TPC-1851WP (B)

18.5" WXGA TFT LED LCD Thin-Client Terminal with Intel® Celeron® J1900 Processor

Features

- Industrial-grade 18.5" WXGA TFT LCD with 50K lifetime and LED backlight
- Intel® Celeron® J1900 2.0 GHz quad-core processor with 4GB DDR3L SDRAM
- True-flat capacitive touch touchscreen and IP66-rated front panel
- Front-facing LED indicators to show operating status
- Advantech iDoor technology and SSD/HDD bay
- Compact, fanless system with aluminum alloy front bezel and chassis grounding protection
- Supports VESA mount (100 x 100 mm)
- Supports Advantech's SNMP Subagent software
- Supports Advantech's WISE-PaaS/RMM remote management software

Introduction

TPC-1851WP (B) thin-client terminal is an industrial panel PC equipped with a 18.5" WXGA TFT LED LCD, low-power Intel® Celeron® J1900, 2.0 GHz, quad-core processor, and built-in 4GB of DDR3L SDRAM. TPC-1851WP (B) delivers high-performance computing in a compact, fanless system. For enhanced durability to satisfy diverse industrial automation applications, TPC-1851WP (B) features a capacitive touchscreen with IP66-rated front panel, die-cast aluminum alloy front bezel, and 100 x 100 VESA mount kit. Moreover, with the provision of two full-size mini PCIe slots, which support mSATA interface for storage and USB/PCIe interface for Advantech's iDoor technology separately, TPC-1851WP (B) can be easily expanded to provide additional I/O ports, isolated digital I/O, fieldbus protocols, MRAM, and 3G/GPS/GPRS/Wi-Fi communication capabilities.

Specifications

General

- **BIOS** — AMI UEFI
- **Certification** — CCC
- **Cooling System** — Fanless design
- **Dimensions (W x H x D)** — 488 x 309 x 59 mm (19.21 x 12.17 x 2.32 in)
- **Enclosure** — Front bezel: Die-cast aluminum alloy / Back housing: SECC
- **Mount Options** — VESA mount, Desktop/wall/panel
- **OS Support** — Microsoft® WES7 (32/64-bit), Windows 7 (32/64-bit), Windows 10 Enterprise LTSB, Android, Advantech Linux
- **Power Consumption** — 22.68W (Typical)
- **Power Input** — 24 V_{DC} ± 20%
- **Watchdog Timer** — 15-255 sec (system)
- **Weight (Net)** — 5.2kg (11.46lbs)

System Hardware

- **CPU** — Intel® Celeron® J1900, 2.0 GHz, quad-core
- **Memory** — 1 x SODIMM with 4 GB DDR3L SDRAM (up to 8 GB)
- **LAN** — 2 x Intel® I210; 10/100/1000 BASE-T
- **Expansion Slots** — 1 x Full-size mini PCIe (USB+PCIe interface)
- **Storage** — 1 x 2.5" SATA SSD, 1 x mSATA
- **I/O** — 1 x RS-232
  1 x RS-232/422/485
  1 x USB 3.0
  3 x USB 2.0
  1 x iDoor slot

LCD

- **Display Type** — WXGA TFT LED LCD
- **Display Size** — 18.5"
- **Max. Resolution** — 1366 x 768
- **Max. Colors** — 16.7M
- **Luminance** — 250 cd/m^2
- **Viewing Angle (H°/V°)** — 170°/160°
- **Backlight Life** — 30,000 hrs
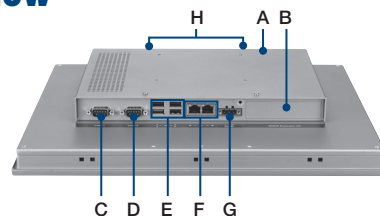- **Contrast Ratio** — 1000:1

Touchscreen

- **Light Transmission** — 90% ± 3%
- **Type** — PCAP

Environment

- **Humidity** — 10 ~ 95% RH @ 40 °C, non-condensing
- **Ingress Protection** — IP66-rated front panel
- **Operating Temperature** — 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** — -30 ~ 70 °C (-22 ~ 158 °F)
- **Vibration Protection** — With SSD: 1 Grms (5 ~ 500 Hz) (operating, random vibration)
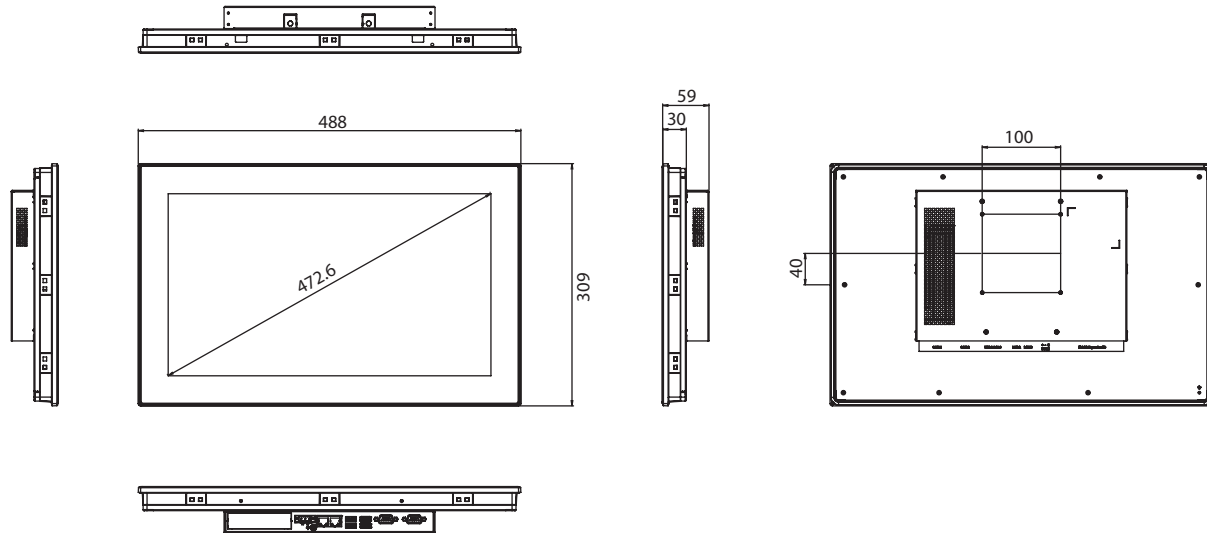
Rear View

A. HDD/SSD bay
B. iDoor slot
C. RS-232
D. RS-232/422/485
E. USB 2.0 and 3.0
F. LAN (10/100/1000)
G. Power input
H. Antenna port

VICPAS
HMI Parts Center

Last updated: 24-Sep-2021

Dimensions

Unit: mm

TPC-1851WP (B) Panel Cutout Dimensions: 479.3 x 300.3 mm (18.87" x 11.82")

Ordering Information

- **TPC-1851WP-E3BE**   18.5" WXGA panel PC with Intel® Celeron® J1900, 2.0 GHz, quad-core CPU, 4GB DDR3L SDRAM

Optional Accessories

- **PWR-247-DE**   60W 24 V_{DC} /2.5A power supply
- **96PSA-A120W24T2-3**   120W 24 V_{DC} power supply
- **1702002600**   Power cable (US) 1.8 M
- **1702002605**   Power cable (EU) 1.8 M
- **1702031801**   Power cable (UK) 1.8 M
- **1700000596-11**   Power cable (China/Australia) 1.8 M

Embedded OS

- **20703WX9ES0049**   TPC-xx51(T)(WP)-xxBE Win10 x64 LTSC V6.06 Entry

iDoor Modules

- **PCM-26D2CA-AE**   SJA1000 CANbus module with CANopen and 2 x DB9
- **PCM-26D1DB-MAE**   Hilscher netX100 fieldbus module with PROFIBUS and 1 x DB9
- **PCM-27D24DI-AE**   Digital I/O module with 16 DI/8 DO, isolation protection, and 1 x DB37
- **PCM-24D2R4-BE**   OXPCIe-952 UART with isolated RS-422/485 and 2 x DB9
- **PCM-24D2R2-BE**   OXPCIe-952 UART with isolated RS-232 and 2 x DB9
- **PCM-24R2GL-AE**   2-Port GigaLAN Intel® i350 PCIe mini card
- **PCM-24R1TP-AE**   Intel® 82574L, GbE, IEEE 1588 PTP, 1 x RJ45
- **PCM-262R2EC-MAE**   Hilscher netX100 fieldbus mPCIe with EtherCAT, 2 x RJ45, Master
- **PCM-27J3AU-AE**   3-Port audio stereo with mPCIe and 3.5-mm jack
- **PCM-29R1TX-AE**   1-Port iLink(TX) long-distance display transmitter with RJ45

Application Software

WebAccess/SCADA	Advantech WebAccess/SCADA is a 100% browser-based IIoT software platform aimed at supervisory control and data acquisition (SCADA) operations. WebAccess/SCADA provides open interfaces that allow our customers and partners to develop unique IoT applications for different vertical markets. In addition to supporting traditional SCADA functions, the platform features an HTML5-based user interface and intelligent dashboard to facilitate cross-platform, cross-browser data analysis. Moreover, WebAccess/SCADA not only offers built-in widgets, but is also equipped with an innovative Widget Builder that enables customers to build their own widgets.
WebAccess/HMI	Advantech WebAccess/HMI is human-machine interface (HMI) software based on Microsoft's Windows operating system. This software features excellent communication and monitoring capabilities, supports more than 350 PLC communication protocols, and offers a wide choice of screen design objects to satisfy diverse automation applications and HMI monitoring requirements.