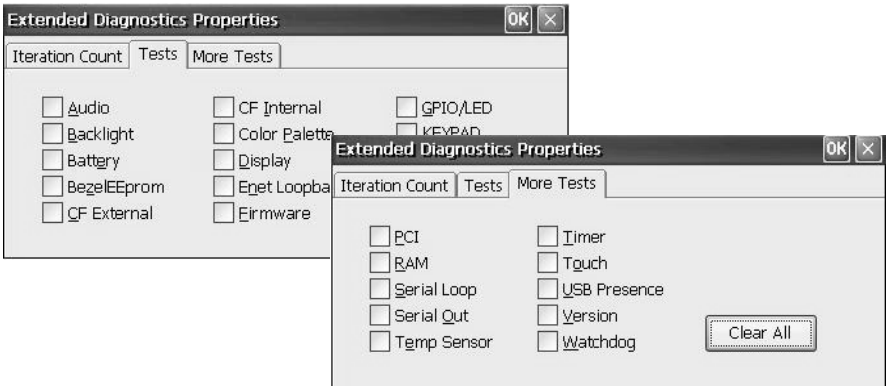
TIP

Enabling Extended Diagnostics and setting a high Interaction count will increase the time it takes for the terminal to start up.

The tests will run each time you reset or cycle power to the terminal until you disable Extended Diagnostics. Setting a low iteration count will also decrease the start up time.

Tests

The Tests and More Tests tabs show a list of tests that can be performed on the VersaView CE terminal at startup and the on/off status of each test. The terminal will run only the test with checked boxes. To enable a test, select the check box; to disable a test, clear the check box. Press the Clear All button if you want to clear all check boxes.



Hardware Monitor

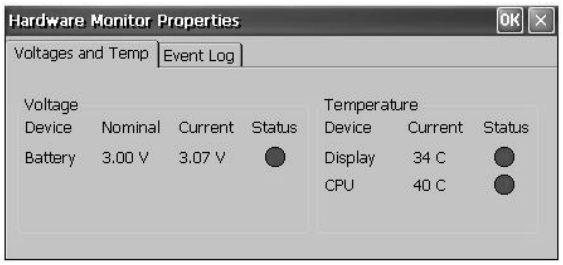
Use the Hardware Monitor dialog to:

- view the current battery voltage state and temperature of the display and processor.
- view and/or clear all recorded events.

When done performing operations, remember to select OK in the title bar to activate settings.

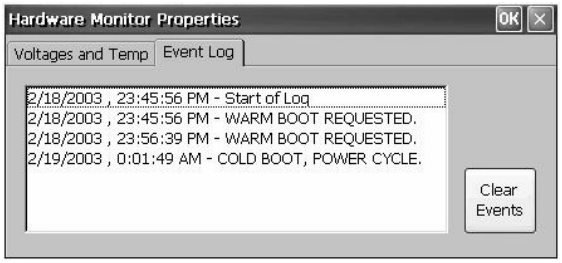
Voltages and Temperature

The Voltages and Temp tab shows both the nominal and actual voltage of the battery in the VersaView CE terminal and its current status. The current temperature of the display and the processor is also shown along with its status.



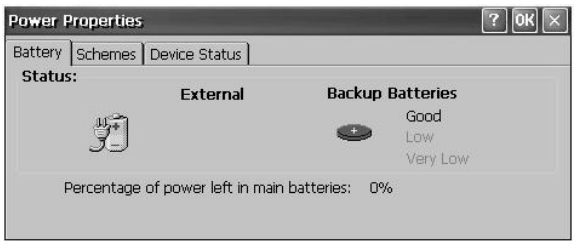
Event Log

The Event Log shows a list of all events that have occurred in the system. Select the Clear Events button to clear all events from the list.



Power

The Battery tab on the Power dialog shows the status of the internal battery in the terminal. Replace the battery in the terminal, when the Battery State is Low or Very Low. For the VersaView CE terminal, you can ignore the other tabs.

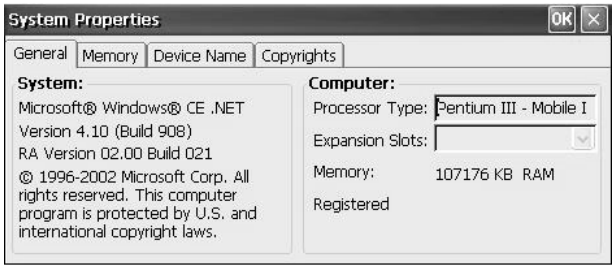


System

The System dialog provides system, device and copyright information for the VersaView CE. It also provides memory allocations for storage and programs. If you make memory adjustments, remember to click OK to activate settings.

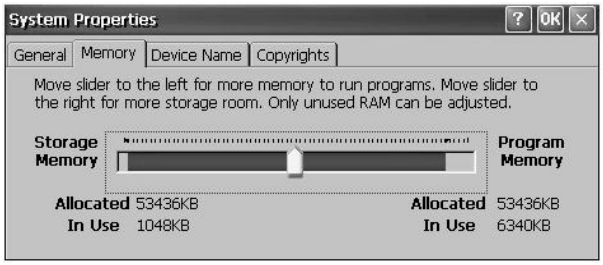
General

The General tab displays system operating and computer information.



Memory

The Memory tab displays the amount of memory allocated and in use for storage and programs. These settings are controlled by the system at startup and can be adjusted by an application program. Normally, it is not necessary to the change the setting unless a program reports a need for more memory. Move the slider to the left to increase the allocation for program memory. The memory allocations are automatically adjusted as you move the slider.



Device Name

The Device Name tab defines a name and description for your VersaView CE terminal. This information identifies your CE terminal to other computers on the Ethernet network. The name must be unique on the network. You must change the name from the initial default the terminal was shipped if more than one VersaView CE terminal is present on your Ethernet network.

.The device name must include:

- 1 to 15 characters
- a leading alpha character in the range a - z or A - Z
- remaining characters in the range a - z, A - Z, 0 - 9 or - (hyphen)

The device description is optional but useful if you want to further describe a specific terminal.

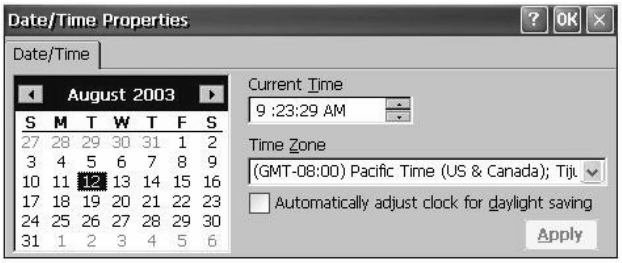
Copyrights

The Copyright tab provides copyright information for your VersaView CE terminal.

Date/Time

The Date/Time dialog sets the current date and time for the selected time zone. Changing the time zone will adjust the date and time accordingly. Select the check box if Daylight Savings is in effect for the current time zone.

The time appears according to the format set in the Regional Settings dialog. After making adjustments, select the Apply button and then the OK button.



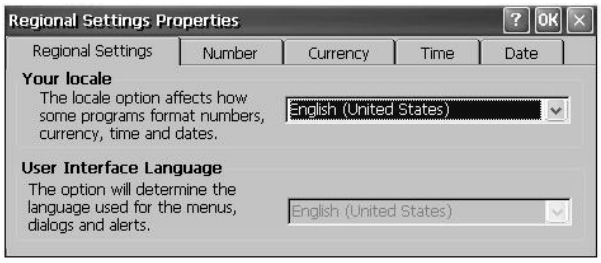
Regional Settings

Use the tabs on the Regional Settings dialog to select a language and then set the format for how the time, date, and numbers appear for the selected language.

When done performing operations, remember to select OK in the title bar to activate settings.

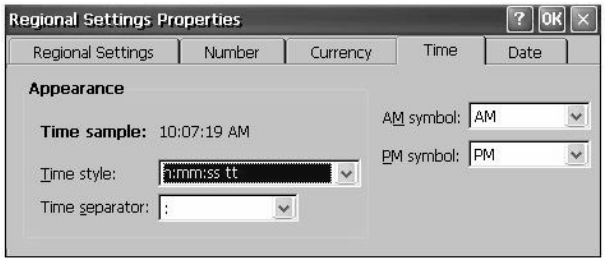
Language

The Language tab selects a language that is installed on the VersaView CE terminal. Languages are installed as a part of the operating system.



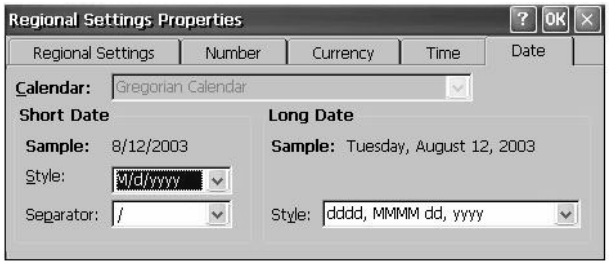
Time

The Time tab configures the time format for the selected language. A sample of the current time format is shown. This sample changes as you make adjustments. You can adjust the time format, the separator between the time fields, and the AM/PM symbol.



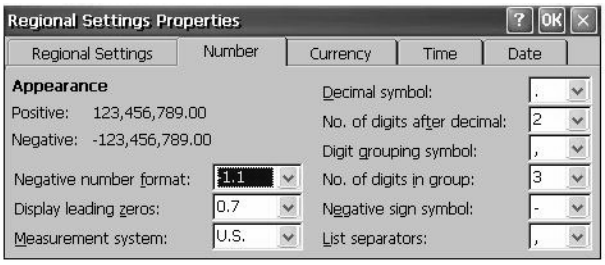
Date

The Date tab configures the style of the short date format and the long date format for the selected language. A sample of the current formats is shown. These samples are updated as you make changes.



Number

The Number tab configures how negative and positive numbers will appear for the selected language. The appearance of the current formats is shown for both positive and negative numbers. These samples are updated as you make changes.



Internet Options

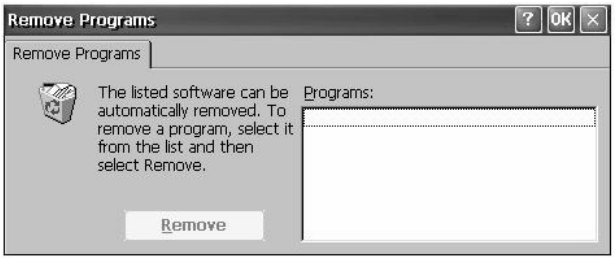
The Internet Setting dialog provides tabs to configure parameters for accessing and using the Internet on your VersaView CE device.

Certificates

The Certificates dialog manages digital certificates used by some applications for establishing trust and secure communications. Certificates are signed and issued by certificate authorities and are valid for a prescribed period of time.

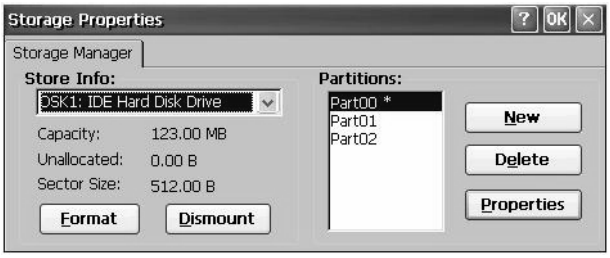
Remove Programs

Use the Remove Programs dialog to remove installed programs from your terminal. The dialog which shows a list of programs that can be removed. Select a program from the list and then select the Remove button. Click OK.



Storage Manager

Use the Storage Properties dialog to display information about the Internal Compact Flash Card and other storage devices such as the External Compact Flash Card and USB Mass Storage Devices. From this dialog, you can also configure partitions and reformat the device.



WARNING

Do not try to alter the Internal Compact Flash storage device that is displayed under Storage Info as DSK1: IDE Hard Disk Drive. You may not be able to reboot the terminal if you modifying the Internal Compact Flash partitions.

Install and Replace Components

Chapter Objectives

This chapter shows how to install, replace or upgrade various components of the terminal.

- Logic module
- Communication module
- Display module
- RAM and internal compact flash
- Battery
- Display module bezel
- Backlight
- AC power supply
- Product label
- Keypad legend inserts
- External compact flash card

Required Tools

- #00, #1, and #2 Phillips screwdriver
- Electrostatic Discharge (ESD) wristband

Precautions

Before installing or replacing any components, disconnect power from the terminal. During installation, take care not to touch any of the exposed electronic components.

WARNING

Disconnect all power from the terminal before installing or replacing any components. Failure to disconnect power may result in electrical shock and/or damage to the terminal.

ATTENTION

Be careful when touching any of the exposed electronic components to prevent damage from Electrostatic Discharge (ESD).

Work in a static free environment and wear a properly grounded ESD wristband.

Compatibility of Components

When assembling components of a terminal or replacing the internal compact flash in a logic module, the components must be compatible.

To verify compatibility of the internal compact flash with the logic module of the terminals, you must know what version of RSView ME and the operating system is running on the terminal.

1. Locate the green label on the logic module to determine the revision level of your terminal.
   - Rev B: Contains RSView ME 3.0 and Windows CE 3.0
   - Rev C: Contains RSView ME 3.10 and Windows CE 4.1
   - Rev D: Contains RSView ME 3.20 and Windows CE 4.1
   - Rev E: Contains RSView ME 4.0 and Windows CE 4.1
2. Determine the series of the internal compact flash and logic module from the label.

VersaView CE Terminal Compatibility

The table matches the series of the internal compact flash cards with the correct series of the logic module for the terminals. The logic module is available with or without memory installed.

Terminal Revision	Logic Module 6189-RPxH (with memory) is compatible with:	Internal Compact Flash 6189-RW1, 2, 3, 4	RSView ME Version	OS Version
Rev B[1]	Series A: 6189-RPxH/A	Series B: 6189-RWx/B	RSView ME 3.0	Windows CE 3.0
Rev C	Series B: 6189-RPxH/B	Series C: 6189-RWx/C	RSView ME 3.10	Windows CE 4.1
		Series D: 6189-RWx/D Series E: 6189-RWx/E	RSView ME 3.20	Windows CE 4.1
		Series F: 6189-RWx/F	RSView ME 4.0	Windows CE 4.1
Rev D	Series C: 6189-RPxH/C Series D: 6189-RPxH/D	Series D: 6189-RWx/D Series E: 6189-RWx/E	RSView ME 3.20	Windows CE 4.1
		Series F: 6189-RWx/F	RSView ME 4.0	Windows CE 4.1
Rev E	Series D: 6189-RPxH/D Series E: 6189-RPxH/E	Series D: 6189-RWx/D [2] Series E: 6189-RPxH/E [2]	RSView ME 3.20	Windows CE 4.1
		Series F: 6189-RWx/F	RSView ME 4.0	Windows CE 4.1

[1] When upgrading RSView ME 3.0 to 3.10 or higher, the Firmware Upgrade Kit is required.

[2] Recommend firmware upgrade to align the firmware in the logic module and the internal compact flash.

RSView ME terminals are compatible with .mer applications that are the same version or a previous version. For example, RSView ME 3.20 terminals can run RSView 3.0, 3.10, and 3.20 .mer applications.

When upgrading from RSView ME 3.0 to 3.1 or later, the appropriate changes are made to the OS from Windows CE 3.0 to Windows CE 4.1.

Install or Replace the Logic Module

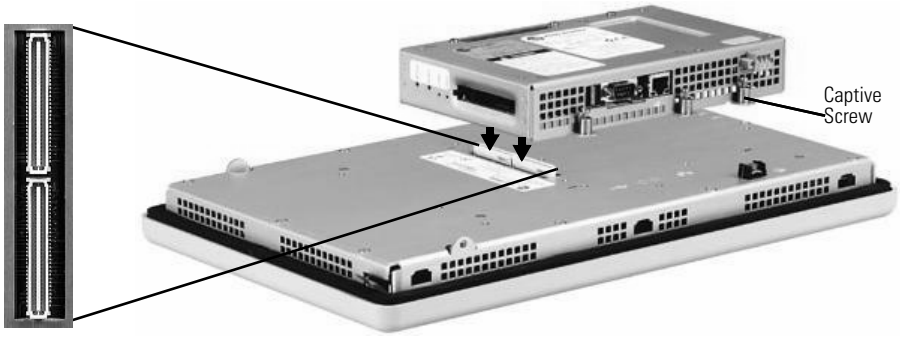
This section shows how to install and replace the logic module. If the display module and logic module are ordered as separate components, attach the logic module to the display module before panel installation.

The logic module is available with or without RAM and internal compact flash installed. If ordered as separate components, you must install the memory before attaching the logic module to the display module.

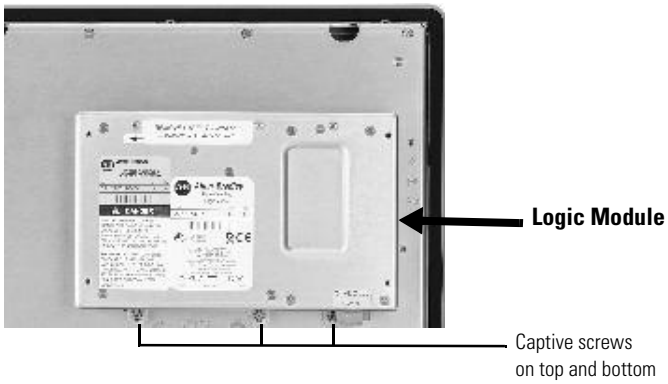
TIP If replacing the logic module, you may want to remove the RAM and compact flash to reuse in new logic module.

To install a logic module:

1. Disconnect power from the terminal.
2. If the terminal is removed from panel, set the terminal, display side down, on a clean, flat, stable surface to prevent scratches.
3. Position the logic module over the back of the display module until the two connectors on the bottom of the logic module align with the connectors on the display module.



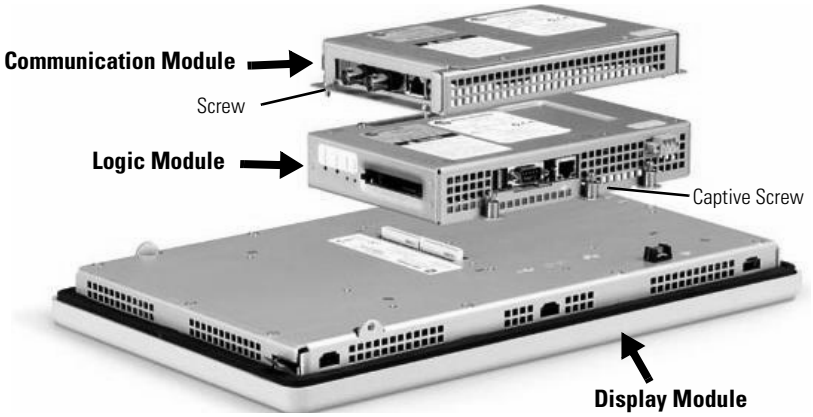
4. Push down on the logic module until firmly seated.
5. Tighten the six captive screws that secure the logic module to the display module to a torque of 0.68 Nm (6 to 8 in-lb).



To replace the logic module:

Before replacing the logic module, you must remove the communication module, if attached. You will also need to remove the Internal RAM and compact flash from the logic module to reuse in the new logic module.

1. Disconnect power from the terminal.
2. Disconnect all power and communication cables.
3. If the terminal is removed from panel, set the terminal, display side down, on a clean, flat, stable surface to prevent scratches.
4. Remove the four screws that attach the communication module (if attached) to the logic module. Carefully lift the communication module away from the logic module.



5. Loosen the six captive screws that secure the logic module to the display module.
6. Carefully lift the logic module away from the back of the display module.

ATTENTION

Wear a properly grounded ESD wristband before touching any of the electronic components in the logic module.

7. If reusing the memory in the new logic module:
   - Remove the RAM and internal compact flash from the logic module.
   - Insert the RAM and internal compact flash in the new logic module.
8. Install the new logic module.
9. Attach the communication module, if necessary.

Install or Replace a Communication Module

This section shows how to install and replace a communication module. The communication module installs over the logic module. The communication modules are available as separate catalog numbers for specific communication protocols. The installation is the same for all modules regardless of the communication type.

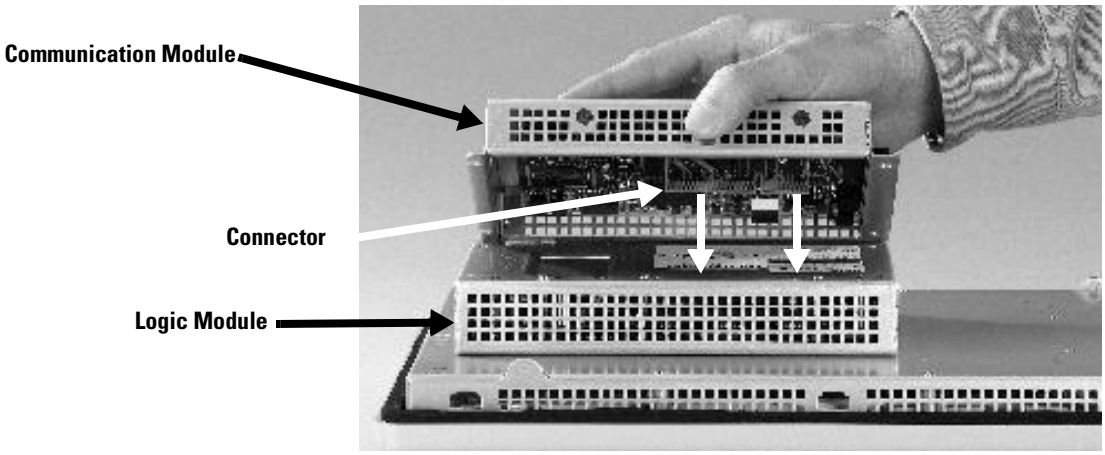
TIP The logic module must be attached to the display module before you attach the communication module.

To install a communication module:

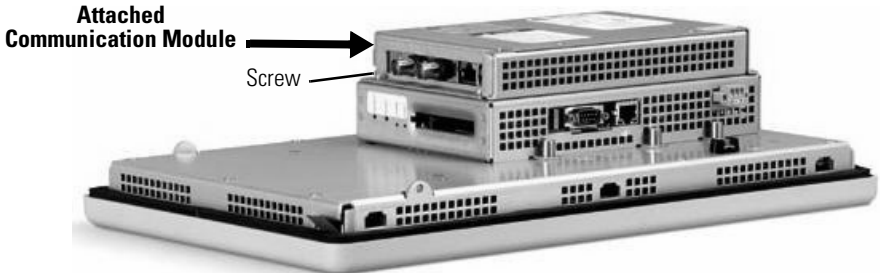
1. Disconnect power from the terminal.
2. If the terminal is removed from panel, set the terminal, display side down, on a clean, flat, stable surface to prevent scratches.
3. Remove the label covering the communication module connector on the logic module.

4. Position the communication module over the logic module so that the connectors on bottom of module align with connectors on the logic module.

To prevent ESD between the modules, allow the communication module to touch the logic module before making connection.



5. Push down on the communication module until the connectors are firmly seated.
6. Tighten the four screws that secure the communication module to the logic module to a torque of 0.68 Nm (6 to 8 in-lb).



To replace a communication module:

1. Disconnect power from the terminal.
2. Disconnect the communication cables from the module.

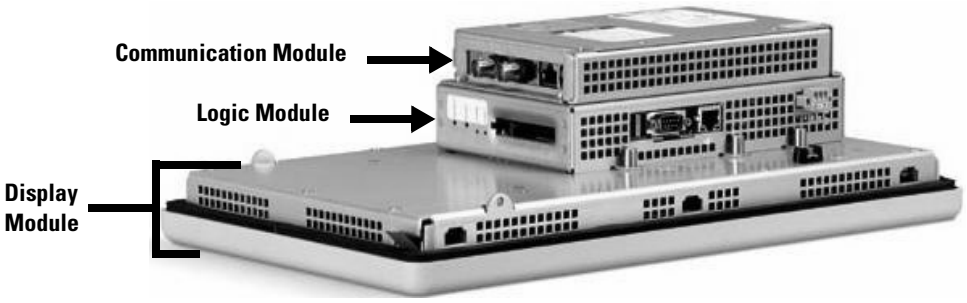
WARNING

Do not connect or disconnect any communication cable with power applied to this device or any device on the network. An electrical arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

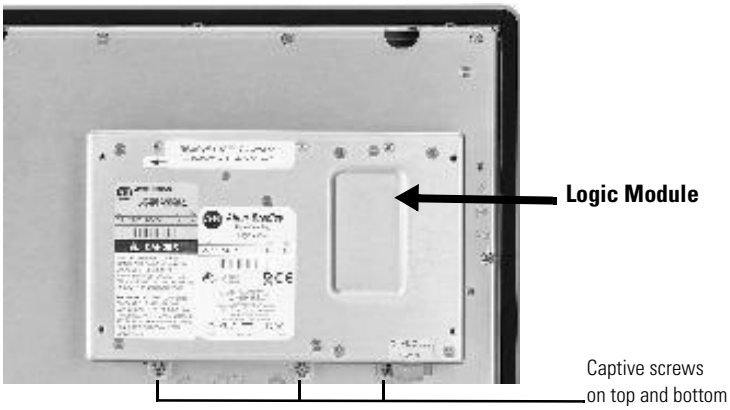
3. Remove the four screws that secure the communication module to the logic module.
4. Carefully lift the communication module away from the logic module and set aside.
5. Install the new communication module.

Replace the Display Module

This sections shows how to replace the display module. It is necessary to remove the communication module from the logic module to perform this operation.

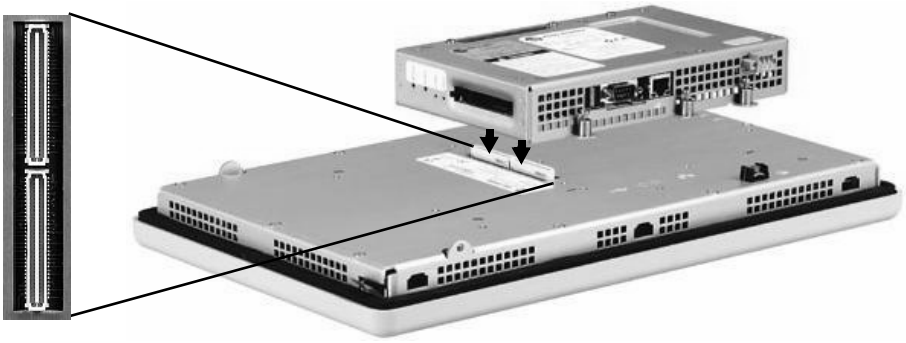


1. Disconnect power from the terminal.
2. Remove the terminal from the panel.
3. Detach the communication module (if attached) from the logic module by removing the four screws.
4. Loosen the six captive screws that attach the logic module to the display module.



5. Carefully lift the logic module from the terminal.
6. Set the display module aside.

7. Position the new logic module over the new display module so that the connectors align.



8. Push down on the logic module until firmly seated.

9. Tighten the six captive screws that secure the logic module to the display module to a torque of 0.68 Nm (6 to 8 in-lb).

10. Attach the communication module (if necessary) and tighten the four screws to a torque of 0.68 Nm (6 to 8 in-lb).

Upgrade RAM and Internal Compact Flash

The logic module is available with or without RAM/internal compact flash installed. If RAM and internal compact flash are ordered as separate components, you must install the memory before attaching the logic module to the display module. The internal compact flash card contains flash memory, the operating system and Machine Edition software which is required to boot and run the terminal.

To replace RAM and/or internal compact flash:

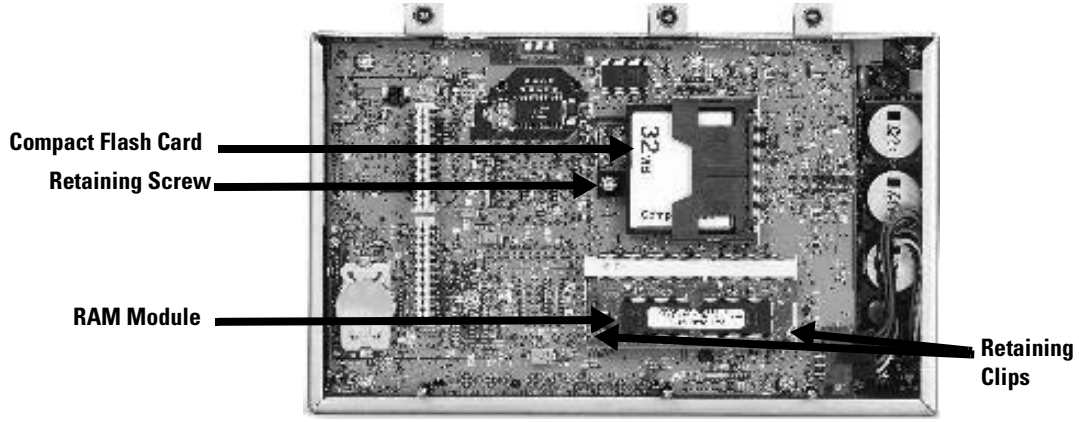
1. Remove power from the terminal.
2. Place the terminal, display side down, on a flat stable surface.
3. Loosen the six captive screws that secure the logic module.
4. Carefully lift the logic module away from the terminal and turn over to expose the circuit board.

ATTENTION

Wear a properly grounded ESD wristband before touching any of the electronic components in the logic module.

Skip Steps 5 - 6 if not replacing RAM.

5. Locate the RAM module on the circuit board. Pull the metal retaining clips away from the module and slide out the RAM module.



6. Insert the new RAM module at a 45° angle and snap down.

Skip Steps 7 - 11 if not replacing internal compact flash.

7. Unscrew and remove the retaining clip that secures the internal compact flash card.
8. Pull out the internal compact flash card.
9. Insert the new internal compact flash card.
10. Reattach the retaining clip.
11. Attach the logic module by aligning the two connectors on the bottom of module with the connectors on the display module.
12. Push down on the logic module until firmly seated.
13. Tighten the six captive screws that secure the logic module to a torque of 0.68 Nm (6 to 8 in-lb).

Replace the Battery

A lithium battery is used by the real-time clock; it is not used for application backup or retention. The clock module has a minimum life expectancy of two years without power.

WARNING

When you connect or disconnect the battery an electrical arc can occur. This could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

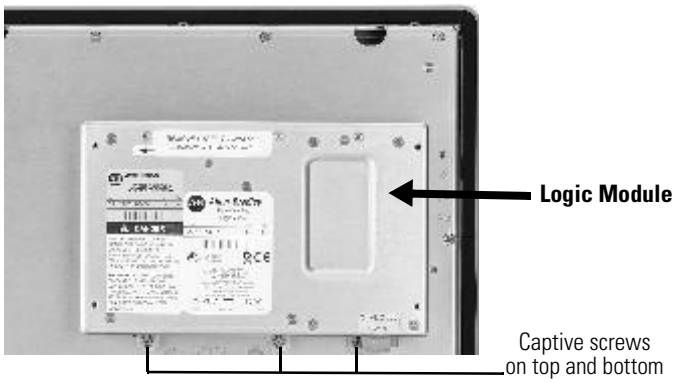
For Safety information on the handling of lithium batteries, including handling and disposal of leaking batteries, see Guidelines for Handling Lithium Batteries, publication AG 5-4. Replace the battery only with the indicated catalog number.

Do not dispose of battery in a fire or incinerator. Dispose of used batteries in accordance with local regulations.

Store batteries in a cool, dry environment. We recommend 25 °C with 40 to 60% relative humidity. You may store batteries for up to 30 days between -45 to 85 °C, such as during transportation. To avoid possible leakage, do not store batteries above 60 °C for more than 30 days.

To replace the battery:

1. Disconnect power from the terminal.
2. Place the terminal, display side down, on a flat stable surface.
3. Detach the communication module (if attached) from the logic module by removing the four screws.
4. Loosen the six captive screws that attach the logic module to the display module.

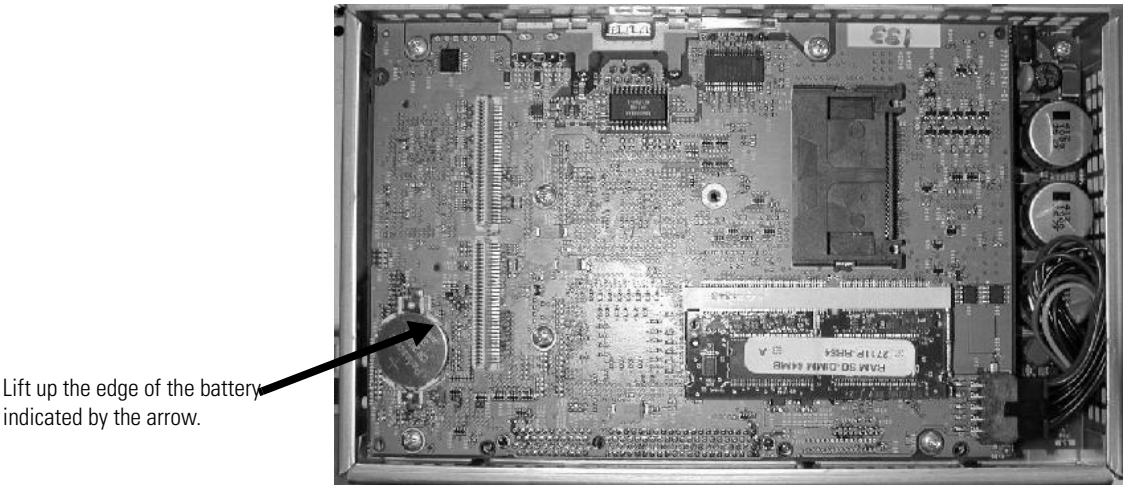


5. Carefully lift the logic module away from the terminal and flip over to expose the circuit board.

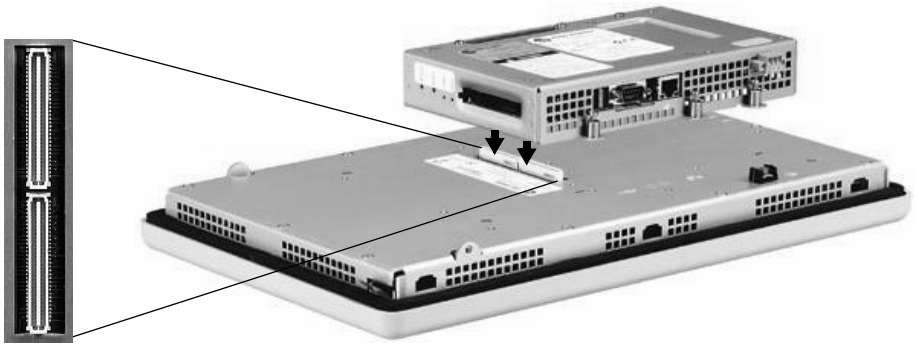
ATTENTION

Wear a properly grounded ESD wristband before touching any of the electronic components in the logic module.

6. Locate the battery on the circuit board.



7. Remove the battery by lifting up the side of the battery.
8. Insert the new battery.
9. Attach the logic module by aligning the two connectors on the bottom of the module with the connectors on the terminal.



10. Push down on the logic module until firmly seated.
11. Tighten the six captive screws that secure the logic module to a torque of 0.68 Nm (6 to 8 in-lb).
12. Attach the communication module (if necessary) and tighten the four screws to a torque of 0.68 Nm (6 to 8 in-lb).

Replace the Bezel

Remove the Display Module Bezel

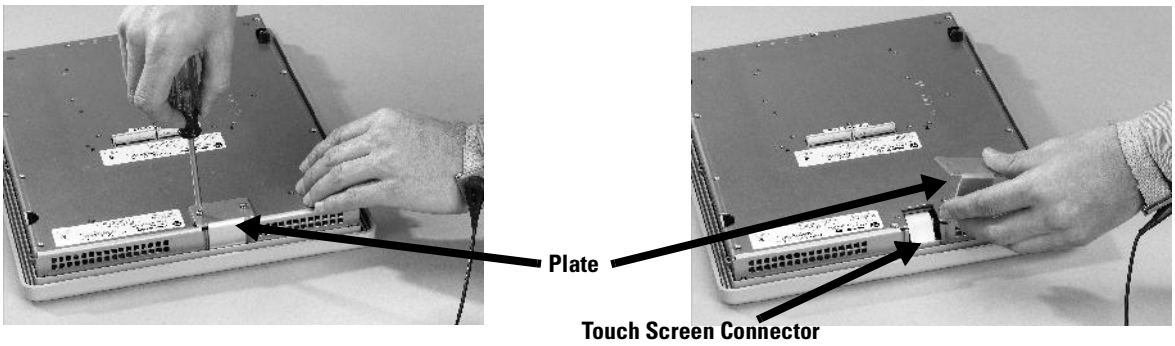
It is not necessary to remove the logic or communication module before removing the bezel, except for the VersaView CE 700H.

1. Disconnect power from the terminal.
2. Set the terminal, display side down, on a flat stable surface.

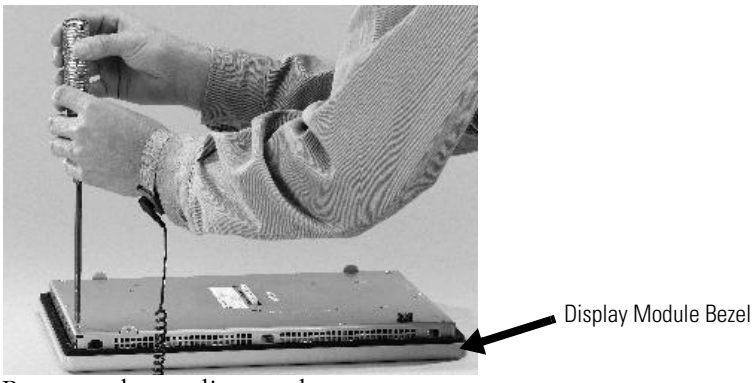
ATTENTION

Wear a properly grounded ESD wristband before touching any of the electronic components in the logic module.

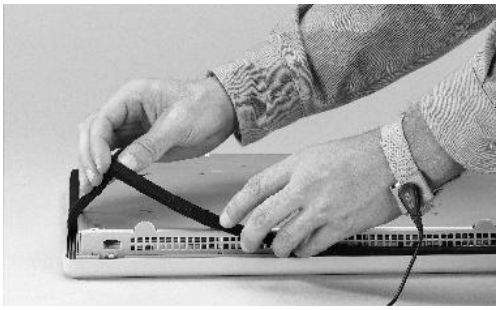
3. On touch screen only terminals, remove the two screws that secure the small metal plate to the back of the display module.
4. Disconnect the (touch screen) connector.



5. Remove the screws from the back of the display module. The number of screws varies for each terminal type.

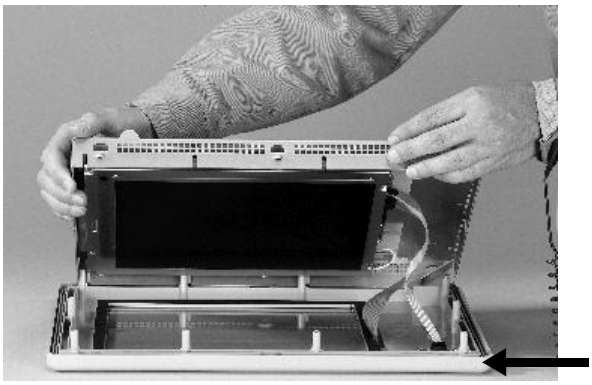


6. Remove the sealing gasket.



7. Lift the back of the display module away from the bezel.

   Work on a clean, flat, stable surface to protect the display from debris, scratches and damage.



8. Detach all connectors (maximum of three). The number of connectors varies by model.
   - IrDa connector (if present)
   - Function key connector
   - Touch screen connector
9. Set the bezel aside.

Replacing Display Module Bezel

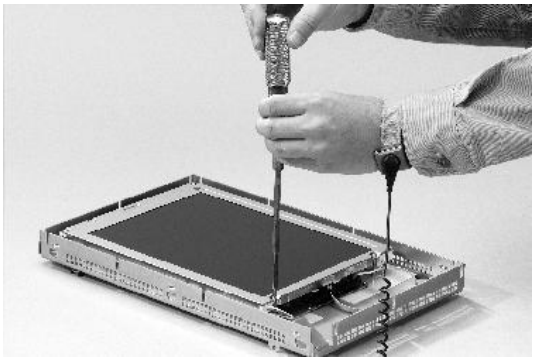
1. Make sure the bezel is free of lint and marks before attaching.
2. Attach the connectors. The number of connectors varies by model.
   - IrDa connector (if present)
   - Function key connector
   - Touch screen connector
3. Place the back of the display module over the new bezel. Be careful not to pinch any of the cables.

   Allow the touch screen connector to extend out of the access opening.
4. Attach the touch screen connector.
5. Replace the sealing gasket.
6. Attach the screws that secure the display module to the bezel and tighten to a torque of 1.35 - 1.58 Nm (12 to 14 in-lb).
7. On touch screen terminals, reattach the small metal plate to the back of the display module using two screws and torque to 0.68 Nm (6 to 8 in-lb).

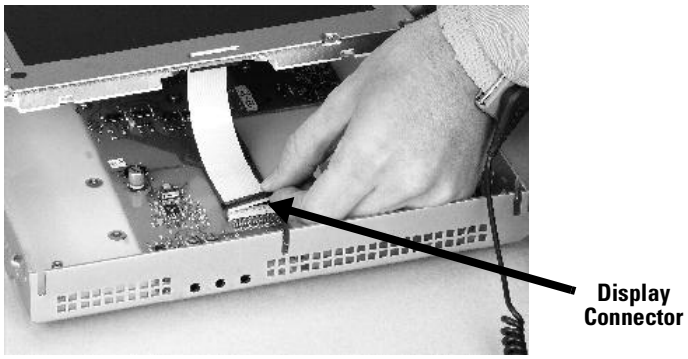
Replace the Backlight

This section shows how to replace the backlight for the 700H, 1000H, 1250H, and 1500H terminals. The 1250H High-Bright terminals do not have a replaceable backlight.

1. Disconnect power from the terminal.
2. Remove the display module bezel.
3. Remove the four screws that secure the LCD display.

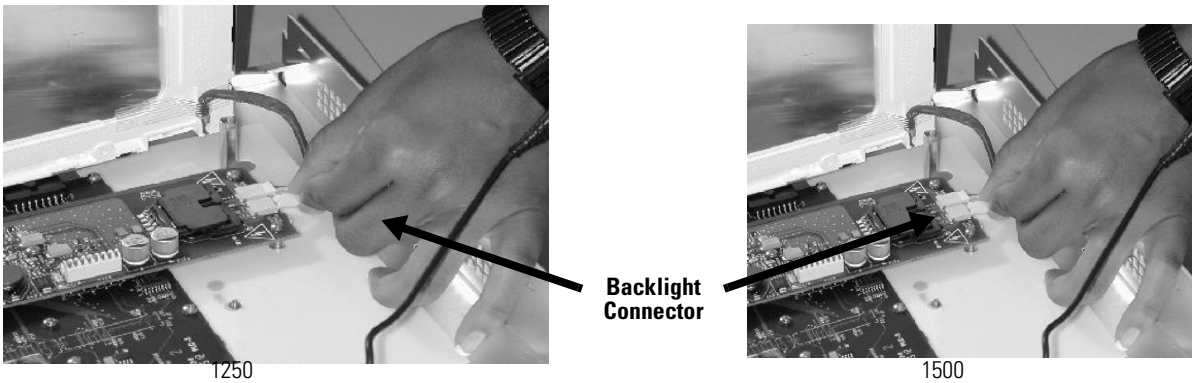


4. Lift the LCD display and detach the display connector from the circuit board. The location of the connector varies by model.



5. Detach the backlight connectors from the circuit board.

   The 1250H has one or two backlight connectors depending on the display series. The 1500H has four backlight connectors.

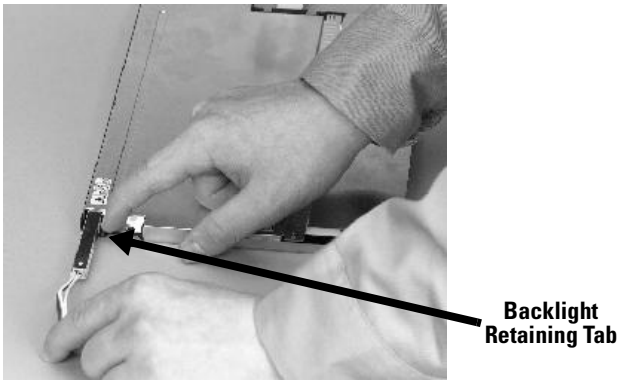


1250 1500

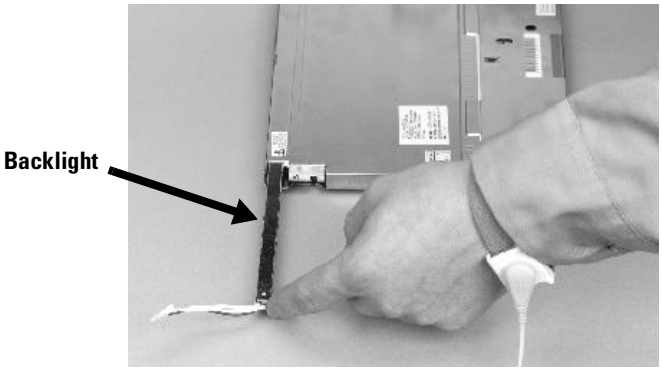
For VersaView CE 700H and 1000H

Work on a clean, flat, stable surface to protect the display from debris, scratches and damage.

6. Press the retaining tab that secures the backlight and then pull out the backlight.



7. Insert the new backlight.



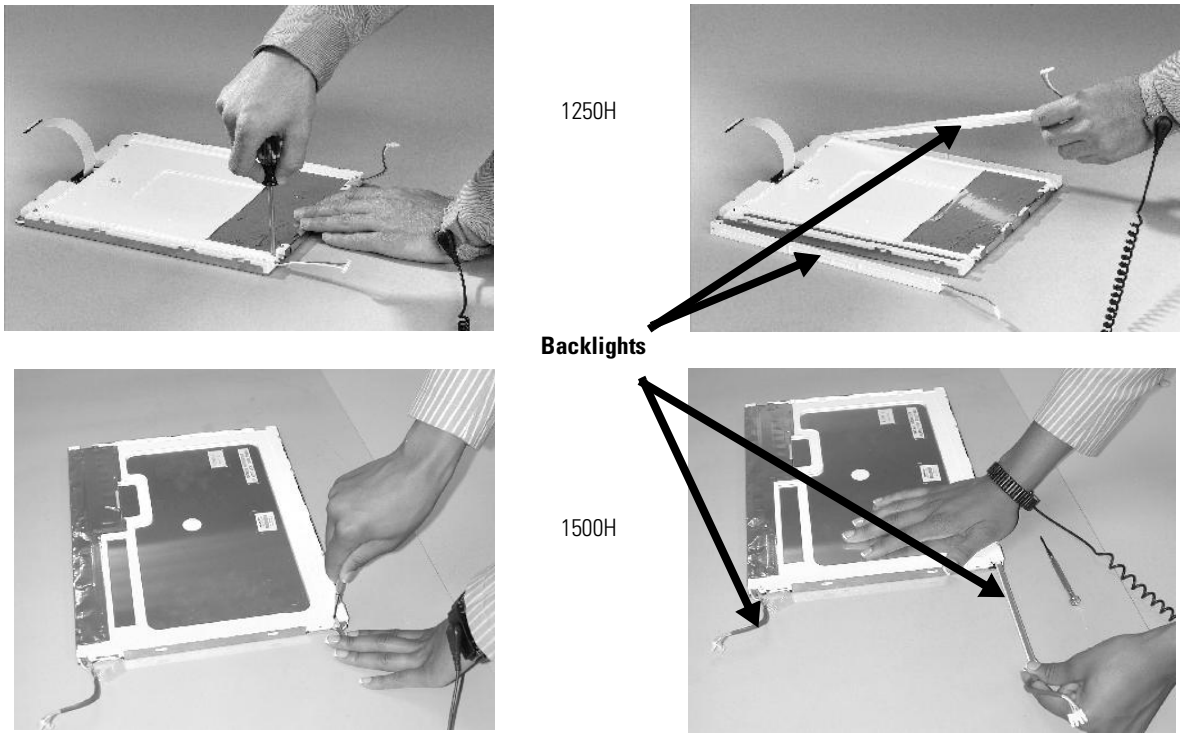
For VersaView CE 1250H and 1500H

- The 1250H Series A and B displays have two backlights and use cat. no. 2711P-RL12C backlight replacement.
- The 1250H Series C displays have only one backlight and use cat. no. 2711P-RL12C2 backlight replacement.
- The 1500H Series B displays have four backlights and use cat. no. 2711P-RL15C backlight replacement.

Work on a clean, flat, stable surface to protect the display from debris, scratches and damage.

8. Remove the screw(s) that secure the backlight(s) and then remove the backlight(s).

- The two backlights for the 1250H Series A and B displays are each secured with two screws.
- The single backlight for the 1250H Series C displays is secured with one screw.
- For the 1500H Series B displays, remove the tape and then remove the backlights.



9. Insert the new backlight(s) and then secure each with the same screws. Torque the screws to 0.117 Nm (1.04 in-lb).

10. Reattach the LCD display connector to the circuit board.

11. Reattach the backlight connector to the circuit board.

12. Secure the LCD display by attaching the four screws and tighten to the specified torque.

Screw Size	Torque
#4	.68 Nm (6 to 8 in-lb)

13. Replace the display module bezel.

Install the Remote AC Power Supply

Connecting to AC power requires a separate power supply, cat. no. 2711P-RSACDIN that mounts to a DIN Rail. This power supply converts AC power to DC power and has these electrical input ratings:

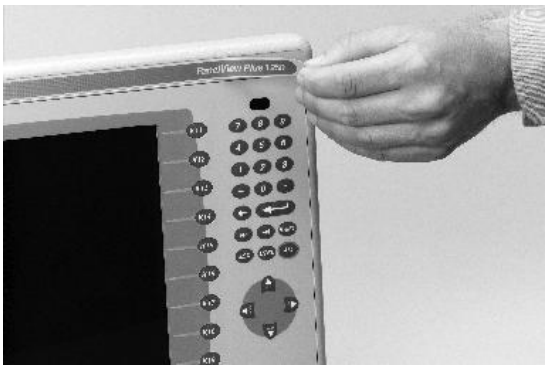
- 85 to 264 V AC (47 to 63 Hz)

For details on installation, refer to the installation instructions shipped with the power supply.

Remove the Product Label

If you ordered a terminal with a label, you can remove it and attach your own label.

1. Remove the Allen-Bradley label using your fingers or a tweezers.



2. Clean area with damp cloth and isopropyl alcohol.

3. Remove adhesive backing of OEM label and affix over area where Allen-Bradley label was located.

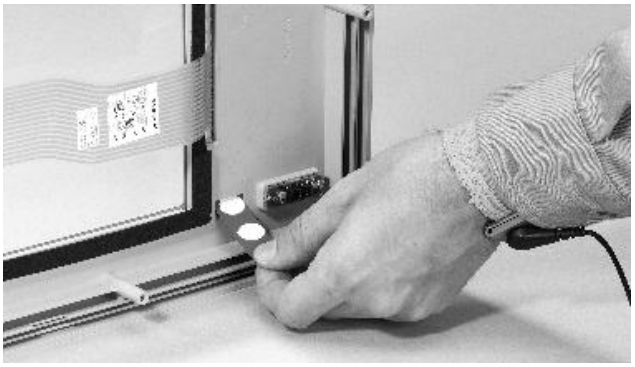
Install the Keypad Legend Inserts

This section shows how to replace the legend inserts in the keypad terminals. The legend strips are available as separate catalog numbers for each keypad version of the terminals. One side of the legend strips have the default key legends and the other side is blank for creating custom legends.

The F1-Fxx and K1-Kxx legend inserts on the VersaView CE 700H - 1500H terminals are accessible when the display module bezel is removed.

To replace the F1-Fxx or K1-Kxx function key legends:

1. Remove power from the terminal.
2. Remove the display module bezel.
3. Pull the legend inserts out from the slots on the bezel.

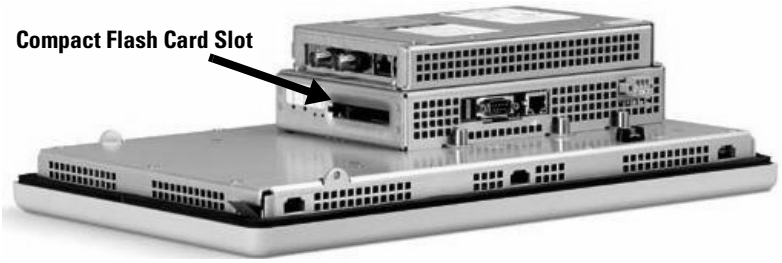


4. Slide the new inserts into the same slots until only the end tab is visible.
5. Replace the display module bezel.

Use an External Compact Flash Card

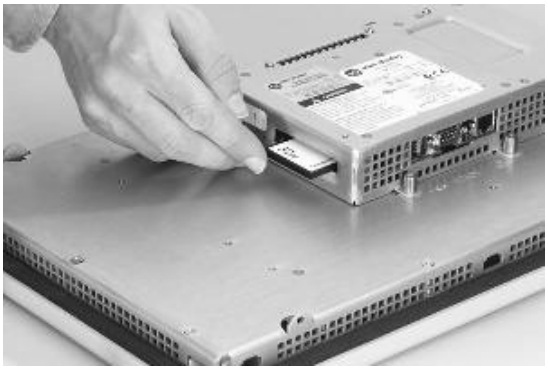
The terminal has a compact flash card slot which supports Type I compact flash cards. The cards are available in different memory sizes.

The card slot is on the logic module. The orientation of the card slot varies depending on the Series of the logic module.



Insert a Compact Flash Card

1. Insert the card in the compact flash card slot of the terminal until firmly seated.

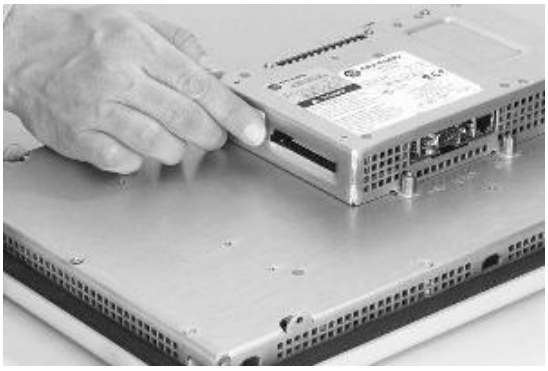


Remove a Compact Flash Card

1. Press the Eject button on the logic module.

   The location of the Eject button varies depending on the series of the logic module.

2. When the button pops out, press it again to release the card.



3. Remove the card from the card slot.

Terminal Connections

Chapter Objectives

This chapter provides network and device connections for the terminals, including:

- Wiring and safety guidelines
- Logic controller cable charts
- Communication port isolation
- USB ports
- Serial connections on base unit
- Ethernet (onboard communications)
- DH485/DH+/RIO communications module
- ControlNet communications module
- DeviceNet communications module

Wiring and Safety Guidelines

Use publication NFPA 70E, 'Electrical Safety Requirements for Employee Workplaces', IEC 60364 'Electrical Installations in Buildings' or other applicable wiring safety requirements for the country of installation when wiring the devices. In addition to the NFPA guidelines:

- route communication cables to terminal by a separate path from incoming power:

  IMPORTANT Do not run signal wiring and power wiring in the same conduit.

- Cross power and communication lines at right angles if they must cross.

  Communication lines can be installed in the same conduit as low level DC I/O lines (less than 10V).

- Shield and ground cables appropriately to avoid Electromagnetic Interference (EMI).

  Grounding minimizes noise from EMI and is a safety measure in electrical installations.

For more information on grounding recommendations, refer to the National Electrical Code published by the National Fire Protection.

Logic Controller Cable Charts

The charts provide a summary of terminal connections to controllers and network interface modules.

Runtime Communication Cables - To Controllers

		Cables: VersaView CE to SLC Controllers				
Protocol	**VersaView CE Comm Port**	**SLC-500, 5/01, 5/02 CH1 RJ45 (DH-485)**	**SLC-5/03, 5/04, 5/05 CH0 (9-pin RS-232) (DF1 or DH-485)**	**SLC 5/03 CH1 (RJ45) (DH-485)**	**SLC 5/04 CH1 (DH+)**	**SLC 5/05 CH1 (ENET)**
DF1 (any)	RS-232 (DF1) Comm Port (9-pin) VersaView CE 700H -1500H	N/A	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	N/A	N/A	N/A
DH-485 Serial (any)	RS-232 (DH-485) Comm Port (9-pin) VersaView CE 700H -1500H	use AIC+ Module (1761-NET-AIC) Connect to Port 1 or 2	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	use AIC+ Module (1761-NET-AIC) Connect to Port 1 or 2	N/A	N/A
DH-485 xxx6xx	DH-485 Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	1761-CBL-AS03 (10 ft/3m) 1761-CBL-AS09 (30 ft/9m)	use AIC+ Module (1761-NET-AIC) Connect to Port 3	1761-CBL-AS03 (10 ft/3m) 1761-CBL-AS09 (30 ft/9m)	N/A	N/A
ControlNet xxx15xx	ControlNet Communication Port VersaView CE 700H -1500H 6182H-xxx15xx, 2711P-RN15S	N/A	1747-KFC15A or 1747-SCRNR/A Module with ControlNet cable			
DeviceNet xxx10xx	DeviceNet Communication Port VersaView CE 700H -1500H 6182H-xxx10xx, 2711P-RN10H	N/A	Use 1747-SDN Module with DeviceNet Cable			
EtherNet/IP (any)	EtherNet/IP Communication Port VersaView CE 700H -1500H	N/A	Use 1761-NET-ENI Module with Ethernet cable	N/A	N/A	2711P-CBL-EX04 Ethernet Crossover Cable(1)
Remote I/O xxx6xx	Remote I/O Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	SLC 5/02 only use 1747-SN with shielded twinaxial cable	use 1747-SN Module with shielded twinaxial cable			
DH+ xxx6xx	DH+ Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	N/A	N/A	N/A	shielded twin axial cable (1770-CD)	N/A

(1) *VersaView CE EtherNet/IP direct connection to SLC-5/05 requires hub or the crossover cable listed.*

		Cables: VersaView CE to PLC-5 and MicroLogix Controllers		
Protocol	**VersaView CE Comm Port**	**PLC-5, PLC-5C, PLC-5E CH0 (25-pin RS-232) (DF1)**	**MicroLogix 1500LRP CH1 (9-pin RS-232) (DF1 or DH-485)**	**MicroLogix 1000, 1200, 1500LSP CH0 (8-pin Mini DIN) (DF1 or DH-485)**
DF1 (any)	RS-232 (DF1) Comm Port (9-pin) VersaView CE 700H -1500H	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m) (9-to-25 pin adapter required)	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	2711-NC21 (16ft/5m) 2711-NC22 (49ft/15m) (null modem not required)(1)
DH-485 Serial (any)	RS-232 (DH-485) Comm Port (9-pin) VersaView CE 700H -1500H	N/A	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	2711-NC21 (16ft/5m) 2711-NC22 (49ft/15m) (null modem not required)(1)
DH-485 xxx6xx	DH-485 Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	N/A	N/A	use AIC+ Module (1761-NET-AIC) Connect to Port 3
ControlNet xxx15xx	ControlNet Communication Port VersaView CE 700H -1500H 6182H-xxx15xx, 2711P-RN15S	to PLC-5C with ControlNet cable	N/A	N/A
DeviceNet xxx10xx	DeviceNet Communication Port VersaView CE 700H -1500H 6182H-xxx10xx, 2711P-RN10H	Use 1771-SDN Module with DeviceNet Cable	N/A	N/A
EtherNet/IP (any)	EtherNet/IP Communication Port VersaView CE 700H -1500H	to PLC-5E with Ethernet cable	Use 1761-NET-ENI Module with Ethernet cable	
Remote I/O xxx6xx	Remote I/O Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	shielded twinaxial cable (1770-CD)	N/A	N/A
DH+ xxx6xx	DH+ Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	shielded twinaxial cable (1770-CD)	N/A	N/A

(1) *AIC+ Module recommended for isolation purposes when VersaView CE and controller are not on same power supply*

		Cables: VersaView CE to Logix Controllers		
Protocol	**VersaView CE Comm Port**	**ControlLogix CH0 (9-pin RS-232) (DF1)**	**CompactLogix CH0 (9-pin RS-232) (DF1 or DH-485)**	**FlexLogix CH0 (9-pin RS-232) (DF1)**
DF1 (any)	RS-232 (DF1) Comm Port (9-pin) VersaView CE 700H -1500H	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)		
DH-485 Serial (any)	RS-232 (DH-485) Comm Port (9-pin) VersaView CE 700H -1500H		2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	
DH-485 xxx6xx	DH-485 Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	N/A	use AIC+ Module (1761-NET-AIC) Connect to Port 3	N/A
DeviceNet xxx10xx	DeviceNet Communication Port VersaView CE 700H -1500H 6182H-xxx10xx, 2711P-RN10H	Use 1756-DNB Module with DeviceNet Cable	Use 1769-SDN Module with DeviceNet Cable	Use 1788-DNBO Module with DeviceNet Cable
ControlNet xxx15xx	ControlNet Communication Port VersaView CE 700H -1500H 6182H-xxx15xx, 2711P-RN15S	use 1756-CNB Module with ControlNet cable	1769-L35C with ControlNet cable	use 1788-CNC or 1788-CNF Module with ControlNet cable
EtherNet/IP (any)	EtherNet/IP Communication Port VersaView CE 700H -1500H	use 1756-ENET or 1756-ENBT Module with Ethernet cable	to 1769-L35E with Ethernet cable	use 1788-ENBT Module with Ethernet cable
Remote I/O xxx6xx	Remote I/O Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	use 1756-DHRIO Module with shielded twinaxial cable (1770-CD)	N/A	N/A
DH+ xxx6xx	DH+ Communication Port VersaView CE 700H -1500H 6182H-xxx6xx, 2711P-RN6	use 1756-DHRIO Module with shielded twinaxial cable (1770-CD)	N/A	N/A

		Cables: VersaView CE to Communication Adapters				
		1747-AIC	1761-NET-AIC			
Protocol	**VersaView CE Comm Port**		**Port 1 (9-pin)**	**Port 2 8-pin Mini DIN()**	**Port 3 (DH485)**	**1761-NETDNI or 1771-NET-ENI**
DF1 (any)	RS-232 Comm Port (9-pin) VersaView CE 700H -1500H	N/A	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	2711-NC21 (16ft/5m) 2711-NC22 (49ft/15m)	N/A	1761-CBL-AP00 (0.5 m) 1761-CBL-PM02 (2m) 2711-CBL-PM05 (5 m) 2711-CBL-PM10 (10m)
DH-485 Serial (any)	RS-232 Comm Port (9-pin) VersaView CE 700H - 1500H	N/A	2711-NC13 (16ft/5m) 2711-NC14 (32ft/10m) 2706-NC13 (10ft/3m)	2711-NC21 (16ft/5m) 2711-NC22 (49ft/15m)	N/A	
DH-485 xxx6xx	DH-485 Communication Port VersaView CE 700H - 1500H 6182H-xxx6xx, 2711P-RN6	Direct Connection to single AIC with Belden 9842 cable [1]	N/A		Direct Connection to single AIC+ with Belden 9842 cable [1]	N/A

[1] Use serial port on terminal with AIC+ module for a DH-485 network solution.

Communication Port Isolation

The terminals contain integral and modular (externally attached) communication ports. These ports may contain electrical isolation depending on the catalog number of the terminal or communication module.

Integral Communication Port Isolation

Communication Port	700H-1500H Terminal
RS-232	Isolated
USB	Non-isolated
Ethernet	Non-isolated

700H - 1500H Modular Communication Port Isolation

Communication Port	Module	Isolation
DH-485	2711P-RN6	Non-isolated
DH+	2711P-RN6	Non-isolated
Remote I/O	2711P-RN6	Non-isolated
DeviceNet	2711P-RN10H	Isolated
ControlNet	2711P-RN15S	Isolated (1)

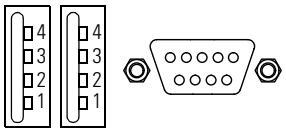
(1) NAP port is non-isolated.

USB Ports

The terminal has two USB ports. The Windows CE .NET operating system currently only supports standard USB keyboard and mouse devices (that is, HID devices) with native device drivers. It also supports some USB printers that have Printer Control Language (PCL) capabilities. A vendor-specific Windows CE .NET driver will be required for all other USB devices.

See Appendix C for a list of compatible USB devices.

Plug the USB device into either one of the two USB ports on the terminal.



USB Ports

USB Connector Pinout

Pin	Signal
1	USBVCC
2	USBD-
3	USBD+
4	USB-GND

WARNING

Do not connect or disconnect the communication cable with power applied to the terminal, or the serial device on the other end of the cable. An electrical arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

WARNING

USB devices not powered by the USB port must be within the same enclosure and connected to a ground system common with the terminal, or the USB devices must be used with a USB hub that provides galvanic isolation.

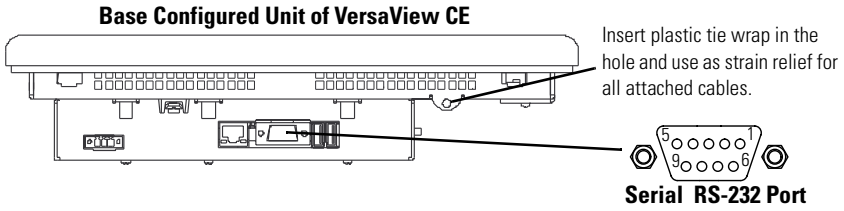
If a USB hub is connected to the terminal, an externally powered USB hub is recommended. Before attaching devices to a USB hub, check that the power adapter is connected and powered on.

Serial Connections

The base configured unit of all terminals has a multi-purpose serial RS-232 port that supports:

- DH-485 communications through a serial connection
- DF1 full duplex communications with controllers using direct connections or modem connections
- Third party point-to-point communications
- Application uploads/downloads
- Printing

The serial port on the base configured unit of the terminal is a 9-pin, male, RS-232 connector. The table shows the pinout descriptions for this port and how these pins map to the serial ports on the controllers.



VersaView CE RS-232 Port 9-pin DCE		SLC 9-pin	PLC 25-pin	MicroLogix/ DNI 8-pin DIN
1				
2	RXD →	2	3	4
3	← TXD	3	2	7
4	← DTR	4	20	
5	↔ COM	5	7	2
6	DSR →	6	6	
7	← RTS	7	4	
8	CTS →	8	5	
9				
Connector Shell	Chassis Gnd			

The maximum cable length for serial communications is:

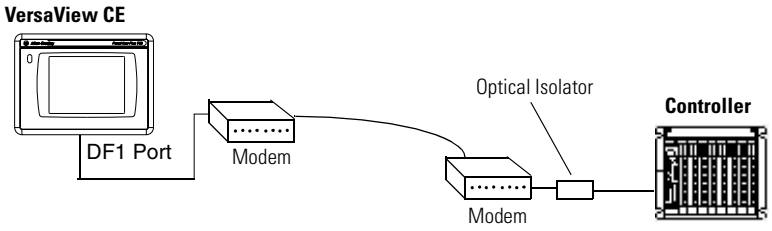
- 15.24 m (50 ft) at 19200 baud
- 152 m (500 ft) at 9600 baud

WARNING

Do not connect or disconnect the communication cable with power applied to the terminal, or the serial device on the other end of the cable. An electrical arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

Modem Connection

Wire or radio modem communications is possible between the terminal and controller. Each modem must support full duplex communications. Refer to your modem user manual for details on settings and configuration.



Constructing a Null Modem Cable

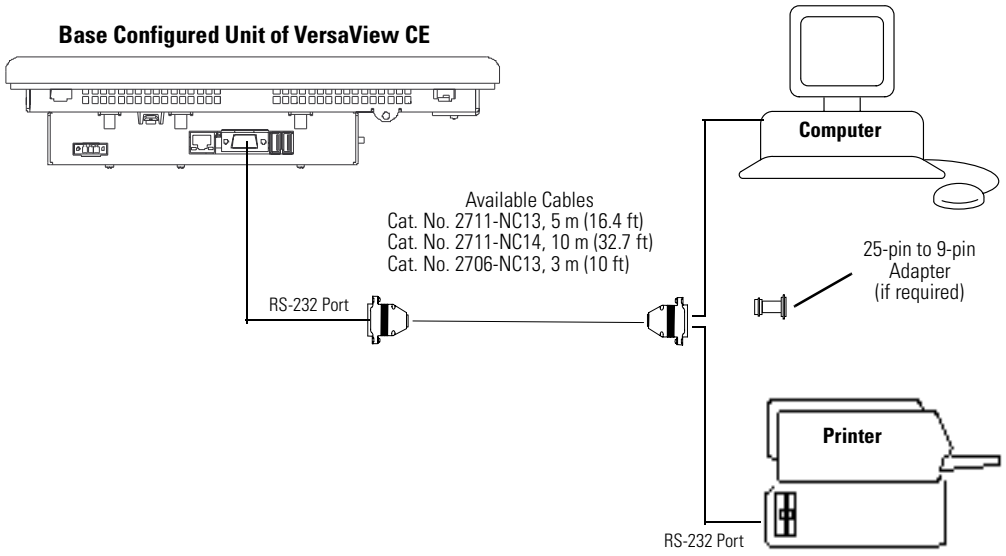
To construct a null modem cable, refer to the following pinout:

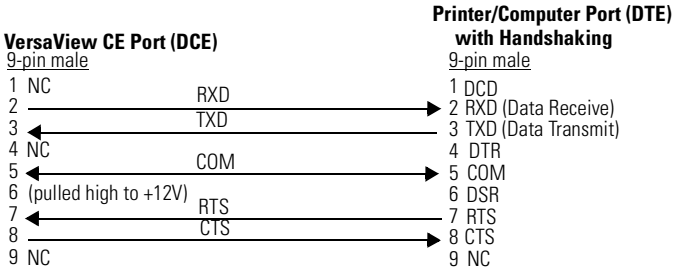
	VersaView CE 9-pin	9-pin	VersaView CE 9-pin	25-pin	
FG (Frame Ground)	-	-	-	1	FG
TD (Transmit Data)	3	2	3	3	RD
RD (Receive Data)	2	3	2	2	TD
RTS (Request to Send)	7	8	7	5	CTS
CTS (Clear to Send)	8	7	8	4	RTS
SG (Signal Ground)	5	5	5	7	SG
DSR (Data Set Ready)	6	4	6	20	DTR
DTR (Data Terminal Ready)	4	6	4	6	DSR

Computer or Printer Connections

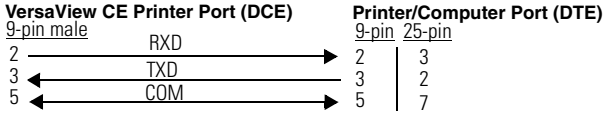
The RS-232 serial port on the base configured unit of the terminals supports:

- Application uploads/downloads using a direct connection or
- Printing





Upload/Download or Printer Cable without Hardware Handshaking



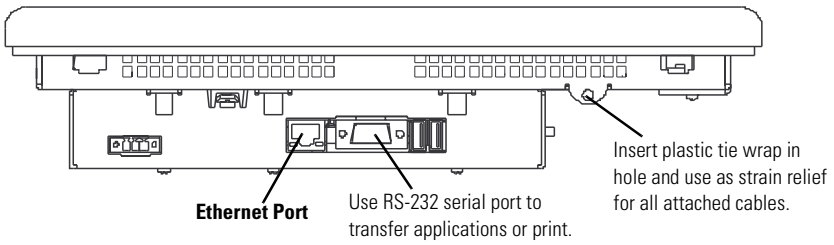
Ethernet Connections

The base configured unit of the terminal has an Ethernet port that supports:

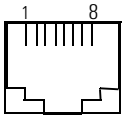
- EtherNet/IP communications
- Third party Ethernet communications
- Network connections
- Application uploads/downloads
- Printing
- Web browsing

Ethernet Connector

The base configured unit of the terminals has an RJ45, 10/100Base-T connector for EtherNet/IP or Ethernet TCP/IP network communications.



The table shows the connector pinouts.

Pin	Pin	Pin Name
Looking into RJ45 Connector 	1	TD+
	2	TD-
	3	RD+
	4	NC
	5	NC
	6	RD-
	7	NC
	8	NC
	Shield Connection	Chassis Gnd

Use point-to-point, 10/100Base-T cables with cross over pin-outs (such as 2711P-CBL-EX04) when connecting the Ethernet port on the terminal directly to a logic controller's Ethernet port or a computer 10/100Base-T port. Use standard Ethernet cables when connecting to a switch or hub.

Cables

Category 5 shielded and unshielded twisted-pair cables with RJ45 connectors are supported. If 100 Mbit/second data rates are used, we recommend that you use a shielded cable. The shielded cable will help insure that industrial noise immunity levels are maintained. The maximum cable length between the terminal's Ethernet port and a 10/100Base-T port on an Ethernet hub (without repeaters or fiber) is 100 meters (328 feet). In industrial applications, keep the cable length to a minimum.

WARNING

Do not connect or disconnect any communication cable with power applied to this device or any device on the network. An electrical arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

DH-485/DH+/Remote I/O Module

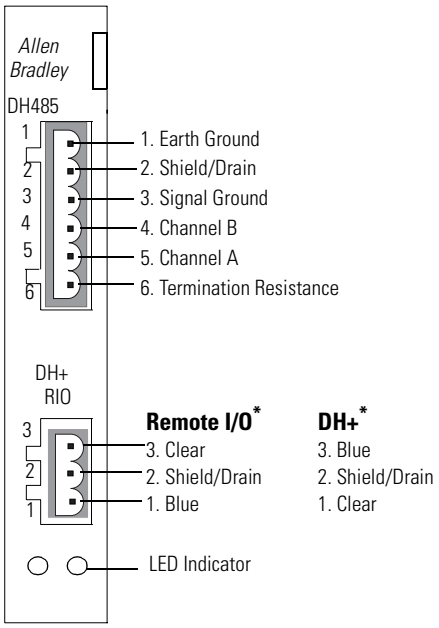
Terminals with a DH-485/DH+/Remote I/O communication module support communications with these networks:

- DH+ networks
- DH-485 networks
- Remote I/O networks

You can communicate with only one network at one time.

Module Connections

IMPORTANT See your controller documentation for appropriate controller connections.



***** Use a Belden 9463 twin axial or equivalent cable, cat. no. 1770-CD.

DH+ Status Indicator

Condition	Indication
off	Channel is not online
blinking green	Device is only node on the network.
solid green	Device is online and receiving token.
blinking red	Duplicate node
solid red	Failed selftest

DH-485 Status Indicator

Condition	Indication
off	Channel is not online
blinking green	Device is only node on the network.
solid green	Device is online and receiving token.
blinking red	Parity error
solid red	Failed selftest

Remote I/O Scanner Mode Status Indicator

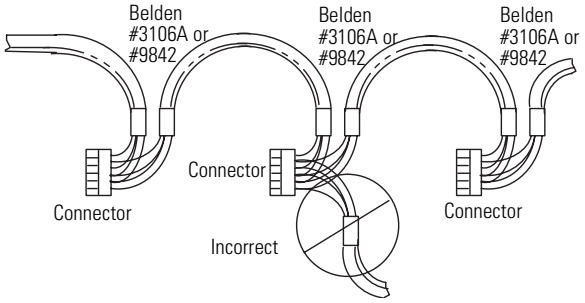
Condition	Indication
off	Channel is not online
blinking green	At least one but not all adapters in the scanlist are not responding.
solid green	All adapters in the scanlist are responding.
blinking red	None of the adapters in the scanlist are responding.
solid red	Failed selftest

DH-485 Network Port Wiring

Use these instructions for wiring Belden cable. If you are using standard Allen-Bradley cables, see the Logic Controller Cable Charts.

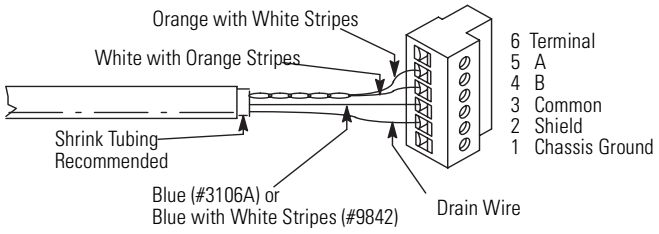
Attaching RS-485 Connector to the Communication Cable

IMPORTANT A daisy-chained network is recommended. We do not recommend hybrid star/daisy chain networks as shown.

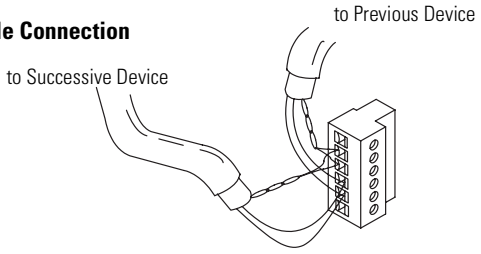


Attach the connector to the Belden #3106A or #9842 Cable as shown.

Single Cable Connection



Multiple Cable Connection



The table shows connections for Belden #3106A.

For this Wire/Pair	Connect this Wire	To this Terminal
Shield/Drain	Non-jacketed	Terminal 2 - Shield
Blue	Blue	Terminal 3 - (Common)
White/Orange	White with Orange Stripe	Terminal 4 - (Data B)
	Orange with White Stripe	Terminal 5 - (Data A)

DH+ Network Connections

Use the Belden 9463 twin axial or equivalent cable (cat. no. 1770-CD), to connect a terminal to a DH+ link..

You can connect a DH+ link in two ways:

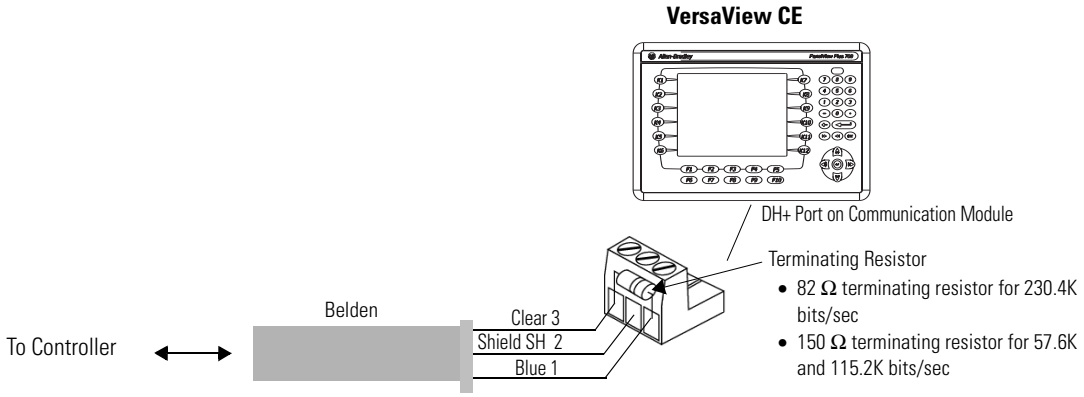
- Trunk line/drop line - from the drop line to the connector screw terminals on the DH+ connectors of the processor
- Daisy chain - to the connector screw terminals on the DH+ connectors on the processor

Follow these guidelines when installing DH+ communication links:

- Do not exceed these cable lengths:
  - trunk line-cable length: 3,048 m (10,000 ft)
  - drop-cable length: 30.4 m (100 ft)

  The maximum cable length is determined by baud rate.

- Do not connect more than 64 stations on a single DH+ link.

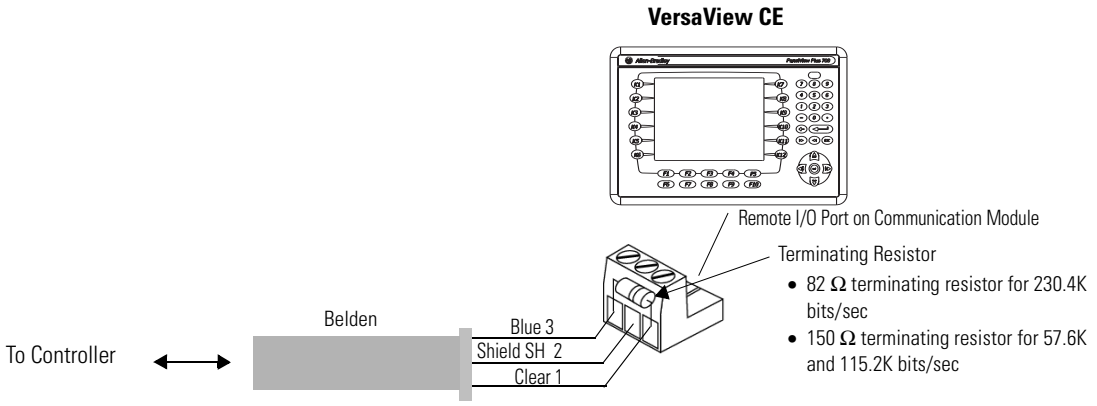


Remote I/O Connections

Use the Belden 9463 twin axial or equivalent cable (cat. no. 1770-CD), to connect a terminal to a Remote I/O scanner. The maximum cable length (link distance) is determined by the baud rate.

- 2,800 m (10,000 ft) for 57.6K baud
- 1,400 m (5,000 ft) for 115.2K baud
- 700 m(2,500 ft) for 230.4K

See Programmable Controller Wiring and Grounding Guidelines, Publication 1770-4.1. The user manual for the I/O scanner module also provides cabling information.



ControlNet Module

Terminals with a ControlNet communication module support communications and the transfer of applications between devices on a ControlNet network.

Related Information

For more information on ControlNet products, refer to these publications.

- ControlNet System Overview (Publication 1786-2.9)
- ControlNet System Planning and Installation Manual (1786-6.2.1)
- ControlNet Cable System Component List (AG-2.2)
- ControlNet Communications for PanelView Plus and VersaView CE Terminals (2711P-UM003)

The Rockwell Automation website www.rockwellautomation.com provides information and product descriptions of ControlNet products. Under the Products and Services heading, select Communications.

ControlNet Protocol

The terminals support Unscheduled and Scheduled messaging, Scheduled I/O, and redundant cabling with PLC-5C and ControlLogix controllers.

The ControlNet architecture supports multiple processors and up to 99 nodes (via taps) anywhere along the trunk cable of the network. There is no minimum tap separation and you can access the ControlNet network from every node (including adapters).

Compatible ControlNet Controllers

A terminal with a ControlNet Module communicates with a PLC-5C (PCCC commands) or a ControlLogix processor (CIP protocol) using Unscheduled messaging. The following controllers are supported:

- ControlLogix using 1756-CNB module
- PLC-5/20C, -5/40C, -5/60C, -5/80C

Minimum Requirements

The following software and firmware must be installed on the development computer and the PanelView Plus terminal to configure and communicate with an Allen-Bradley controller on a ControlNet network.

ControlNet Unscheduled Communications

Software/Firmware	VersaView CE 700H-1500H
RSView Studio	v3.10 or later
RSView Machine Edition Runtime	v3.10 or later
ControlNet Module Firmware	2711P-RN15S, Series A, Rev A (firmware v2.07 or later) (1)

(1) This applies to terminals that are ordered as pre-configured units with the ControlNet module.

ControlNet Scheduled Communications

Requirements	VersaView CE 700H-1500H
RSView Studio	v3.20 or later
RSView Machine Edition Runtime	v3.20.04 or later
RSNetWorx for ControlNet	v5.11 or later
RSLogix 5000	v13.0 or later
ControlNet Module Firmware	2711P-RN15S, Series A, Rev C (firmware v3.08 or later) (1)

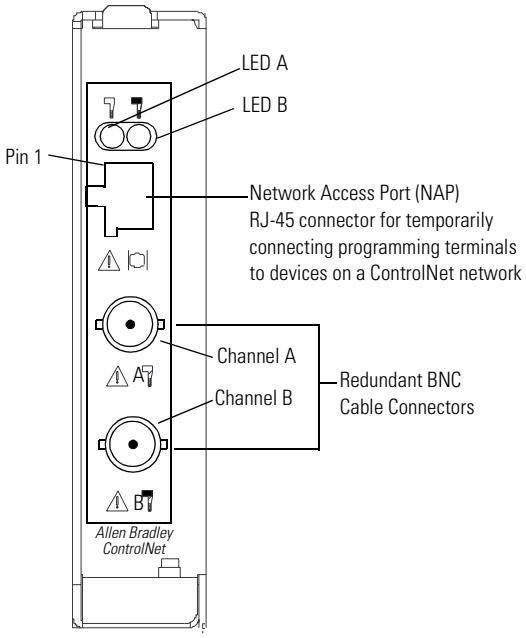
(1) This applies to terminals that are ordered as pre-configured units with the ControlNet module.

WARNING

The ControlNet Communications Module (2711P-RN15S) will not run with RSView ME firmware 3.20.04 or earlier. All ControlNet Modules with v3.07 firmware must be upgraded to v3.08 or later; otherwise, outputs may turn on an indeterminate state.

ControlNet Connections

2711P-RN15S ControlNet Module



Pin	NAP Signal
1	Signal Common
2	No Connection
3	TX_H
4	TX_L
5	RX_L
6	RX_H
7	No Connection
8	Signal Common
Shell	Earth Ground

ATTENTION

Do not connect more than one ControlNet network to the communications module. If you attempt to connect a second network to the module, your communication system will operate erratically.

NAP and Redundant Cables

Refer to the ControlNet Cable System Planning and Installation manual (Publication 1786-6.2.1) for descriptions of ControlNet components. For information on purchasing these items, refer to the Allen-Bradley ControlNet Cable System Component List (Publication AG-2.2).

Item	Catalog Number
RG-6 quad-shield	1786-RG6
Coax repeater	1786-RPT, -RPTD
Coax taps	1786-TPR, -TPS, -TPYR, -TPYS
Network access cable	1786-CP
Coax tool kit	1786-CTK
Segment terminators	1786-XT
BNC connectors	1786-BNC, -BNCJ, -BNCP, -BNCJ1

IMPORTANT Do not connect to a network using both the redundant cable BNC connector and the Network Access Port (NAP).

Connect the Module to the Network

You can connect the ControlNet Module:

- Directly to a ControlNet network, which requires a tap
- To a device already connected to the ControlNet network

WARNING

When used in a Class I, Division 2, hazardous location, this equipment must be mounted in a suitable enclosure with proper wiring that complies with the governing electrical codes.

Do not connect or disconnect any communication cable with power applied to this device or any device on the network. An electrical arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

DeviceNet Module

Terminals with a DeviceNet communication module support communication and the transfer of applications between devices on a DeviceNet network.

Related Information

For more information on DeviceNet products, refer to these publications.

- DeviceNet Selection Guide (Publication DNET-SG001)
- DeviceNet Media Design Installation Guide (DNET-UM072)
- DeviceNet Tips & Tricks (DNET-BR003)

The Rockwell Automation website www.rockwellautomation.com provides information and product descriptions of DeviceNet products. Under the Products and Services heading, select Communications.

DeviceNet Protocol

The terminals support DeviceNet Scheduled I/O only. DeviceNet allows direct connection of field devices such as lights, drives, and valves. It also provides a control architecture that supports multiple processors. DeviceNet is a trunk/drop or bus-based network that supports up to 64 nodes and operates at 125, 250, or 500 K baud.

Compatible DeviceNet Controllers

A terminal with a DeviceNet Module communicates with an SLC-500 and PLC-5 (PCCC commands), or a ControlLogix processor (CIP protocol) using Unscheduled messaging. Supported controllers include:

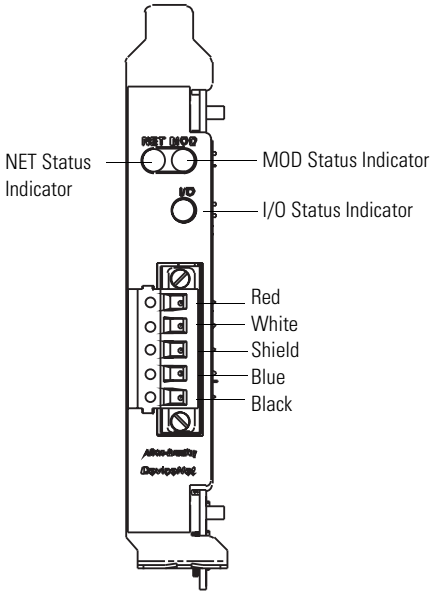
- ControlLogix using 1756-DNB module
- PLC-5 with a 1771-SDN module
- SLC 5/03 - SLC/505 with a 1747-SDN module

Minimum Requirements

Software/Firmware	PanelView Plus 700H-1500H
RSView Studio	v4.0 or later
RSView Machine Edition Runtime	v4.0 or later
DeviceNet Module	2711P-RN10H

DeviceNet Connections

2711P-RN10H DeviceNet Module



WARNING

Do not connect or disconnect any communication cable with power applied to this device or any device on the network. An electrical arc could cause an explosion in hazardous location installations. Be sure that power is removed or the area is nonhazardous before proceeding.

DeviceNet I/O Status Indicator

This bi-color (green/red) LED provides information on the states of inputs and/or outputs.

Condition	Status	Indication
off	output(s) active	All outputs are active.
	input(s) active	All inputs are active.
green	output(s) active	One or more outputs are active and under control, and no outputs are faulted.
	input(s) active	One or more inputs are active and producing data, and no inputs are faulted.
flashing green(1)	output(s) idle	One or more outputs are idle, and no outputs are active or faulted.
flashing red (1)	output(s) faulted	One or more outputs are faulted, and may be in the fault state.
	input(s) faulted	One or more inputs are faulted, and may be in the fault state.
red	output(s) forced off	One or more outputs are forced off (may be an unrecoverable fault).
	input unrecoverable fault	One or more inputs has an unrecoverable fault.

(1) The flash rate of the LED is approximately 1 flash per second. The LED should be on for approximately 0.5 seconds and off for approximately 0.5 seconds.

DeviceNet Module (MOD) Status Indicator

This bi-color (green/red) LED provides device status. It indicates whether or not the device has power and is operating properly.

Condition	Status	Indication
off	no power	No power applied to device.
green	device operational	Device is operating in a normal condition.
flashing green(1)	device in standby (device needs commissioning)	Device needs commissioning due to configuration missing, incomplete, or incorrect.
flashing red (1)	recoverable fault	For example, the device's scan list configuration does match the actual network configuration.
red	unrecoverable fault	Device has an unrecoverable fault. Cycle power to your computer. If the problem persists, the device may need to be replaced.
	device self testing	Device is in self test. Refer to the DeviceNet Specification, Volume II, Identity Object.

(1) The flash rate of the LED is approximately 1 flash per second. The LED should be on for approximately 0.5 seconds and off for approximately 0.5 seconds.

DeviceNet Network (NET) Status Indicator

This bi-color (green/red) LED indicates the status of the communication link.

Condition	Status	Indication
off	not powered	Device is not online.
	not online	The device has not completed the Dup_MAC_ID test yet.
		The device may not be powered; look at the Module Status LED.
flashing green(1)	online	Device is online, but has no connections in the established state.
	not connected	The device has passed the Dup_MAC_ID test, is online, but has no established connections to other nodes.
green	link okay, online, connected	The device is online and has connections in the established state.
flashing red (1)	connection timeout	One or more I/O connections are in the timed-out state.
red	critical link failure	Failed communication device. The device has detected an error that has rendered it incapable of communicating on the network (Duplicate MAC ID or Bus-off). Check network integrity and baud rate of all devices. Then cycle power to the card by shutting down and cycling power to your computer.

(1) The flash rate of the LED is approximately 1 flash per second. The LED should be on for approximately 0.5 seconds and off for approximately 0.5 seconds.

ATTENTION

Extensive use of Change-of-State connections, particularly with rapidly changing data, can adversely impact the available DeviceNet network bandwidth. If the network bandwith becomes consumed, some devices may only be able to communicate intermittently. This can result in timeout errors and possible loss of data. If timeouts occur, consider changing the connection type for some of the Change-of-State connections to Cyclic or Polled.

Transfer Files

Chapter Objectives

This chapter covers information on how to:

- Transfer applications using a compact flash card
- Transfer applications from a computer
- Connect to a computer using ActiveSync
- Upgrade terminal firmware

Transfer Files Using a Compact Flash Card

The VersaView CE terminal allows you to copy or load files using a compact flash card from Windows Explorer or RSView ME.

- To copy files in RSView ME using a compact flash card, see page 4-21.
- To copy files in Windows Explorer, see page 5-6.

Transfer Files from a Computer

IMPORTANT For details on transferring .MER applications from a computer to the VersaView CE terminal, refer to RSView Studio help or documentation.

Connect via ActiveSync

This section shows how to create an ActiveSync connection between a computer and a VersaView CE terminal.

Creating an ActiveSync connection is a two-step process:

1. Create a partnership between the devices using a Serial connection.
2. When the partnership is created, you can then connect the devices using an Ethernet.

What You Need

- Computer and a VersaView CE terminal that are connected to an Ethernet network supporting DHCP
- ActiveSync 3.7 (or later) software installed on computer. You can download ActiveSync from the www.microsoft.com website.
- 2711-NC13 or 2706-NC13 serial cable for connecting the VersaView CE terminal to the computer with ActiveSync installed.

Create a Partnership using a Serial Connection

IMPORTANT To complete the ActiveSync installation, you must select the Serial Connection initially. After that you can switch between serial and Ethernet.

You must also make a valid ActiveSync connection at least once with the computer.

Install ActiveSync on PC

1. Install ActiveSync 3.7 (or later) on your computer.
2. Connect the VersaView CE terminal to the computer with ActiveSync installed.

   Use a 9-pin straight through cable (2711-NC13 or 2706-NC13) for a serial connection and/or an Ethernet cable.
3. Start ActiveSync. You will see the Get Connected screen.

Initiate Serial Connection on VersaView CE

1. Select Start>Menu>Programs>Microsoft ActiveSync>Serial.

   The Connecting to Async Connection dialog appears.

Find ActiveSync Connection and Create a Partnership on PC

1. When the Connecting to Async Connection dialog appears on the VersaView CE, select the Next button on the Getting Connected screen of your computer.

   If the Connecting to Async Connection dialog closes before a connection is established, return to Initiating Connection from VersaView CE.
2. When the ActiveSync connection is created, a window opens allowing you to create a new partnership. Select Yes to create the new partnership.
3. ActiveSync will prompt you for a device name. Enter the name and press Next.
4. Select any options you want to synchronize. Press the Next button.
5. Press the Next button and then the Finish button.

Terminate Connection on VersaView CE

1. Click the ActiveSync connection utility on the taskbar.

   The Connection Status dialog should appear.

2. Press the Disconnect button to terminate the connection (may take 30 seconds).

Connect via Ethernet

Now that a partnership is created using a serial connection, you can connect to the VersaView CE using an Ethernet connection.

ActiveSync Setup on PC

1. Verify that ActiveSync is configured to accept Ethernet. By default, Ethernet is enabled. (It is only necessary to enable Ethernet if it is disabled).

Connect with the Partnership on VersaView CE

1. Select Start>Programs>Microsoft Active Sync>Ethernet.

   The ActiveSync dialog opens. The name of the computer you connected to via the serial connection will appear.

2. Select Connect.

   The Connection Status window opens. This window remains opens as long as the ActiveSync connection is active.

   Closing the window will terminate the connection.

Upgrade Firmware

The Firmware Upgrade Wizard (FUW) allows you to upgrade firmware in the terminal. Using the FUW, you can:

- Create a firmware upgrade card (compact flash card) which you then load in the card slot of terminal to upgrade firmware.
- Upgrade firmware in a terminal that is connected to your desktop computer using a Serial, Ethernet, or Network connection via RSLinx Enterprise (for supported protocols).

The Firmware Upgrade Wizard is available in RSView Studio or with the Firmware Upgrade Kit.

Prepare Terminal for Firmware Upgrade

Before starting the Firmware Upgrade Wizard, follow these steps to prepare the terminal for a successful upgrade.

1. Backup all .MER files on the terminal to an external storage card or network.
2. Delete all applications on the terminal.
3. Record any Ethernet communication settings, such as IP address, subnet masks, and gateways by selecting Terminal Settings>Network and Communications>Network Connections>Network Adapters>IP Address.
4. Disable the Auto-start feature on the terminal by selecting Startup Options>RSView ME Station Startup and select Go to Configuration Mode.
5. Reset the terminal.

Upgrade Firmware using a Compact Flash Card

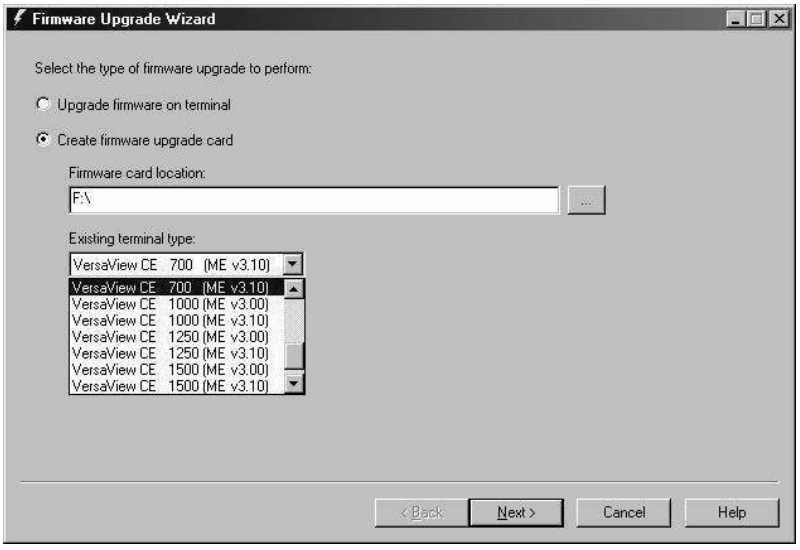
This section shows how to upgrade the firmware in terminal using a compact flash card. This is a two step-process. First, you create a firmware upgrade card with the necessary firmware files. Second, you load this card in the target terminal to upgrade the firmware.

1. *Create a Firmware Upgrade Card*

1. Start the Firmware Upgrade Wizard. Select Start>Rockwell Software>RSView Enterprise>Firmware Upgrade Wizard.

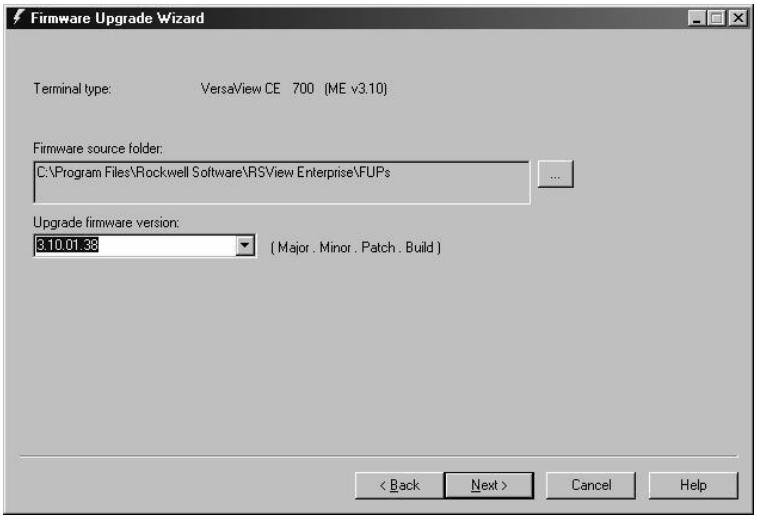
2. Select Create firmware upgrade card.

- In the Firmware card location text box, select the destination for the compact flash files (folder on the hard drive or physical location of the compact flash card, e.g., E:\).
- From the Existing terminal list, select the type of terminal you are upgrading, then press Next.

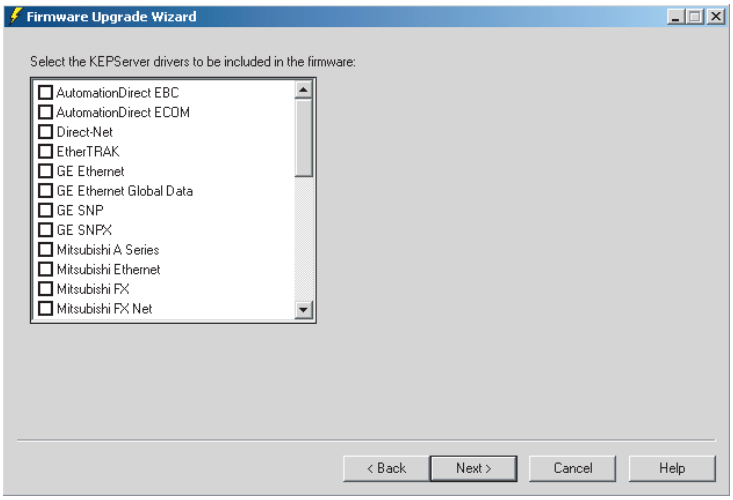


3. From the Firmware source folder list, select the location of the firmware files. The default location is C:\Program Files\Rockwell Software\RSView Enterprise\FUPs.

   From the Upgrade firmware version list, select the version of the firmware you want to upgrade to, then press Next.



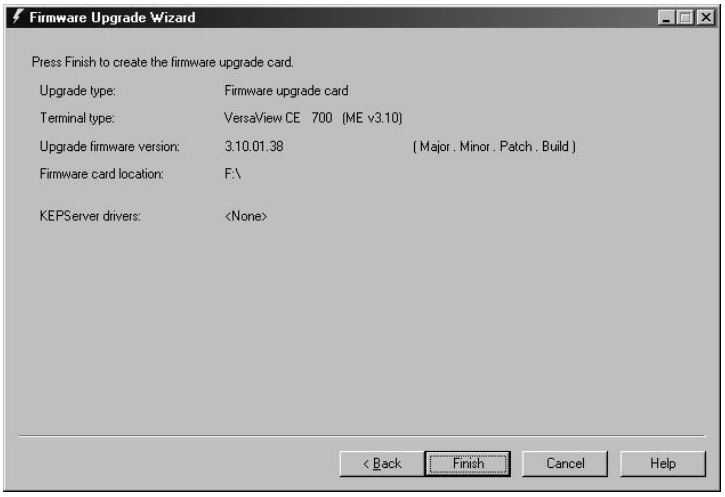
4. Select the appropriate KEPServer drivers and press Next. If no KEPServer drivers are needed, just press Next.



TIP If the selected FUP file does not support the KEPServer drivers, this dialog will not appear.

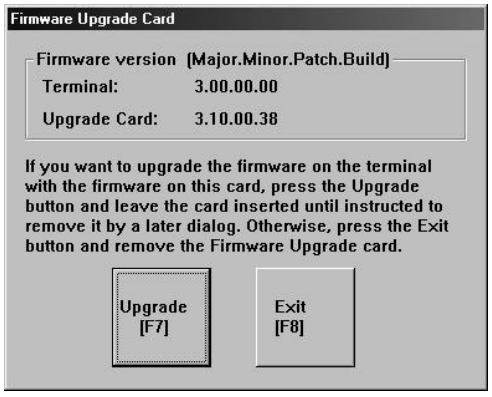
5. Select Finish to copy the firmware source files to the location specified in step 2.

TIP If the files were created in a separate folder on a local hard drive, copy the files to the root directory of the compact flash card.



2. Upgrade Firmware in the Terminal using Firmware Upgrade Card

1. Insert the compact flash card into the card slot of a powered terminal. A dialog appears indicating the firmware upgrade is about to occur.



2. Press Upgrade to begin the firmware upgrade.

IMPORTANT Do NOT remove the compact flash card while the upgrade is in process.

3. If other terminals exist on the same Ethernet network, the following error may display:

   'Error registering name on network (may be duplicate). Change in system Control Panel and try again.'

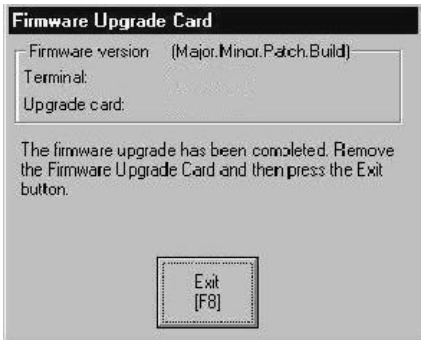
   Ignore this error. It will be corrected during the upgrade. Press OK to acknowledge error and wait for terminal to reset.

   TIP If a USB mouse is available you can acknowledge this error by selecting OK.

4. On touch or touch/screen terminals, you must calibrate the touch screen by selecting pointers in all four corners of the screen and pressing the middle of the screen when prompted.
5. Ignore the following message if it appears. It means RSView ME is being installed. Do not touch the two buttons that appear with this message.

   'Machine edition may be corrupted. Do you want to download firmware?'

6. When the upgrade is complete, a dialog appears requesting you to remove the compact flash card from the card slot. Remove the card and press F8 or Exit to reset the terminal.



7. Communication settings are cleared when the terminal is upgraded. If Ethernet communications is used, reconfigure the Ethernet communication settings using the values recorded when preparing the terminal.
8. Replace the .MER files that you backed up before starting the upgrade or download a new .MER file to the terminal.
9. Load the .MER file and run the project.

   TIP You can configure your application to start automatically on power cycle under Startup Options.

Upgrade Firmware using a Network (Ethernet) Connection

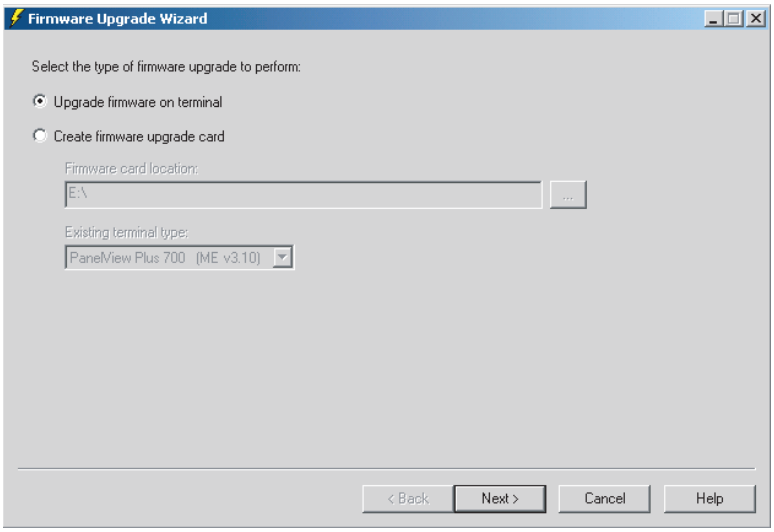
You can upgrade the firmware in a terminal that is connected to a desktop computer using a Serial, Ethernet or Network (using RSLinx Enterprise) connection.

- **Serial connection** requires a RAS connection to be set up on computer. During the RAS setup, you select the COM port.
- **Ethernet connection** requires that you enter the terminal's IP Address.
- **Network connection** requires RSLinx Enterprise where you select the terminal on an existing network.

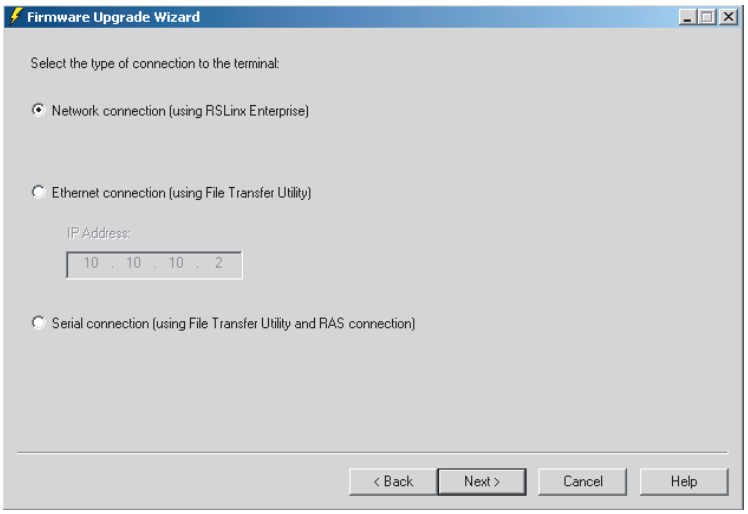
Both the Serial and Ethernet connection requires the File Transfer Utility running on the terminal.

This section shows how to upgrade firmware in a terminal using a Network connection via Ethernet communications.

1. Start the Firmware Upgrade Wizard. Select Start>Rockwell Software>RSView Enterprise>Firmware Upgrade Wizard.



2. Select Upgrade firmware on terminal and press OK.

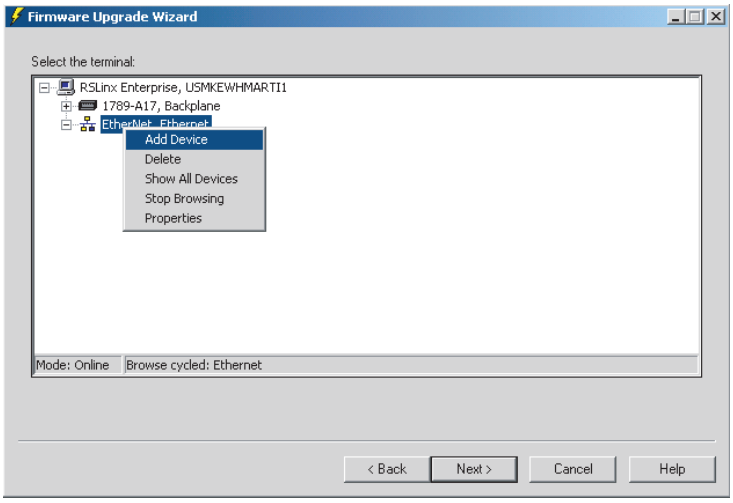


3. Select Network connection and press Next.

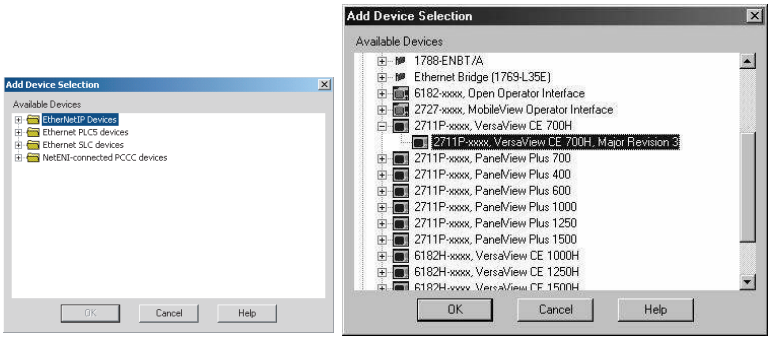
   Use the Ethernet and Serial connections only if the firmware upgrade is unsuccessful.

4. Locate the terminal on your Ethernet network via its IP address.

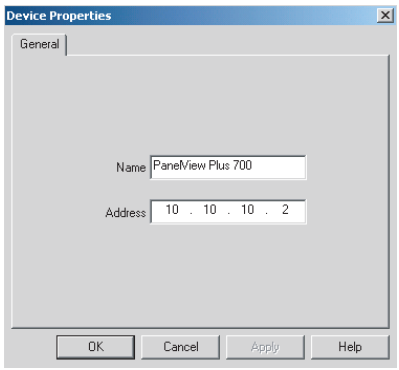
   Skip to Step 6 if you found the terminal. If you do not see the terminal, right click on the Ethernet driver and add the device to the browse tree.



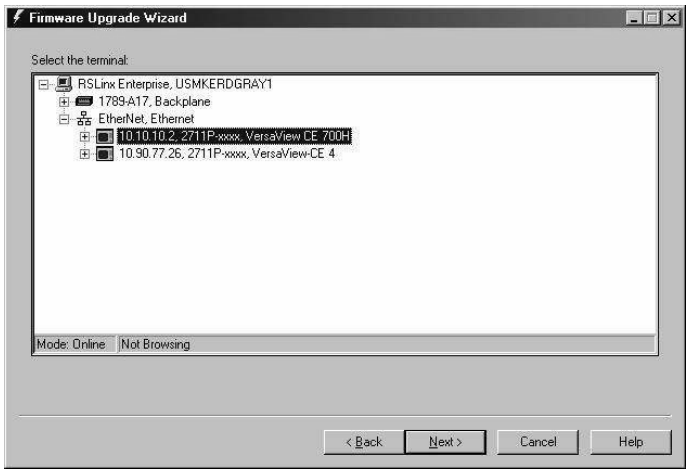
5. Double-click on EthernetIP Devices. Select the appropriate terminal and press OK.



6. Enter the IP address for the terminal and press OK.

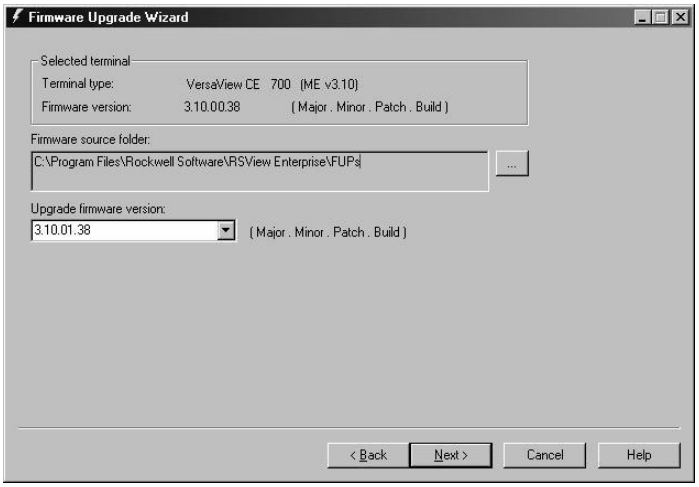


7. Select the terminal to be upgraded and press OK.

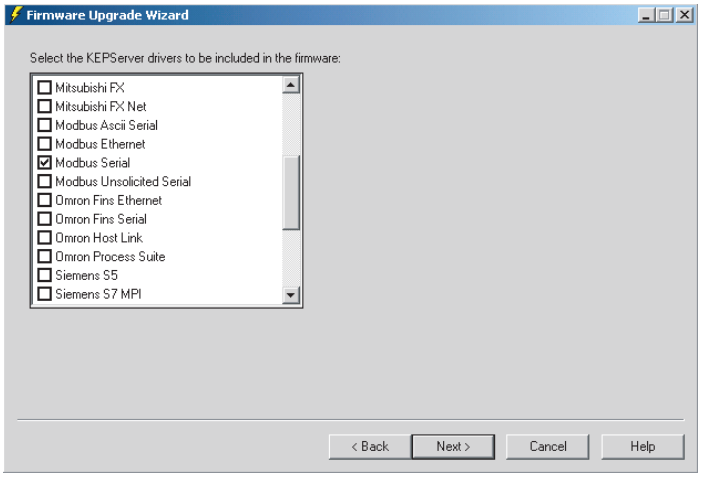


8. From the Firmware source folder text box, select the location of the firmware files. The default location is C:\Program Files\Rockwell Software\RSView Enterprise\FUPs.

   From the Upgrade firmware version list, select the version of the firmware you want to upgrade to, then select Next.

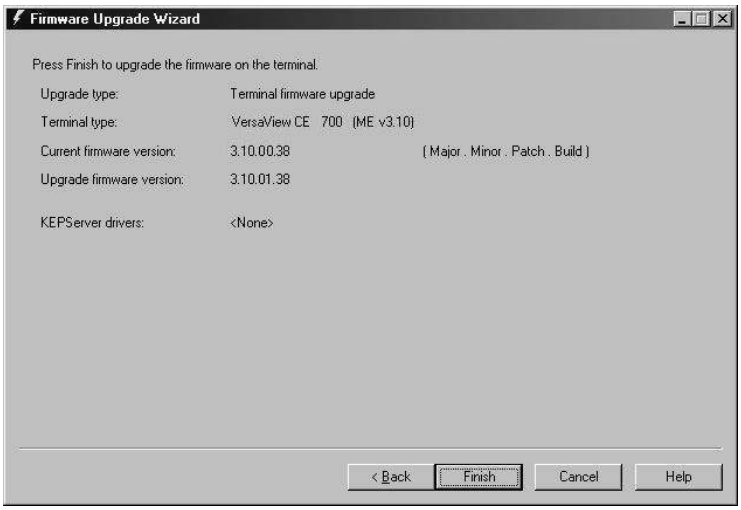


9. Select the appropriate KEPServer drivers and select Next. If no KEPServer drivers are needed, just select Next.

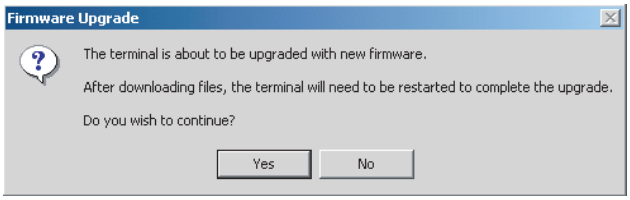


TIP If the selected FUP file does not support the KEPServer drivers, this dialog will not appear.

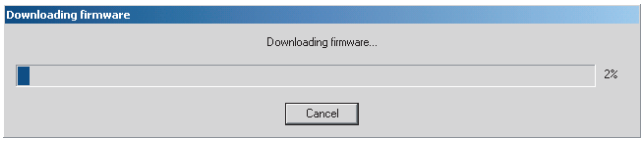
10. Press Finish to start the upgrade.

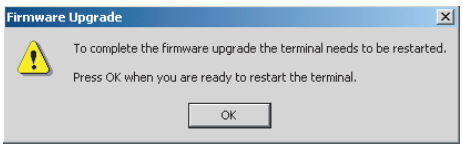


11. Press Yes to continue the upgrade process. If the terminal was properly prepared for the upgrade, no applications should be running.



12. Firmware files are downloaded to the terminal. This may take several minutes to 15 minutes. When the download is complete, press OK to reset the terminal.





If other terminals exist on the same Ethernet network, the following error may display:

'Error registering name on network (may be duplicate). Change in system Control Panel and try again.'

Ignore this error. It will be corrected during the upgrade. Press OK to acknowledge error and wait for terminal to reset.

TIP If a USB mouse is available you can acknowledge the error by selecting OK.

13. On touch or touch/screen terminals, you must calibrate the touch screen by selecting pointers in all four corners of the screen and pressing the middle of the screen when prompted.
14. Ignore the following message if it appears. It means RSView ME is being installed. Do not touch the two buttons that appear with the message.

    'Machine edition may be corrupted. Do you want to download firmware?'
15. Communication settings are cleared when the terminal is upgraded. If Ethernet communications is used, reconfigure the Ethernet communication settings using the values recorded when preparing the terminal.
16. Replace the .MER files that you backed up before starting the upgrade or download the new .MER files to the terminal.
17. Load the .MER file and run the project.

TIP You can configure your application to start automatically on power cycle under Startup Options.

Troubleshooting

Chapter Objectives

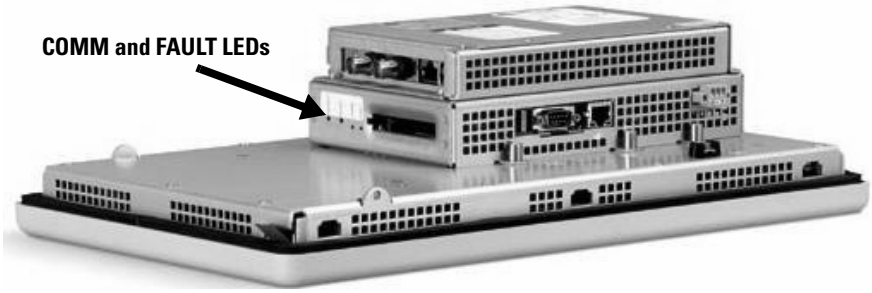
This chapter provides information on how to isolate and correct common operating problems.

- LED indicators
- General troubleshooting
- Troubleshooting individual components (display, touch screen, keypad, attached keyboard or mouse)
- Ethernet
- Application startup
- File system
- Advanced troubleshooting
- Startup error messages
- Startup information messages
- Startup sequence
- System identification errors
- Restarting in safe mode
- Firmware upgrades
- Clean the display window

LED Indicators

The terminals have two LED indicators to isolate operating problems:

- COMM indicator (green) for communications
- FAULT indicator (red) for terminal faults



General Troubleshooting

This section provides a list of general troubleshooting steps to follow when trying to isolate problems.

- **Check for adequate power**. The VersaView CE terminal requires 24V dc at 2.9 A minimum. An under-powered unit could result in unpredictable behavior.

  The AC power supply (2711P-RSACDIN) meets Class 2/SELV requirements, and is approved for the VersaView CE terminal.

After a successful startup, both LEDs are off and controlled by the application running on the terminal.

- **Check LED indicators on the logic module at startup**. Is power on? Is the unit attempting to start? The red LED should be Off, except for a few brief flashes, and the green LED should be On. If the LEDs remain Off, the power supply or logic module has failed. Check the power cable. Replace the logic module if the power is within range; if not, replace the power supply.

  If the terminal powers up and stops during startup, the state of the logic module LEDs indicate:

  Blinking red LED indicates a recoverable error.

Red LED	Green LED	Indication
Blinking	Off	Last firmware download failed. Reload firmware using Firmware Upgrade Wizard (FUW) utility.
Blinking	Blinking	EBC boot loader firmware failed or is missing. Reload firmware using Firmware Upgrade Wizard (FUW) utility.
Blinking	On	Windows CE .NET OS firmware failed or is missing. Reload firmware using Firmware Upgrade Wizard (FUW) utility.

  Solid red LED indicates a non-recoverable and fatal error.

Red LED	Green LED	Indication
On	Off	Fatal hardware error occurred in logic module. Replace the logic module.
On	Blinking	Fatal hardware error occurred in display module. Replace the display module.

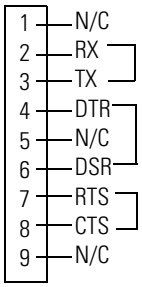
- **Check the messages at startup for errors**. Record any error message and refer to the Startup Error Message table.
- **Check the voltages and temperatures**. In VersaView CE, open the Hardware Monitor control application. In RSView ME, open Terminal Settings>System Information>Terminal Information.
  - Battery Voltage should be at least 2.75 V dc. Replace the battery if less than 2.75 V dc.
  - Display Temperatures should be less than 55 °C. The CPU temperature should be less than 95 °C.

If the temperatures are higher, check for obstructed airflow through the chassis and attempt to moderate the ambient temperatures within the enclosure and surroundings.

- **Check the System Event Log for errors or unexpected reboots.** In VersaView CE, open the Hardware Monitor application and select the Event Log tab. In RSView ME, open Terminal Settings>System Event Log.
- **Use Extended Diagnostics to perform more extensive hardware testing at startup**. In VersaView CE, open the Extended Diagnostics control panel application. In RSView ME, open Terminal Settings>Startup Tests>Select Tests.

  Select one or more of the tests you want to run. Enable extended diagnostics and set the iteration or repeat count. Restart the terminal. The Serial Port test requires a loopback connector with these connections.

DB9 Connector (female)



Extended Diagnostics are performed at every startup until disabled. A failure will momentarily halt startup and display an error message.

Troubleshooting Components

This section provides tips on how to isolate problems with individual components of the terminal, including the display, touch screen, keypad, attached keyboard or mouse.

Display Problems

This section provides tips on how to isolate problems with the display.

- **Check the brightness setting of the display module**. Is the display brightness dim or unreadable?

  In VersaView CE, open the Display control panel application and select the Backlight tab. In RSView ME, open Terminal Settings>Display Intensity.

- **Check the Screen Saver settings**. Is the backlight turning off and dimming the display unexpectedly.

  In VersaView CE, open the Display control panel application and select the Screen Saver tab. In RSView ME, open Terminal Settings>Display>Screen Saver.

- **Check the LED indicators on the logic module**. Do they flash during startup? Is power on and is the unit attempting to start?
- **Check the Display temperature.** The display intensity will decrease to 40% if its temperature (or the temperature within the enclosure) is too high to reduce damage to the display. This can be checked using the RSView ME Events log.
- **Check the startup messages**. Is the display operating at all and do the startup messages appear? Record any error message and refer to the Startup Error Messages.
- **Restart in Safe Mode**. If the startup messages appear on the display but the Windows CE .NET operating system appears to be failing, try booting up in Safe Mode. See page 9-16 for details. If the unit appears to run in Safe Mode then it is likely that the WinCE Registry is corrupt or a bad application is being loaded automatically at startup.
- **Replace the display module if all other attempts do not resolve problem**. If replacing the display corrects the problem, then the display was not functioning properly.

Touch Screen Problems

This section provides tips on how to isolate problems with the touch screen.

- **Check the catalog number of the unit**. Verify that your terminal has a touch screen by looking at the label on the display module.
- **Perform a calibration of the touch screen**. In VersaView CE, open the Touch control panel application and select the Calibration tab. In RSView, open Terminal Settings>Input Devices>Touch Screen>Calibration. Follow the directions.

  The calibration requires 4 user screen touches. When the touches do not converge to a satisfactory calibration, you are asked repeatedly for additional screen touches and the calibration process never terminates. A touch screen that does not calibrate is not present or not functioning properly. Replace the bezel or the display module.

- **Check the Cursor Enable setting for the touch screen**. Is the cursor visible? In VersaView CE, open the Display control panel application and select the Cursor tab. In RSView, open Terminal Settings>Input Devices>Touch Screen>Cursor.
- **Check the pointer input by attaching a USB mouse**. If the mouse works, but the touch screen does not, then the touch driver or touch screen is not functioning properly. If both the mouse and the touch screen are not working, then it is an application problem.
- **Determine if the problem is with the application**. Try to touch something outside the application such as a button in the shell or a desktop icon. If the touch screen operates outside the application, then the application is the problem.
- **Does touching or dragging on the screen appear to work?** If yes, even if incorrectly, the touch screen is present and working but requires calibration.
- **Replace the bezel or display module if all other attempts do not resolve the problem**. If replacing the display module or bezel corrects the problem, then the touch screen was not functioning properly.

Mouse Problems

This section provides tips on how to isolate problems with an attached mouse.

- **Check the Cursor Enable setting**. Is the cursor visible? In VersaView CE, open the Display control panel application. In RSView, open Terminal Settings>Input Devices>Touch Screen>Cursor. Also check mouse settings.
- **Check the USB cable and connection**. Detach and then re-attach the mouse. Cycle power to the terminal.
- **Is the mouse a USB composite device?** If the mouse is a keyboard/mouse composite device, then try a stand-alone USB mouse.
- **Replace the USB mouse**. Try a different model or manufacturer. See Appendix C for a list of compatible USB devices. You can also check the Knowledgebase at the http://support.rockwellautomation.com site for a list of USB devices that are compatible with the terminal. If attaching a new mouse resolves the problem, then the old mouse was not working or non-compliant.

Keypad Problems

This section provides tips on how to isolate problems with the Keypad.

- **Check the Multi-Key/Hold-Off settings**. In VersaView CE, open the Keypad control panel application. In RSView, open Terminal Settings>Keypad>Keypad Settings.

  Is the Hold-Off Delay longer than expected, or are multiple key presses inhibited by Multi-Key Lockout? Check all configurable settings.
  The Home, End, Page Up, and Page Down keys are not supported when multi-key lockout is enabled.
- **Check the key input by attaching a USB keyboard**. If the keyboard works, but the keypad does not, then the keypad driver or keypad is not working. If both the keypad and keyboard are not working, then the problem may be the application.
- **Check the keypad mapping?** Keys on the VersaView CE terminal can be remapped and/or disabled via the Keypad Configuration Utility (KCU). Use the KCU to check the current keypad configuration. Restarting in Safe Mode will result in the default keypad mappings.
- **Determine if the problem is with the application**. Press a key outside the application such as an edit box in the shell. If the keypad input works outside the application, then the application is at fault. On the VersaView CE terminal, press Ctrl+Esc simultaneously to open the Start menu, cursor to run, type numbers and viewable characters into the Run dialog.
- **Replace the display module if all other attempts do not resolve problem**. If replacing the display module corrects the problem, then the keypad was not functioning properly.

Problems with Keyboard

This section provides tips on how to isolate problems with an attached Keyboard.

- **If the keypad is present, check input using the keypad**. If the keypad works, but the keyboard does not, then the keyboard driver or keyboard is probably not working. If both the keypad and the keyboard are not working, then it is probably an application problem.
- **Determine if the problem is with the application**. Press a key outside the application, such as an edit box in the shell. If keyboard entry works outside the application, then the application is the problem. On VersaView CE, press Ctrl+Esc simultaneously to open the Start menu, cursor to run, type viewable characters into the Run dialog.
- **Check the USB cable and connector**. Detach and re-attach the keyboard. Insure a good connection. Cycle power to the terminal.
- **Is the keyboard a USB composite device?** If the keyboard is a keyboard/mouse composite device, then try a stand-alone USB keyboard.
- **Replace the USB keyboard**. Try a different model or manufacturer. See Appendix C for a list of compatible USB devices. You can also check the Knowledgebase at the http://support.rockwellautomation.com site for a list of USB devices that are compatible with the terminal. If a new keyboard resolves the problem, then the old keyboard was probably non-compliant.

Ethernet Problems

- **Check the LED indicators at the Ethernet connector**. The green LED indicates a communications link and should be ON. The amber LED indicates data activity and should be flashing. Verify that there is a connection to the hub.
- **Check the cable connections and quality of cable.** Check for good connections and things such as quality, crimping, hub connection, and uplink ports.
- **Check the IP Address of the Built-In Ethernet Controller**. In VersaView CE, open the Network and Dial-up Connections control panel application. In RSView, select Terminal Settings>Networks and Communications>Network Connections>Network Adaptors.

  If DHCP is enabled, the device expects a valid IP address to be acquired within several seconds after startup. The TCP/IP protocol automatically assigns 169.254.nnn.nnn when it fails to acquire an IP address from the server. In general, an IP address that begins with 169 will not support a network connection.

  A bad Ethernet connection and the absence of a valid IP address are typically reported in a Communications error message box with the Winsock critical error 10065 - "No route to host".

- **Check for conflicting IP addresses**. If DHCP is not enabled, make sure the IP address you specify is not in conflict with the address of another device on the network.
- **Check the Device Name of the terminal**. Do not allow devices on the network with same (host) name. In VersaView CE, open the System control panel application. In RSView, open Terminal Settings>Communications and Networks>Network Connections>Device Name.
- **Contact your Network Administrator to check peer or server settings**. The “other side” of the Ethernet connection may also be a problem.
- **Use the network utilities Ping.exe and Ipconfig.exe**.
- **Check the requirements of network applications.** Network applications may have specific requirements such as Proxy Settings for Internet Explorer and Ethernet Configuration for ActiveSync. In VersaView CE, open the Communications control panel application.
- **Check the multi-homed devices.** Multi-homed (more than 1 Ethernet node) devices have the same issues as those above but with more potential for confusion and ambiguity. Keep the Network connections as simple as possible.

Application Startup Problems

- **Application does not run on startup.** If the application does not run at startup, try to run the application manually. If the application runs manually, then the operating system may be starting up with an invalid shortcut path.

  Check the shortcuts in the folder:

  \Storage Card\Windows\StartUp

  Check the syntax of each shortcut path in the Startup folder and insure that a valid target application exists.

- **Is the application missing components?** The application may be missing components or required DLLs.
- **Remove and re-load the application**.

File System Problems

- **File system errors are reported at startup.** The file system is checked at startup and errors are reported in a message box. Record the error information and always elect to correct the problem. Typically, the message box will reappear until the error is corrected.

  File system errors are rare and can usually be corrected. The most common cause of lost clusters and file/directory size mismatches within a FAT file system is an unexpected power outage while writing to the file system. Always stop applications before removing power so that data is cleanly flushed out to the file system and the file system is brought to an orderly stop.

  Although, the RSView ME application runs from RAM, applications such as data and event logging, and historical trending, write to flash memory and should be stopped before removing power.

Advanced Troubleshooting

1. Ping and ipconfig are invaluable for network debugging along with some knowledge of IP and the Winsock error codes.
   - Try to ping the destination host.
   - Check the destination address.
   - Check whether you have a router configured in your network system (your WinSock implementation).
   - Use the tracert command at the command prompt on the desktop to try and determine where the failure occurs along the route between your host and the destination host.

2. Some utility programs are distributed on the Accessories CD. Others can be developed using the SDK (Software Development Kit).

3. Take advantage of alternate connectivity - mouse versus touch screen, keyboard versus keypad, serial communications, and alternate Ethernet connections.

4. Enable the crash logger and examine the EXCEPTIONS.LOG file from the VersaView CE when suspecting an operating system or application crash.

5. Store the current operating system on an external compact flash card. You can then use this card to update the terminal in case the operating system is out-of-date or corrupted.

6. Store Autorun.exe utilities on an external compact flash card which can be easily run by inserting the card in the external compact flash card slot of the terminal.

7. Know useful keyboard shortcuts so that you can navigate around the system without a mouse or touch screen.

8. Check the Event Log in the Hardware Monitor control panel application or under Terminal Settings>System Event Log in RSView ME. Look for error conditions or reasons for unexpected reboots.

9. Check the configuration settings in the VersaView CE Control Panel applications or RSView ME for incorrect settings.

10. Most importantly, general troubleshooting thoroughness means getting answers to questions such as:
    - Does the failure always happen? Is it repeatable?
    - Does the failure happen at bootup or some other time? Is there a set of actions that reveal the problem?
    - Does the failure occur on just one terminal or multiple machines? If more than one machine, what do they have in common? If not all machines, then what is different between machines that fail and those that don't?
    - What appears on the screen, the LED indicators?
    - Lastly, and most important; did everything work until recently? If so, what changed?

Startup Error Messages

The table provides a list of system error messages that may display on startup and the recommended corrective action. The messages apply to all terminals except where indicated. When an error occurs, the terminal displays the error number with a text message. The word ERROR! appears under this line in different languages.

Displayed Message
ERROR! FEHLER! ERREUR! ERRORE!

Error #	Displayed Message	Description	Recommended Action
1	RAM Test	RAM test failure	Reset the terminal. If error persists, reseat the SO-DIMM RAM module. If error still persists, replace the logic module.
23	Internal CF	Error programming the new OS firmware to internal compact flash.	Reload the firmware. If error persists, replace the internal compact flash. If error still persists, replace the logic module.
24	CRC Check	Checksum of the OS firmware failed.	Reload the firmware. If error persists, replace the internal compact flash card. If error still persists, replace the logic module.
30	Watchdog Test	Watchdog test failure	Reload the firmware. If error persists, replace the logic module.
31	Stuck Key	Function key failure	Check that nothing is pressed against a key. Reset the terminal without key presses. If error persists, replace the display module.
31.5	Stuck Touch	Touch screen failure	Check that nothing is pressed against the touch screen. Reset the terminal without touch screen presses. If error persists, replace the display module.
32	Battery Test	Battery failure	Replace the battery. If error persists, replace the logic module.
33.5	NVRAM Access	Non-volatile memory failure	Upgrade the system firmware to revision 3.10.03 or later.
40	EXE Check	System OS firmware is missing or corrupt.	Reload the firmware. If error persists, replace the internal compact flash card. If error still persists, replace the logic module.
50	External CF	Error loading the OS firmware from the external compact flash card.	Reload the firmware. If error persists, replace the external compact flash card and attempt the firmware upgrade again.

Startup Information Messages

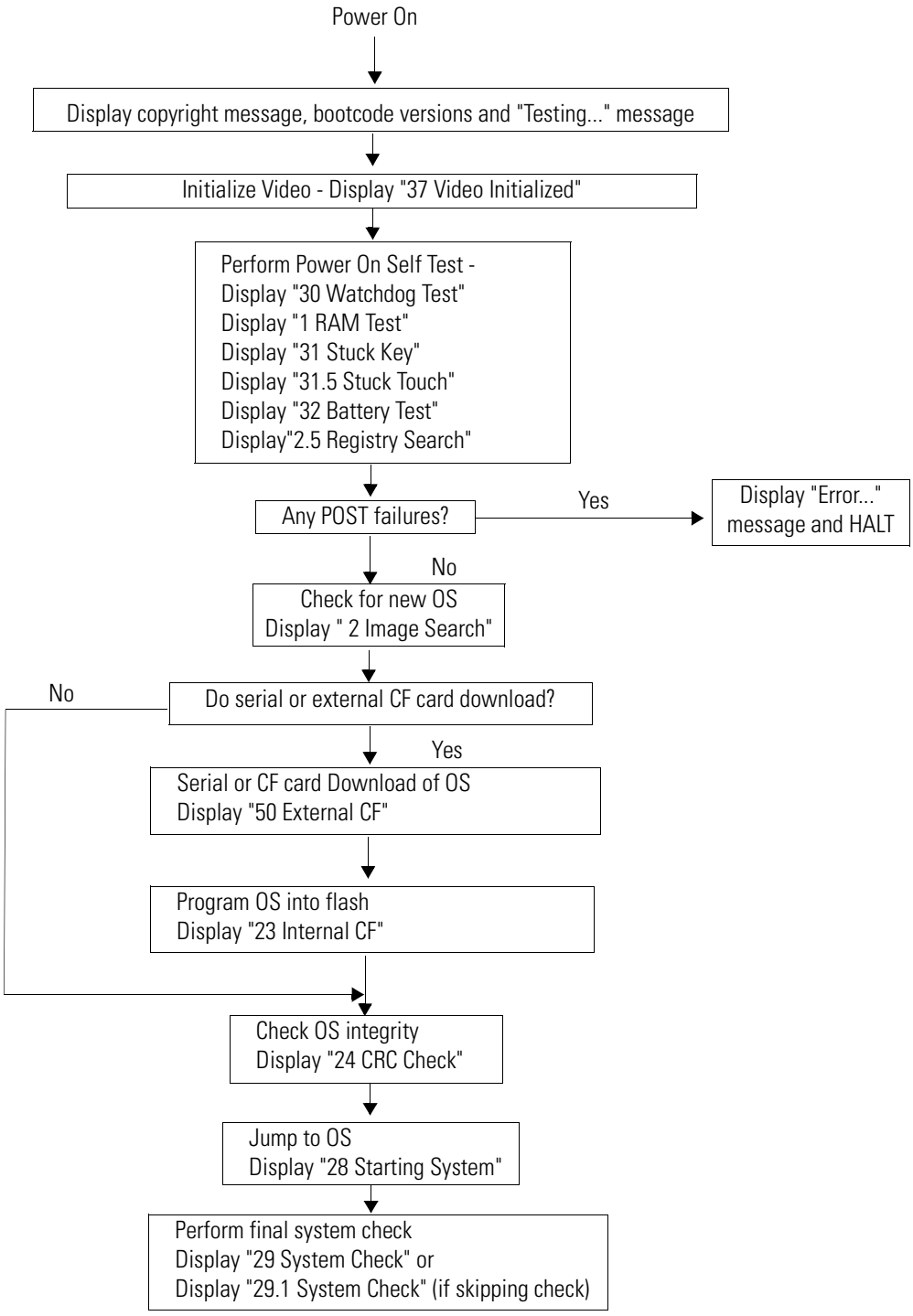
The table provides a list of system information messages that display at startup. The messages are in the order that they appear on the terminal screen during startup and typically display for a few seconds.

Startup information messages show the startup sequence of the terminal but do not require that you perform any action.

Message #	Displayed Message	Description
37	Video Initialized	Configures and initializes the graphics video system.
30	Watchdog Test	Tests the watchdog circuitry to verify system integrity.
1	RAM Test	Tests the RAM memory.
31	Stuck Key	Checks the integrity of the function key hardware.
31.5	Stuck Touch	Checks the integrity of the touch screen hardware.
32	Battery Test	Checks the integrity of the battery hardware.
2.5	Registry Search	Locates and loads the most recent, valid registry. Multiple copies of the registry are maintained. If power is lost during a registry update, a valid registry is available the next time power is applied to the terminal.
2	Image Search	Checks for new OS firmware upgrade on the external compact flash card and the serial port.
50	External CF	Transfers a new OS firmware upgrade from the external compact flash card to the terminal. Message may display for several minutes.
23	Internal CF	Programs the OS firmware just downloaded into the internal flash memory. Message may display for several minutes.
24	CRC Check	Checks the integrity of the OS firmware.
28	Starting System	Launches the operating system (OS).
29	System Check ###	Internal file system integrity check (### is percent progress indicator).
29.1	System Check	Internal file system integrity check disabled. Contact technical support.

Startup Sequence

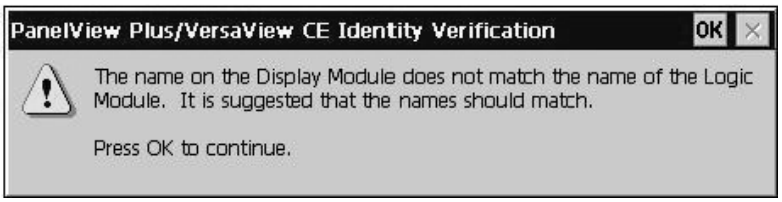
This flow chart provides a sequence of startup operations for the terminal and shows system information messages that display on the terminal.



System Identification Errors

The error messages in this section appear on bootup if incorrect or invalid components are used with the VersaView CE terminal.

- The following dialog appears if a VersaView CE logic module is attached to a PanelView display module. It is recommended that you use a VersaView CE display module with a VersaView CE logic module. This is a warning allowing you to continue to operate.



- The following dialog appears if the VersaView CE logic module contains a 2711P-RWx internal compact flash card for the PanelView Plus terminal

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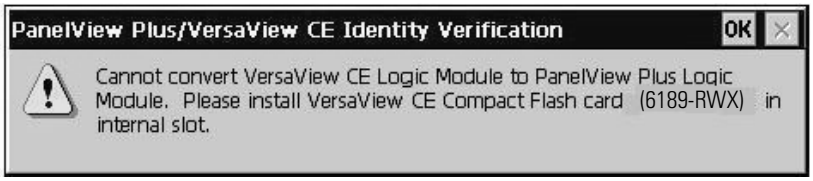
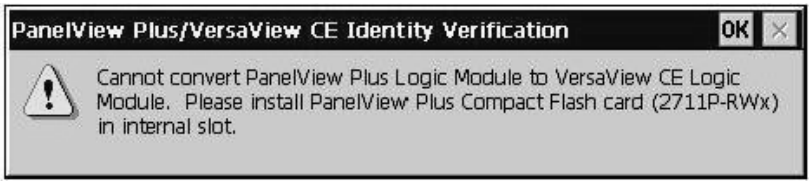


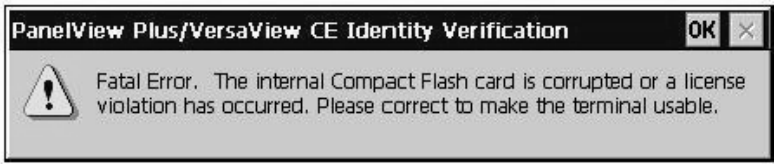
After pressing OK, you will be asked to power of the terminal and insert a valid 6189-RWx internal compact flash card for the VersaView CE terminal.

- The following dialog appears if the PanelView Plus logic module contains a 6189-RWx internal compact flash card for the VersaView CE terminal.



After pressing OK, you will be asked to power off the terminal and insert a valid 2711P-RWx internal compact flash card for the PanelView Plus terminal.

- The following dialog appears if the internal compact flash in the VersaView CE logic module is corrupt or invalid. This is a fatal error



After pressing OK, you will be asked to power of the terminal and insert a valid 6189-RWx internal compact flash card.

Restart in Safe Mode

Safe Mode is a diagnostics mode where the system is reduced to a known state that permits recovery from a software problem. Safe Mode ignores all user changes to the system and avoids any problems that are due to interactions with end-user software or changes. Once the system is running in Safe Mode, you can repair the offending applications or changes that caused the problem.

When the VersaView CE terminal is restarted in Safe Mode, the following occurs:

- The Persistent Registry is ignored and the Default Registry is used. The Persistent Registry is restored at the next reboot unless the Default Registry is saved (flushed), in which case it becomes the new Persistent Registry.
- The \Windows\Startup folder is ignored, inhibiting most startup actions. All user applications that launch automatically at startup are shortcuts in the \Startup folder.
- Depending on the state of the system, the touch screen may be calibrated at startup.
- All custom key configurations (mappings) generated by the Keypad Configuration Utility (KCU) are ignored.

To restart in Safe Mode:

The switches that control Safe Mode are on the right side of the logic module above the compact flash card slot.

1. Insert a thin probe into the hole marked DEFAULT and press the switch.

2. Insert the probe into the hole marked RESET and press the switch. The system will restart immediately into the Safe Mode.

Firmware Upgrades

The only way to upgrade the firmware is to use the Firmware Upgrade Utility as described in Chapter 8.

Operating System (OS)

The Operating System (OS) compressed binary image resides in a binary partition of the Internal (IDE) compact flash in the logic module. There are two ways to upgrade the OS:

- External compact flash card during a reboot
- LocalOSUpdate (LocalOSUpdate.exe)

External Compact Flash Card

To upgrade the OS using an external compact flash card:

1. Copy the operating system binary file, SYSTEM.BIN, to a compact flash card. The file must be named SYSTEM.BIN.
2. Remove power from the VersaView CE terminal.
3. Insert the compact flash card into the external card slot on the terminal.
4. Power up the VersaView CE terminal.

   The terminal automatically reboots with the new operating system.

Local OS Update

To perform a local update of the operating system:

1. Copy the operating system binary file to a compact flash card.
2. Insert the compact flash card into the external card slot of the VersaView CE terminal.
3. At a CMD prompt on the VersaView CE terminal, run:

   LocalOSUpdate <Pathname and Filename>

   Example: LocalOSUpdate "\Storage card2\NewOS.BIN"

   The terminal automatically reboots with the new operating system.
4. Verify the new operating system is loaded using the System application in the Control Panel.

Load VersaView Components

You can Load VersaView Components using either:

- ActiveSync connection or
- External compact flash card

Using ActiveSync Connection

When the new operating system is running, load the VersaView CE components as follows:

1. Establish an ActiveSync connection between your computer and the VersaView CE terminal, using either a Serial or Ethernet connection (Ethernet is recommended). Refer to page 8-1.
2. Open the VersaView folder on the Accessory CD and run the **VersaViewCEInstall.exe** program.

   This program allows you to select which features to install and automatically copies the files from the CD to the VersaView CE terminal. You must run the program from its directory, to ensure the program locates all the files correctly.
3. Select the desired components from the list of available components. Use the >> button to install everything. Once installed, components can be optionally removed to free space in the \Storage Card folder. When satisfied with the selections, press the **Install/Remove** button.
4. Depending on the options selected and the speed of your ActiveSync connection, the download process may take several minutes. For a serial ActiveSync connection at 19,200 baud, the download time can be 30 minutes.

   When the download is complete, you will see the number of files copied or deleted.
5. Restart the VersaView CE terminal.

External Compact Flash Card

When the new operating system is running, load the VersaView CE components as follows:

1. Open the VersaView CE folder on the Accessory CD and copy the following to an FAT formatted compact flash card:
   - VersaViewCEinstall.exe
   - VersaViewCEinstall.ini
   - Storage Card File folder

2. Insert the compact flash card into the external card slot on the terminal. Using Windows Explorer, browse the \Storage Card folder and run VersaViewCEinstall.exe.

3. Select the desired components from the list of available components. Use the **>>** button to install everything. Once installed, components can be optionally removed to free space in the \Storage Card folder. When satisfied with the selections, press the **Install/Remove** button.

   When the operation is complete, you will see a message box reporting the number of files installed (or removed).

4. Restart the VersaView CE terminal.

Clean the Display Window

ATTENTION

Use of abrasive cleaners or solvents may damage the display. Do not scrub or use brushes.

1. Disconnect power from the terminal at the power source.
2. Use a clean sponge or soft cloth with a mild soap or detergent to clean the display.
3. Dry the display with a chamois or moist cellulose sponge to avoid water spots.

Remove Paint and Grease

Remove fresh paint splashes and grease before drying by rubbing lightly with isopropyl alcohol (70% concentration). Afterward, wash using a mild soap or detergent. Rinse with clean water.

Use a protective antiglare overlay for easier cleaning of display window.

Specifications

Electrical

DC Power Input Voltage Power Consumption	 24V dc nom (18…32V dc) 70 W max (2.9A @24V dc)
AC Power (2711P-RSAC) Input Voltage Line Frequency Power Consumption	 85…264V ac 47…63 Hz 120 VA max

Environmental

Operating Temperature	0…55 °C (32…131 °F)
Storage Temperature	-25…70 °C (-13 to 158 °F)
Heat Dissipation	240 BTU/hr
Relative Humidity	5…95% without condensation
Altitude Operating	2000 m (6561 ft)
Shock Operating	15 g at 11 ms
Shock Non-Operating	30 g at 11 ms
Vibration	10…57 Hz, 0.012 pk-pk displacement 57…500 Hz, 2 g pk acceleration
Enclosure Ratings	Nema Type 12, 13, 4X (indoor use only), IP54, IP65

Display

Display Type	Color Active Matrix TFT Thin-Film Transistor with LCD Liquid Crystal Display
Display Area Size 700H 1000H 1250H and 1250H High-Bright 1500H	 6.5 inch 10.4 inch 12.1 inch 15.0 inch
Display Area (W x H) 700H 1000H 1250H and 1250H High-Bright 1500H	 132 x 99 mm (6.7 inch diagonal) 211 x 158 mm (10.4 inch diagonal) 246 x 184 mm (12.1 inch diagonal) 304 x 228 mm (15.1 inch diagonal)

Resolution	
700H	640 x 480
1000H	640 x 480
1250H and 1250H High-Bright	800 x 600
1500H	1024 x 768
Luminance	
700H - 1500H	300 cd/m^2 (Nits)
1250H High-Bright	1000 cd/m^2 (Nits)
Backlight	
700H - 1500H	CCFL 50,000 hours life, minimum
1250H High-Bright	Backlight not replaceable
Touch Screen	
Touch Technology	Analog resistive
Actuation Rating	1 million presses
Operating Force	10…110 g
Keypad	
Function Keys	Function Keys, numeric and navigation
Actuation Rating	1 million presses
Operating Force	340 g

Mechanical

Weight (for base unit without modules)	
700H Keypad or Keypad & Touch	1.9 kg (4.2 lbs)
700H Touch	1.7 kg (3.8 lbs)
1000H Keypad or Keypad & Touch	2.9 kg (6.3 lbs)
1000H Touch	2.6 kg (5.7 lbs)
1250H Keypad or Keypad & Touch	3.4 kg (7.6 lbs)
1250H Touch and 1250H High-Bright	3.2 kg (7.1 lbs)
1500H Keypad or Keypad & Touch	4.6 kg (10.0 lbs)
1500H Touch	4.2 kg (9.3 lbs)
Dimensions H x W x D (for base unit without communication module)	
700H Keypad or Keypad & Touch	193 x 290 x 55 mm 7.58 x 11.40 x 2.18 in
700H Touch	179 x 246 x 55 mm 7.04 x 9.68 x 2.18 in
1000H Keypad or Keypad & Touch	248 x 399 x 55 mm 9.77 x 15.72 x 2.18 in
1000H Touch	248 x 329 x 55 mm 9.77 x 12.97 x 2.18 in
1250H Keypad or Keypad & Touch	282 x 416 x 55 mm 11.12 x 16.36 x 2.18 in
1250H Touch	282 x 363 x 55 mm 11.12 x 14.30 x 2.18 mm

1250H High-Bright Touch	282 x 363 x 74 mm 11.12 x 14.30 x 2.90 mm
1500H Keypad or Keypad & Touch	330 x 469 x 65 mm 12.97 x 18.46 x 2.55 in
1500H Touch	330 x 416 x 65 mm 12.97 x 16.37 x 2.55 in

General

Battery Life	4 years minimum at 25 °C
Clock	Battery-backed, +/-2 minutes per month
LED Indicators	COMM (Green), Fault (Red)
Application Flash Memory	12 MB
External Compact Flash Storage	512 MB maximum

Agency Certifications

UL Listed Industrial Control Equipment UL Listed Industrial Control Equipment for use in Canada UL Listed Industrial Control Equipment for use in: • Class I, Div 2, Group A, B, C, D • Class I, Zone 2, Group IIC [1] • Class II, Div 2 Groups F, G • Class III Hazardous Locations
CE marked for all applicable directives
C-Tick

[1] Applies only to the 1250H High-Bright Display Module

Programmable Key Definitions

The tables in this appendix shows the Windows virtual key code mapping of each programmable function key on the VersaView CE terminal.

Function Key Mapping

Function Key	Virtual Key Mapping	Function Key	Virtual Key Mapping
F1	VK_F1	K1	RA + VK_F1
F2	VK_F2	K2	RA + VK_F2
F3	VK_F3	K3	RA + VK_F3
F4	VK_F4	K4	RA + VK_F4
F5	VK_F5	K5	RA + VK_F5
F6	VK_F6	K6	RA + VK_F6
F7	VK_F7	K7	RA + VK_F7
F8	VK_F8	K8	RA + VK_F8
F9	VK_F9	K9	RA + VK_F9
F10	VK_F10	K10	RA + VK_F10
F11	VK_F11	K11	RA + VK_F11
F12	VK_F12	K12	RA + VK_F12
F13	LS + VK_F1	K13	RS + VK_F1
F14	LS + VK_F2	K14	RS + VK_F2
F15	LS + VK_F3	K15	RS + VK_F3
F16	LS + VK_F4	K16	RS + VK_F4
F17	LS + VK_F5	K17	RS + VK_F5
F18	LS + VK_F6	K18	RS + VK_F6
F19	LS + VK_F7	K19	RS + VK_F7
F20	LS + VK_F8	K20	RS + VK_F8
F21	LS + VK_F9	K21	RS + VK_F9
F22	LS + VK_F10	K22	RS + VK_F10

Alt, Control and Shift Key Mapping

The following table provides the Windows virtual-key code mapping for the Alt, Control and Shift keys on the VersaView CE terminal.

Keyboard Equivalent	Virtual Key Mapping
Control	VK_LCONTROL
Shift	VK_LSHIFT
Alt	VK_LMENU

Compatible USB Devices

The following table provides a list of compatible USB devices which can be used on the USB ports of the VersaView CE terminals.

Device	Vendor	Model	PanelView Plus 700-1500
USB Keyboard	Rockwell Automation	Cat. No. 6189-KBDEPU1U	Yes
	Ortek	MCK-600USB	Yes
	Dell	RT7D10	Yes
USB Keyboard/Mouse	Rockwell Automation	Cat. No. 6189-KBDEPC1U	Yes
USB Mouse	Logitec	Optical Mouse - M-BJ58	Yes
	Microsoft	Intellimouse D58-00026	Yes
	Atek	USB Mouse	Yes
	VersaView (Rockwell Automation)	USB Mouse	Yes
USB Hub	Belkin	USB 4-Port Hub - ESU021	Yes

Security Considerations

Ports 137 and 138 are normally open to support the NetBIOS protocol used by Windows CE.NET similar to other Microsoft and IBM network operating systems.

Port 80 is open when the web server is optionally installed from the VersaView extensions. Otherwise, Port 80 is normally closed.

The FTP server permits a remote computer to run arbitrary commands and read/write files. The FTP server is optionally installed from the VersaView extensions. Otherwise, there is no FTP server on the system.

SNMP (Simple Network Management Protocol) is not supported.

IGMP (Internet Group Management Protocol) is used for IPv4 multicast. A multicast is communication between a single sender and multiple receivers on a network. IGMP is used to exchange membership status data between IPv4 routers that support multicasting and members of multicast groups. A router is an intermediary device on a communication network that expedites message delivery by finding the most efficient route for a message packet within a network, or by routing packets from one subnetwork to another. A subnetwork is a separate part of an organization's network identified through IP addressing.

VersaView CE terminals provide level 2 (full) support for IPv4 multicasting (IGMP version 2) as described in RFC 1112 and RFC 2236.

Security requires a comprehensive application of policies and technology, and an awareness of security needs and potential vulnerabilities. You may also want to consult with Rockwell GMS Network Services for additional assistance.

Available Fonts for Terminal Applications

The following fonts are pre-installed on PanelViewPlus/VersaView CE terminals:

- True Type fonts (scalable)
  - Tahoma.ttf (proportional)
  - Courier.ttf (fixed width)
  - Arial.ttf (proportional)
- (23) fonts of various sizes migrated from PanelView Standard and PanelView "e" terminals (various sizes)

To simplify the creation and downloading of .mer application files on these devices, use the above list of fonts when developing screens in RSView Studio.

Additional fonts are available in RSView Studio when developing application screens.

- If the font used to develop screens is not available on the target device, the closest font is selected.
- If bolding or italics is used, and a separate bold or italics font is unavailable, then the target operating system will use an algorithm to produce these affects.

In either case, the device screens will look different than they do in RSView Studio.

Downloading Fonts to Terminal

To use additional fonts on a PanelView Plus/VersaView CE device, copy any of the font files on the VersaView CE Accessories CD or the RSView Machine Edition Fonts CD to the following directory on the computer where RSView Studio is installed:

c:\Documents and Settings\All Users\Documents\RSView Enterprise\ME\Runtime

You can now use the File Transfer Utility in RSView Studio to download the font file(s) to the target device:

1. Select **Tools>Transfer Utility**.
2. Select **Source File>True Type Fonts**.
3. Select a font file to download to the device and press the **Download** button.

VersaView CE Accessories CD

The following True Type fonts are included on the VersaView CE Accessories CD:

- Times New Roman.ttf
- Symbol.ttf
- Wingdings.ttf

RSView Machine Edition Fonts CD

Additional fonts are available on a CD, titled "RSView Machine Edition Fonts". This CD is available from the Automation Bookstore (www.theautomationbookstore.com) at no charge.

To download fonts that can be used on the PanelView Plus/VersaView CE terminals via the network, see the Rockwell Automation Knowledgebase (http://support.rockwellautomation.com). Select Knowledgebase under Self-Service Support (or Online Tools) and then enter Tech Note ID A66647102.

Fonts	File Name	Size (Bytes)
Arial		
Arial (Subset 1_30)	arial_1_30.ttf	153,720
Arial Black	arialk.ttf	117,028
Arial Bold	arialbd.ttf	288,496
Arial Bold Italic	arialbi.ttf	226,748
Arial Italic	ariali.ttf	207,808
Comic Sans MS		
Comic Sans MS	comic.ttf	126,364
Comic Sans MS Bold	comicbd.ttf	111,476
Courier New		
Courier New (Subset 1_30)	cour_1_30.ttf	162,460
Courier New Bold	courbd.ttf	312,920
Courier New Bold Italic	courbi.ttf	236,148
Courier New Italic	couri.ttf	245,032
Georgia		
Georgia	georgia.ttf	149,628
Georgia Bold	georgiab.ttf	141,032
Georgia Bold Italic	georgiaz.ttf	159,736
Georgia Italic	georgiai.ttf	157,388
Impact	impact.ttf	136,076
Kino	kino.ttf	28,872
MSLogo	mslogo.ttf	2,500
Symbol	symbol.ttf	69,464
Tahoma		
Tahoma (Subset 1_07)	tahoma_1_07.ttf	123,980
Tahoma Bold	tahomabd.ttf	295,432
Times New Roman		
Times New Roman (Subset 1_30)	times_1_30.ttf	184,976
Times New Roman Bold	timesbd.ttf	334,944
Times New Roman Bold Italic	timesbi.ttf	239,692
Times New Roman Italic	timesi.ttf	248,368

Fonts	File Name	Size (Bytes)
Trebuchet MS		
Trebuchet MS	trebuc.ttf	69,688
Trebuchet MS Bold	trebucbd.ttf	66,444
Trebuchet MS Bold Italic	trebucbi.ttf	66,348
Trebuchet MS Italic	trebucit.ttf	72,560
Verdana		
Verdana	verdana.ttf	149,752
Verdana Bold	verdanab.ttf	137,616
Verdana Bold Italic	verdanaz.ttf	154,800
Verdana Italic	verdanai.ttf	155,076
Webdings	webdings.ttf	118,752
Wingding	wingding.ttf	81,000
Chinese (Simplified) Locale Specific Support		
Simsun & NSimSun		
Simsun & NSimSun	simsun.ttc	10,500,400
Simsun & NSimSun (Subset 2_50)	simsun_2_50.ttc	3,051,024
Simsun & NSimSun (Subset 2_60)	simsun_2_60.ttc	3,578,692
Simsun & NSimSun (Subset 2_70)	simsun_2_70.ttc	6,975,948
Simsun & NSimSun (Subset 2_80)	simsun_2_80.ttc	8,116,188
Simsun & NSimSun (Subset 2_90)	simsun_2_90.ttc	9,066,640
SC_Song	sunfon.ttf	4,686,044
Chinese (Traditional) Locale Specific Support		
MingLiU & PMingLiU(Choose 1)		
MingLiU & PMingLiU	mingliu.ttc	8,822,400
MingLiU & PMingLiU (Subset 2_70)	mingliu_2_70.ttc	4,786,488
MingLiU & PMingLiU (Subset 2_80)	mingliu_2_80.ttc	5,772,700
MingLiU & PMingLiU (Subset 2_90)	mingliu_2_90.ttc	7,354,808
MSMing	msming.ttf	3,172,552
Japanese Locale Specific Support		
MS Gothic		
MS Gothic & P Gothic & UI Gothic	msgothic.ttc	8,272,028
MS Gothic & P Gothic & UI Gothic (Subset 1_50)	msgothic_1_50.ttc	4,456,536
MS Gothic & P Gothic & UI Gothic (Subset 1_60)	msgothic_1_60.ttc	6,057,400
MS Gothic & P Gothic & UI Gothic (Subset 1_70)	msgothic_1_70.ttc	3,795,500
MS Gothic & P Gothic & UI Gothic (Subset 1_80)	msgothic_1_80.ttc	5,438,776
MS Gothic & P Gothic & UI Gothic (Subset 1_90)	msgothic_1_90.ttc	6,408,352
MS Gothic & P Gothic (Subset 30)	msgothic30.ttc	4,197,524
MS Gothic & P Gothic (Subset 30_1_19)	msgothic30_1_19.ttc	3,304,056

Fonts	File Name	Size (Bytes)
Korean Locale Specific Support		
GL_CE	gl_ce.ttf	4,130,084
Gulim & GulimChe (Choose 1)		
Gulim & GulimChe (Subset 1_30)	gulim_1_30.ttc	3,010,268
Gulim & GulimChe (Subset 1_40)	gulim_1_40.ttc	4,683,896
Gulim & GulimChe (Subset 1_50)	gulim_1_50.ttc	7,128,756
Gulim & GulimChe (Subset 1_60)	gulim_1_60.ttc	9,360,100

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Rockwell Automation Support

Rockwell Automation provides technical information on the web to assist you in using its products. At http://support.rockwellautomation.com, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration and troubleshooting, we offer TechConnect Support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://support.rockwellautomation.com.

Installation Assistance

If you experience a problem with a hardware module within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your module up and running:

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned:

United States	Contact your distributor. You must provide a Customer Support case number (see phone number above to obtain one) to your distributor in order to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for return procedure.

www.rockwellautomation.com

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