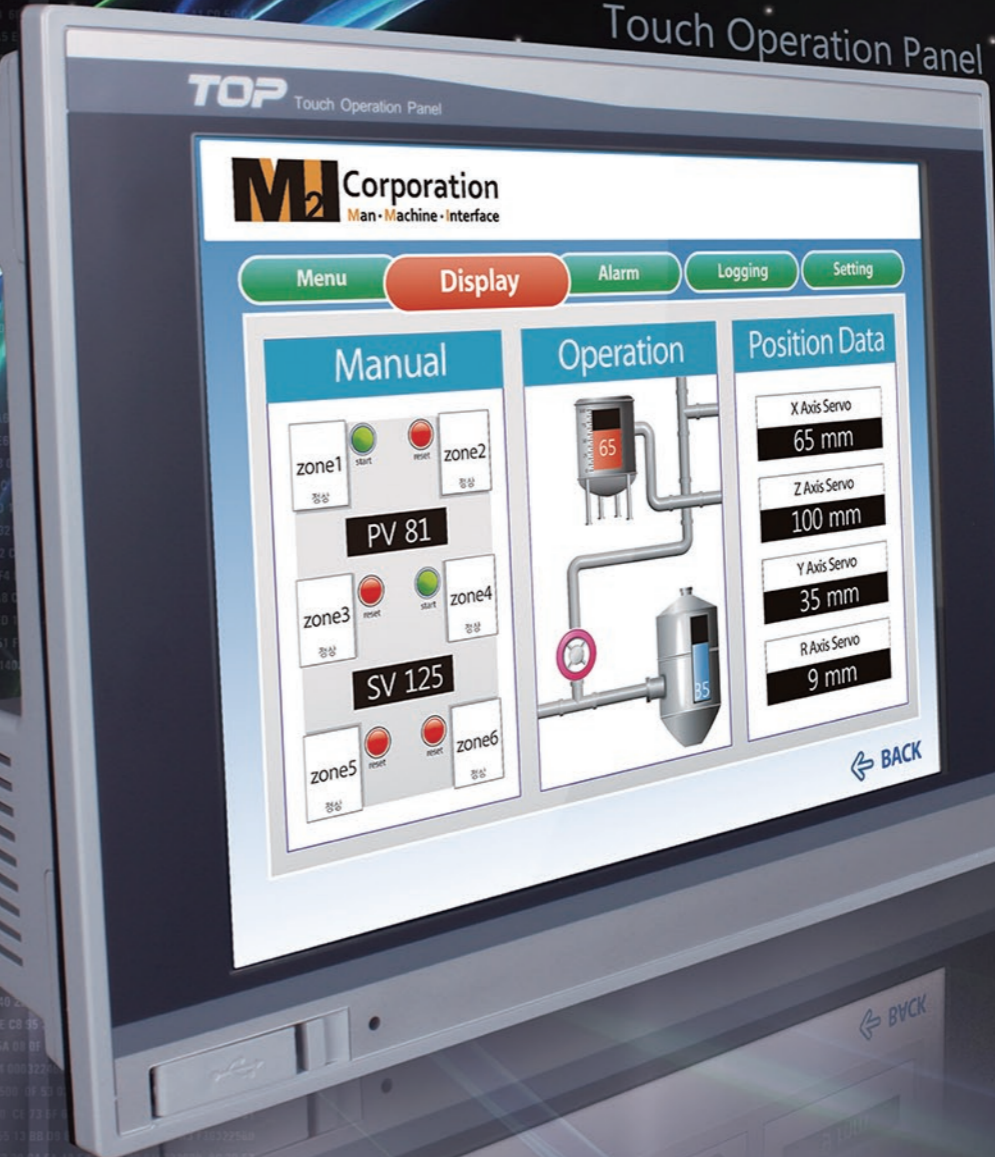


Caution : Before operating the products, be sure to read all related manuals

- The colors in this catalog may differ from those of the actual product.
- Actual user screens may differ from those of the monitor screen of PC.
- All information contained in this catalog is subject to change without notice.
- All product names used in this catalog are the registered trademarks and trademarks of their companies.
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Increasing your value

Touch Operation Panel



**Compliance with the RoHS Directive**

M2I has taken steps to meet requirements for environmental preservation and has sought to comply with the RoHS Directive by adopting measures to eliminate specified harmful substances from existing products to be manufactured and sold beginning in 2007.



**Conformity with International Safety Standards**

The CE Mark and the UL or c-UL and Recognized Component Marks which are printed in TOP guarantee compliance with safety standards accepted in countries and regions worldwide.

Strengthen Customer's Industrial Value

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# Know-how and Professionalism with long history of only HMI

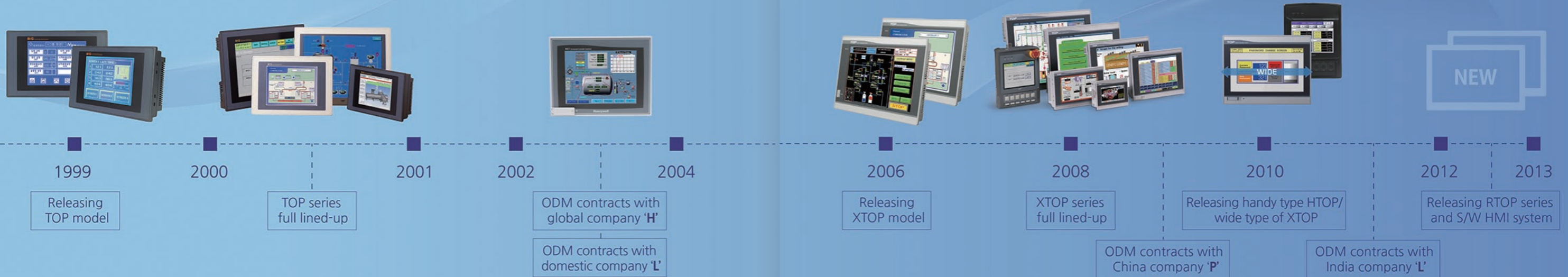
M2I corporation is a professional system development company that was founded in 1999 to produce Embedded HMI Panel and Operator Interface Panel. For dramatic change of industrial structure and technology, M2I is focusing on endless R&D and technical service.

Also M2I's efforts in brand value and quality control support customized products development and full line-up of customer's need.

As our goal, Enhancing customers' competitiveness by know-how and experiences in industrial area, M2I Corporation is cooperating with all of our customers, and we will contribute your improved productivity by developing innovative products and services.



## TOP HISTORY



# Touch Operation Panel

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## Display

Logistics, Inspection, Scrubber, Return device



## Textile

Dyeing, Printing, Dry-clean, Knitting



## Energy

Oil refining, Batteries, Solar system, Power generation, Water resources



## Chemicals/ Steels

Pharmaceuticals, Plastics, Cosmetics, Chemical production, Steelmaking



## Semiconductor/ Electricity

Gas cabinet, VMB, BSGS, Scrubber, Laser marker, Loader/Unloader, Chamber, Lead framer



## Food

Noodle, Soup, Snacks, Milk, Packing, Storage



## Automobile/ Shipbuilding

Painting, Welding, Pressing, Assembly



Eyes of production area

Hands of production process



Common

TFT LCD  
65536 Color  
SRAM Memory 512KB

R Resolution  
M Memory

Standard

ED-E

ED

Wide

Handy

Complete line-up for various demands

15"

12"

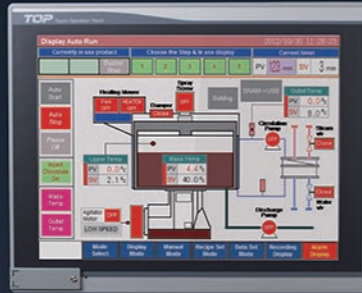
10"

8"

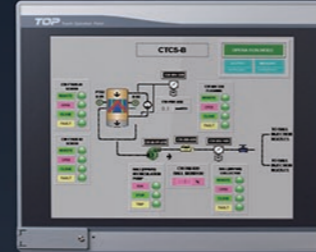
7"

5"

4"



DC XTOP15TX-SD AC XTOP15TX-SA  
R 1024x768 M 26M



DC XTOP12TS-SD AC XTOP12TS-SA  
R 800x600 M 26M



DC XTOP10TS-SD AC XTOP10TS-SA  
R 800x600 M 26M  
DC XTOP10TV-SD AC XTOP10TV-SA  
R 640x480 M 26M



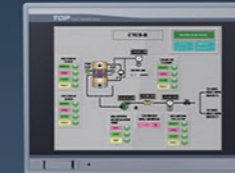
DC XTOP08TS-SD DC XTOP08TV-SD  
R 800x600 R 640x480  
M 26M M 26M



DC XTOP05TQ-SD  
R 320x240  
M 26M



DC XTOP10TV-ED-E  
R 640x480  
M 26M



DC XTOP08TV-ED-E  
R 640x480  
M 26M



DC XTOP05TQ-ED-E  
R 320x240  
M 6M



DC XTOP10TV-ED  
R 640x480  
M 26M



DC XTOP08TV-ED  
R 640x480  
M 26M



DC XTOP05TQ-ED  
R 320x240  
M 6M



DC XTOP10TW-UD-E  
XTOP10TW-UD  
R 800x480  
M 26M



DC XTOP07TW-LD  
XTOP07TW-LD-E  
R 800x480  
M 26M



DC XTOP04TW-UD  
R 480x272  
M 6M



DC HTOP05TV-SD-W DC HTOP05TQ-SD-W  
HTOP05TV-SD HTOP05TQ-SD  
R 640x480 R 320x240  
M 26M M 26M



# TOP Series

## 1. XTOP Series

Including all functions  
**Standard Type**




5", 8", 10", 12", 15"

Serial Ethernet USB Device USB Host CF CARD Fieldbus \*

\* Option

Economy type including all functions  
except Fieldbus  
**ED-E Type**



5", 8", 10"

Serial Ethernet USB Device USB Host CF CARD

Economy type including all functions  
except Fieldbus, Ethernet, CF Memory  
**ED Type**



5", 8", 10"

Serial USB Device USB Host

## 2. Wide Series

Extended wide display with cost reduction  
**Wide Type**



4", 7", 10"

Serial Ethernet \* USB Device USB Host \* CF CARD \* SD CARD \*

\* Please refer to hardware datasheet for the difference of each model's communication port.

## 3. HTOP Series

Operation while moving by hand-held  
(wired, wireless)  
**HTOP Type**



5"

Serial Ethernet USB Device USB Host SD CARD

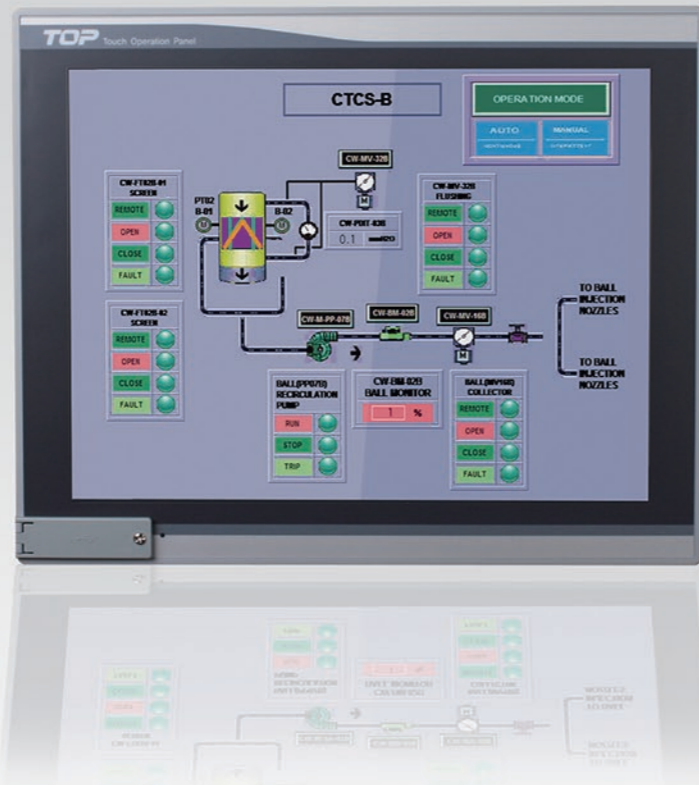
## 4. Detail model name

	LCD Size	LCD Type	Resolution	Detail	Power	Option
XTOP	04 : 4 "	T : TFT	Q : 320×240	S : Standard	A : AC (Power)	E : Ethernet
	05 : 5.7 "	M : Mono STN	V : 640×480	E : Economic	D : DC (Power)	
	07 : 7 "		S : 800×600	U : Universal		
	08 : 8.4 "		X : 1024×768	L : sLim		
	10 : 10.4 "		W : Wide Type			
	12 : 12.1 "					
HTOP	15 : 15 "					
	05 : 5.7 "	T : TFT	Q : 320×240 V : 640×480	S : Standard	D : DC (Power)	W : Wireless



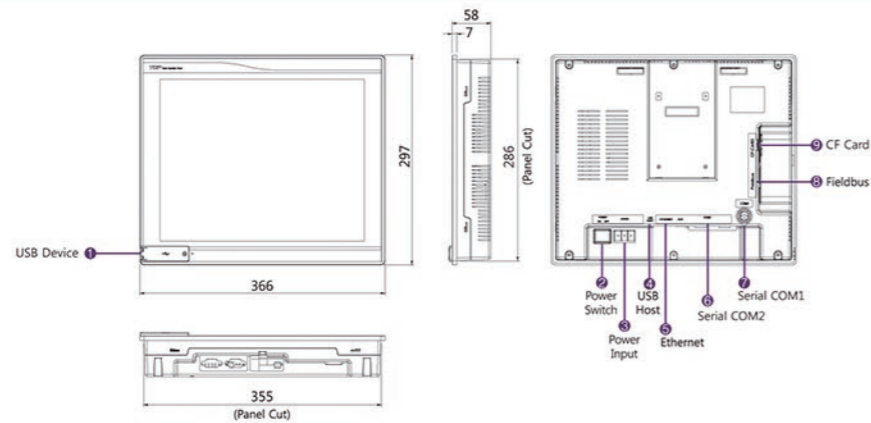
# XTOP 15"

DC XTOP15TX-SD AC XTOP15TX-SA



## • Drawing

XTOP15TX-SD  
XTOP15TX-SA



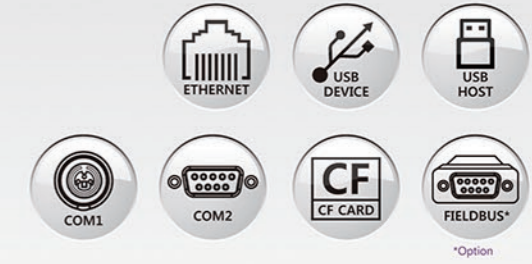
## • Specifications

Functional		XTOP15TX-SD (DC)	XTOP15TX-SA (AC)
Display	Display Type	15" TFT Color	
	Color	65,536 Color	
	Display Area(mm)	304.1x228.1	
	Resolution(dot)	1024x768	
	Brightness Level	8 Level(by software)	
	Backlight Type	LED	
Touch	Backlight Life	50,000 hours	
	Touch Type	Analog resistive film	
	Resolution(Cell)	1024x768	
Interface	Touch Life	1 million times or more	
	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: PS2 6pin or DSUB 9pin 1 Channel</li> </ul>	
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2k, 187.5kbps(MPI Direct)</li> <li>Connector: DSUB 9pin 1 Channel</li> </ul>	
	Ethernet	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>	
	Option Module	Fieldbus(Profibus, CC-Link)	
	USB Device	V1.1 Compatible 1 Channel, Max 5m	
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32)</li> <li>USB Barcode/USB Scanner(Standard Keyboard Protocol)</li> </ul>	
	CF Card	CF Card(Type-II) Slot 1 Channel (FAT16/FAT32)	
	Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port	
	Memory & Others	Screen Memory	26MB
Backup Memory		<ul style="list-style-type: none"> <li>512KB: System buffer(5K Word), Including Alarm/Logging/Recipe</li> <li>5 years(with rechargeable, ambient temperature 25°C)</li> </ul>	
Backup Period		<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30 days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>	
Battery		<ul style="list-style-type: none"> <li>Real Time Clock: Built in</li> <li>Status LED: Built in</li> </ul>	

General		XTOP15TX-SD (DC)	XTOP15TX-SA (AC)
Power	Input Voltage	DC24V(20~28V)	AC85~264V, Frequency 50/60Hz
	Power Consumption	25W or less	
	Voltage Sag	24V, Within 10ms	1 cycle or less(Momentary interval 1s or higher)
Environment	Insulation Resistance	500V DC, 10MΩ	
	Operation Temperature(°C)	-10 ~ +50	
	Storage Temperature(°C)	-20 ~ +60	
	Operation Humidity(%RH)	0 ~ 90(No dew)	
	Atmosphere	No corrosive gas	
	Vibration Endurance	Amplitude: 10±F < 25Hz(2G) X,Y,Z each direction(for 30 minutes)	
	Noise Immunity	1000Vp-p (Pulse width 1μs)	1500Vp-p (Pulse width 1μs)
Structure	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV	
	Shock Endurance	10G X,Y,Z each direction(for 3 times)	
	Surge Voltage	500V(Line-Line)	
	Ground Connection	Class 3(100Ω under)	
Protection Classification	IP65		
Panel Cut(mm)	355x286		
External Dimension(mm)	366x297x58		
Weight(kg)	3.2		
Cooling System	Natural air circulation		
Case Material	ABS(Resistance to flame)		

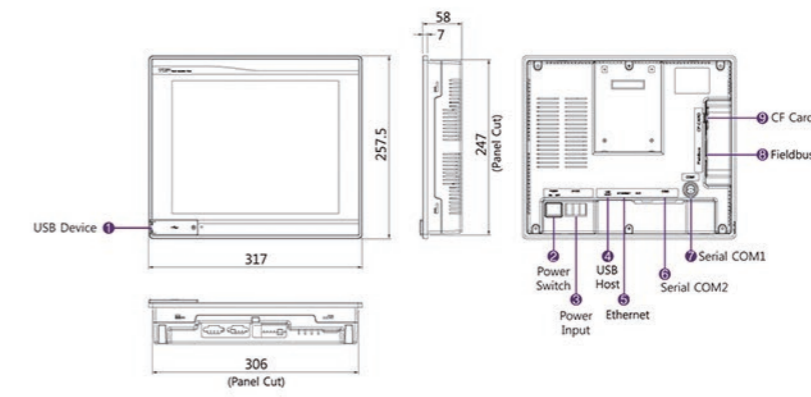
# XTOP 12"

DC XTOP12TS-SD AC XTOP12TS-SA



## • Drawing

XTOP12TS-SD  
XTOP12TS-SA



## • Specifications

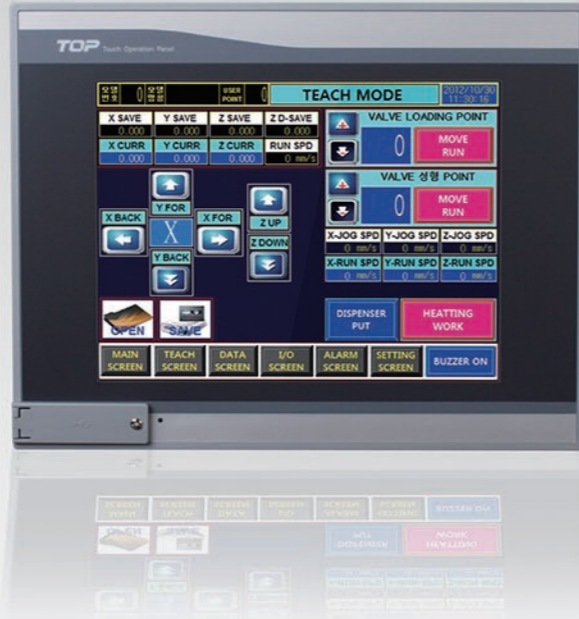
Functional		XTOP12TS-SD (DC)	XTOP12TS-SA (AC)
Display	Display Type	12.1" TFT Color	
	Color	65,536 Color	
	Display Area(mm)	246x184.5	
	Resolution(dot)	800x600	
	Brightness Level	8 Level(by software)	
	Backlight Type	LED	
Touch	Backlight Life	50,000 hours	
	Touch Type	Analog resistive film	
	Resolution(Cell)	800x600	
Interface	Touch Life	1 million times or more	
	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: PS2 6pin or DSUB 9pin 1 Channel</li> </ul>	
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2k, 187.5kbps(MPI Direct)</li> <li>Connector: DSUB 9pin 1 Channel</li> </ul>	
	Ethernet	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>	
	Option Module	Fieldbus(Profibus, CC-Link)	
	USB Device	V1.1 Compatible 1 Channel, Max 5m	
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32)</li> <li>USB Barcode/USB Scanner(Standard Keyboard Protocol)</li> </ul>	
	CF Card	CF Card(Type-II) Slot 1 Channel (FAT16/FAT32)	
	Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port	
	Memory & Others	Screen Memory	26MB
Backup Memory		<ul style="list-style-type: none"> <li>512KB: System buffer(5K Word), Including Alarm/Logging/Recipe</li> <li>5 years(with rechargeable, ambient temperature 25°C)</li> </ul>	
Backup Period		<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>	
Battery		<ul style="list-style-type: none"> <li>Real Time Clock: Built in</li> <li>Status LED: Built in</li> </ul>	

General		XTOP12TS-SD (DC)	XTOP12TS-SA (AC)
Power	Input Voltage	DC24V(20~28V)	AC85~264V, Frequency 50/60Hz
	Power Consumption	20W or less	
	Voltage Sag	24V, Within 10ms	1 cycle or less(Momentary interval 1s or higher)
Environment	Insulation Resistance	500V DC, 10MΩ	
	Operation Temperature(°C)	-10 ~ +50	
	Storage Temperature(°C)	-20 ~ +60	
	Operation Humidity(%RH)	0 ~ 90(No dew)	
	Atmosphere	No corrosive gas	
	Vibration Endurance	Amplitude: 10±F < 25Hz(2G) X,Y,Z each direction(for 30 minutes)	
	Noise Immunity	1000Vp-p (Pulse width 1μs)	1500Vp-p (Pulse width 1μs)
Structure	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV	
	Shock Endurance	10G X,Y,Z each direction(for 3 times)	
	Surge Voltage	500V(Line-Line)	
	Ground Connection	Class 3(100Ω under)	
Protection Classification	IP65		
Panel Cut(mm)	306x247		
External Dimension(mm)	317x257.5x58		
Weight(kg)	2.5		
Cooling System	Natural air circulation		
Case Material	ABS(Resistance to flame)		



# XTOP 10"

DC XTOP10TS-SD AC XTOP10TS-SA  
DC XTOP10TV-SD AC XTOP10TV-SA



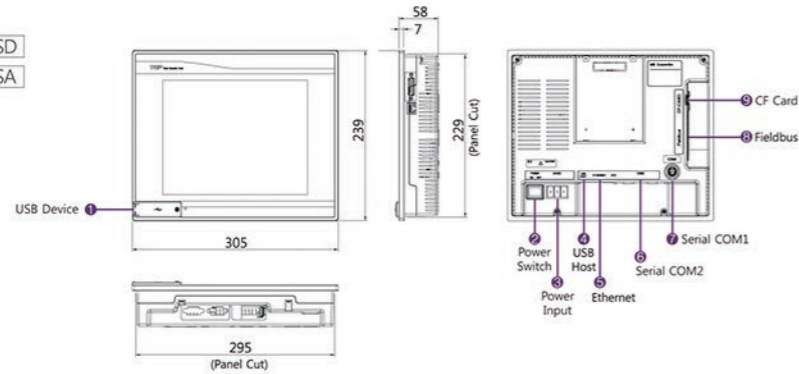
# XTOP 10"

DC XTOP10TV-ED-E DC XTOP10TV-ED



## • Drawing

XTOP10TS-SD XTOP10TV-SD  
XTOP10TS-SA XTOP10TV-SA

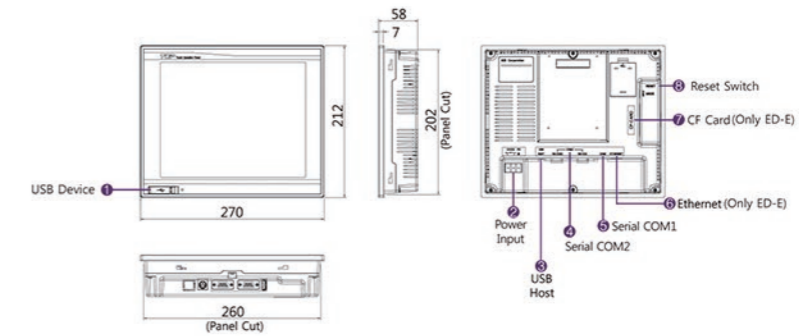


## • Specifications

Functional	XTOP10TS-SD (DC) XTOP10TS-SA (AC)	XTOP10TV-SD (DC) XTOP10TV-SA (AC)	
Display	Display Type	10.4" TFT Color	
	Color	65,536 Color	
	Display Area(mm)	211.2x158.4	
	Resolution(dot)	800x600	640x480
	Brightness Level	8 Level(by software)	
	Backlight Type	LED	
Backlight Life	50,000 hours		
Display Font	6x6/8x8/12x12/8x16/16x16/32x32 dot, MS Windows font possible		
Touch	Touch Type	Analog resistive film	
	Resolution(Cell)	800x600	640x480
	Touch Life	1 million times or more	
Interface	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: PS2 6pin or DSUB 9pin 1 Channel</li> </ul>	
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2k, 187.5kbps(MPI Direct)</li> <li>Connector: DSUB 9pin 1 Channel</li> </ul>	
	Ethernet	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>	
	Option Module	Fieldbus(Profibus, CC-Link)	
	USB Device	V1.1 Compatible 1 Channel, Max 5m	
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32)</li> <li>USB Barcode/USB Scanner(Standard Keyboard Protocol)</li> </ul>	
	CF Card	CF Card(Type-II) Slot 1 Channel (FAT16/FAT32)	
Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port		
Memory & Others	Screen Memory	26MB	
	Backup Memory	512KB: System buffer(5K Word), Including Alarm/Logging/Recipe	
	Backup Period	5 years(with rechargeable, ambient temperature 25°C)	
	Battery	<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30 days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>	
Real Time Clock	Built in		
Status LED	Built in		

## • Drawing

XTOP10TV-ED-E  
XTOP10TV-ED



## • Specifications

Functional	XTOP10TV-ED-E	XTOP10TV-ED	
Display	Display Type	10.4" TFT Color	
	Color	65,536 Color	
	Display Area(mm)	211.2x158.4	
	Resolution(dot)	640x480	
	Brightness Level	8 Level(by software)	
	Backlight Type	LED	
Backlight Life	50,000 hours		
Display Font	6x6/8x8/12x12/8x16/16x16/32x32 dot, MS Windows font possible		
Touch	Touch Type	Analog resistive film	
	Resolution(Cell)	640x480	
	Touch Life	1 million times or more	
Interface	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: PS2 6pin or DSUB 9pin 1 Channel</li> </ul>	
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2k, 187.5kbps(MPI Direct)</li> <li>Connector: DSUB 9pin 1 Channel</li> </ul>	
	Ethernet	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>	
	Option Module	-	
	USB Device	V1.1 Compatible 1 Channel, Max 5m	
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32)</li> <li>USB Barcode/USB Scanner(Standard Keyboard Protocol)</li> </ul>	
	CF Card	CF Card(Type-II) Slot 1 Channel (FAT16/FAT32)	
Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port		
Memory & Others	Screen Memory	26MB	
	Backup Memory	512KB: System buffer(5K Word), Including Alarm/Logging/Recipe	
	Backup Period	5 years(with rechargeable, ambient temperature 25°C)	
	Battery	<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>	
Real Time Clock	Built in		
Status LED	Built in		

General	XTOP10TV-ED-E	XTOP10TV-ED
Power	Input Voltage	DC24V(20~28V)
	Power Consumption	20W or less
	Voltage Sag	24V, Within 10ms
	Insulation Resistance	500V DC, 10MΩ
Environment	Operation Temperature(°C)	-10 ~ +50
	Storage Temperature(°C)	-20 ~ +60
	Operation Humidity(%RH)	0 ~ 90(No dew)
	Atmosphere	No corrosive gas
	Vibration Endurance	Amplitude: 10sF < 25Hz(2G) X,Y,Z each direction(for 30 minutes)
	Noise Immunity	1000Vp-p(Pulse width 1μs)
Structure	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X,Y,Z each direction(for 3 times)
	Surge Voltage	500V(Line-Line)
	Ground Connection	Class 3(100Ω under)
Protection Classification	IP65	
Panel Cut(mm)	260x202	
External Dimension(mm)	270x212x58	
Weight(kg)	1.9	
Cooling System	Natural air circulation	
Case Material	ABS(Resistance to flame)	



# XTOP 8"

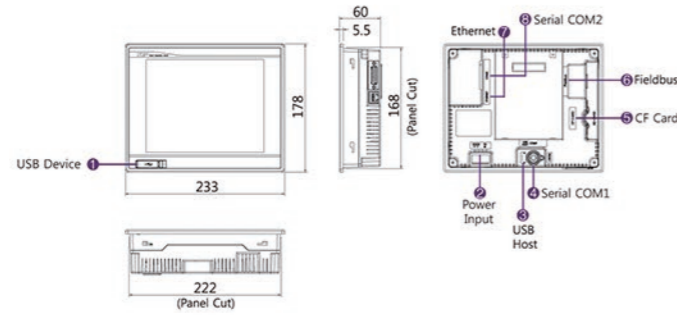
DC XTOP08TS-SD DC XTOP08TV-SD



\*Option

## • Drawing

XTOP08TS-SD  
XTOP08TV-SD



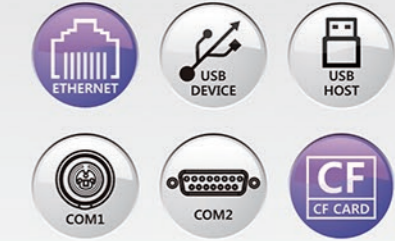
## • Specifications

Functional	XTOP08TS-SD	XTOP08TV-SD		
Display	Display Type	8.4" TFT Color		
	Color	65,536 Color		
	Display Area(mm)	170.9x128.2		
	Resolution(dot)	800x600	640x480	
	Brightness Level	8 Level(by software)		
	Backlight Type	CCFL		
	Backlight Life	50,000 hours		
Display Font	6x6/8x8/12x12/8x16/16x16/32x32 dot, MS Windows font possible			
Touch	Touch Type	Analog resistive film		
	Resolution(Cell)	800x600	640x480	
	Touch Life	1 million times or more		
Interface	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: PS2 6pin or DSUB 15pin 1 Channel</li> </ul>		
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2k, 187.5kbps(MPI Direct)</li> <li>Connector: DSUB 15pin 1 Channel</li> </ul>		
	Ethernet	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>		
	Option Module	Fieldbus(Profibus, CC-Link)		
	USB Device	V1.1 Compatible 1 Channel, Max 5m		
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32)</li> <li>USB Barcode/USB Scanner(Standard Keyboard Protocol)</li> </ul>		
	CF Card	CF Card(Type-II) Slot 1 Channel (FAT16/FAT32)		
	Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port		
	Memory & Others	Screen Memory	26MB	
		Backup Memory	<ul style="list-style-type: none"> <li>512KB: System buffer(5K Word), Including Alarm/Logging/Recipe</li> <li>5 years(with rechargeable, ambient temperature 25°C)</li> </ul>	
Battery		<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30 days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>		
Real Time Clock		Built in		
Status LED	Built in			

General	XTOP08TS-SD	XTOP08TV-SD	
Power	Input Voltage	DC24V(20~28V)	
	Power Consumption	15W or less	
	Voltage Sag	24V, Within 10ms	
	Insulation Resistance	500V DC, 10MΩ	
	Operation Temperature(°C)	-10 ~ +50	
Environment	Storage Temperature(°C)	-20 ~ +60	
	Operation Humidity(%RH)	0 ~ 90(No dew)	
	Atmosphere	No corrosive gas	
	Vibration Endurance	Amplitude: 10≤F<25Hz(2G) X,Y,Z each direction(for 30 minutes)	
	Noise Immunity	1000Vp-p(Pulse width 1μs)	
	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV	
	Shock Endurance	10G X,Y,Z each direction(for 3 times)	
	Surge Voltage	500V(Line-Line)	
	Ground Connection	Class 3(100Ω under)	
	Protection Classification	IP65	
Structure	Panel Cut(mm)	222x168	
	External Dimension(mm)	233x178x60	
	Weight(kg)	1.3	
	Cooling System	Natural air circulation	
Case Material	ABS(Resistance to flame)		

# XTOP 8"

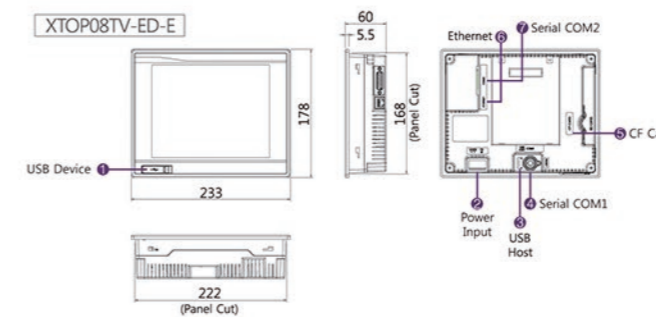
DC XTOP08TV-ED-E DC XTOP08TV-ED



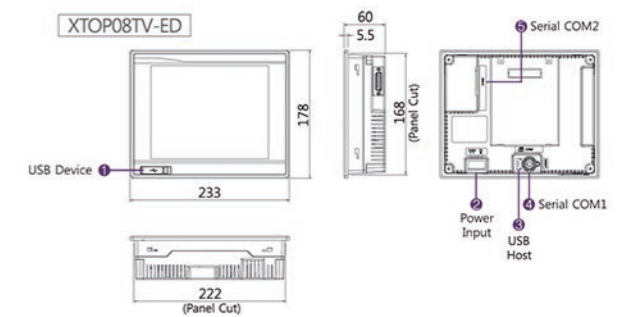
Only ED-E

## • Drawing

XTOP08TV-ED-E



XTOP08TV-ED



## • Specifications

Functional	XTOP08TV-ED-E	XTOP08TV-ED		
Display	Display Type	8.4" TFT Color		
	Color	65,536 Color		
	Display Area(mm)	170.9x128.2		
	Resolution(dot)	640x480		
	Brightness Level	8 Level(by software)		
	Backlight Type	LED		
	Backlight Life	50,000 hours		
Display Font	6x6/8x8/12x12/8x16/16x16/32x32 dot, MS Windows font possible			
Touch	Touch Type	Analog resistive film		
	Resolution(Cell)	640x480	640x480	
	Touch Life	1 million times or more		
Interface	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: PS2 6pin or DSUB 15pin 1 Channel</li> </ul>		
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2k, 187.5kbps(MPI Direct)</li> <li>Connector: DSUB 15pin 1 Channel</li> </ul>		
	Ethernet	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>		
	Option Module	Fieldbus(Profibus, CC-Link)		
	USB Device	V1.1 Compatible 1 Channel, Max 5m		
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32)</li> <li>USB Barcode/USB Scanner(Standard Keyboard Protocol)</li> </ul>		
	CF Card	CF Card(Type-II) Slot 1 Channel (FAT16/FAT32)		
	Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port		
	Memory & Others	Screen Memory	26MB	
		Backup Memory	<ul style="list-style-type: none"> <li>512KB: System buffer(5K Word), Including Alarm/Logging/Recipe</li> <li>5 years(with rechargeable, ambient temperature 25°C)</li> </ul>	
Battery		<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30 days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>		
Real Time Clock		Built in		
Status LED	Built in			

General	XTOP08TV-ED-E	XTOP08TV-ED	
Power	Input Voltage	DC24V(20~28V)	
	Power Consumption	15W or less	
	Voltage Sag	24V, Within 10ms	
	Insulation Resistance	500V DC, 10MΩ	
	Operation Temperature(°C)	-10 ~ +50	
Environment	Storage Temperature(°C)	-20 ~ +60	
	Operation Humidity(%RH)	0 ~ 90(No dew)	
	Atmosphere	No corrosive gas	
	Vibration Endurance	Amplitude: 10≤F<25Hz(2G) X,Y,Z each direction(for 30 minutes)	
	Noise Immunity	1000Vp-p(Pulse width 1μs)	
	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV	
	Shock Endurance	10G X,Y,Z each direction(for 3 times)	
	Surge Voltage	500V(Line-Line)	
	Ground Connection	Class 3(100Ω under)	
	Protection Classification	IP65	
Structure	Panel Cut(mm)	222x168	
	External Dimension(mm)	233x178x60	
	Weight(kg)	1.3	
	Cooling System	Natural air circulation	
Case Material	ABS(Resistance to flame)		



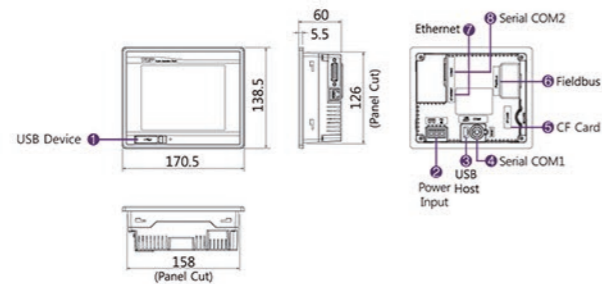
# XTOP 5"

DC XTOP05TQ-SD



## • Drawing

XTOP05TQ-SD



## • Specifications

Functional	XTOP05TQ-SD		
Display	Display Type	5.7" TFT Color	
	Color	65,536 Color	
	Display Area(mm)	115.2x86.4	
	Resolution(dot)	320x240	
	Brightness Level	8 Level(by software)	
	Backlight Type	LED	
	Backlight Life	50,000 hours	
Touch	Touch Type	Analog resistive film	
	Resolution(Cell)	320x240	
Interface	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: PS2 6pin or DSUB 15pin 1 Channel</li> </ul>	
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2k, 187.5kbps(MPI Direct)</li> <li>Connector: DSUB 15pin 1 Channel</li> </ul>	
	Ethernet	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>	
	Option Module	Fieldbus(Profibus, CC-Link)	
	USB Device	V1.1 Compatible 1 Channel, Max 5m	
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32)</li> <li>USB Barcode/USB Scanner(Standard Keyboard Protocol)</li> </ul>	
	CF Card	CF Card(Type-II) Slot 1 Channel (FAT16/FAT32)	
	Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port	
	Memory & Others	Screen Memory	26MB
		Backup Memory	512KB: System buffer(5K Word), Including Alarm/Logging/Recipe
Backup Period		5 years(with rechargeable, ambient temperature 25°C)	
Battery		<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30 days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without</li> </ul>	
Real Time Clock	Built in		
Status LED	Built in		

General	XTOP05TQ-SD	
Power	Input Voltage	DC24V(20~28V)
	Power Consumption	12W or less
	Voltage Sag	24V, Within 10ms
Environment	Insulation Resistance	500V DC, 10MΩ
	Operation Temperature(°C)	-10 ~ +50
	Storage Temperature(°C)	-20 ~ +60
	Operation Humidity(%RH)	0 ~ 90(No dew)
	Atmosphere	No corrosive gas
	Vibration Endurance	Amplitude: 10sF < 25Hz(2G) X,Y,Z each direction(for 30 minutes)
	Noise Immunity	1000Vp-p(Pulse width 1μs)
	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X,Y,Z each direction(for 3 times)
	Surge Voltage	500V(Line-Line)
Structure	Ground Connection	Class 3(100Ω under)
	Protection Classification	IP65
	Panel Cut(mm)	158x126
External Dimension(mm)	170.5x138.5x60	
Weight(kg)	0.7	
Cooling System	Natural air circulation	
Case Material	ABS(Resistance to flame)	

# XTOP 5"

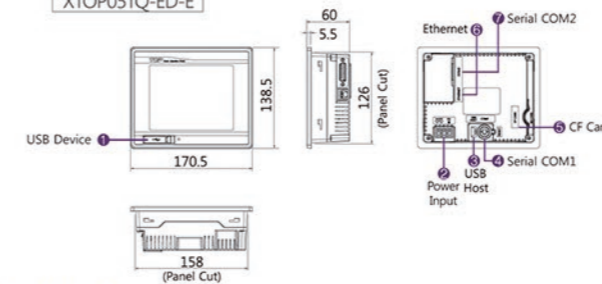
DC XTOP05TQ-ED-E DC XTOP05TQ-ED



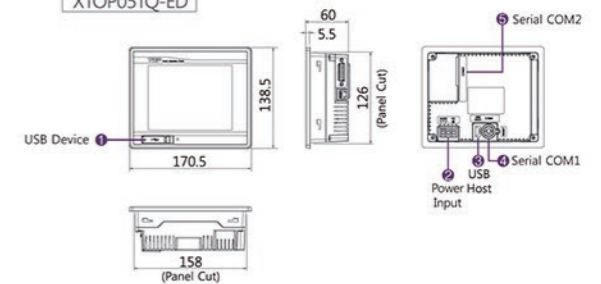
Only ED-E

## • Drawing

XTOP05TQ-ED-E



XTOP05TQ-ED



## • Specifications

Functional	XTOP05TQ-ED-E	XTOP05TQ-ED	
Display	Display Type	5.7" TFT Color	
	Color	65,536 Color	
	Display Area(mm)	115.2x86.4	
	Resolution(dot)	320x240	
	Brightness Level	8 Level(by software)	
	Backlight Type	LED	
	Backlight Life	50,000 hours	
Touch	Touch Type	Analog resistive film	
	Resolution(Cell)	320x240	
Interface	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: PS2 6pin or DSUB 15pin 1 Channel</li> </ul>	
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2k, 187.5kbps(MPI Direct)</li> <li>Connector: DSUB 15pin 1 Channel</li> </ul>	
	Ethernet	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>	
	Option Module	Fieldbus(Profibus, CC-Link)	
	USB Device	V1.1 Compatible 1 Channel, Max 5m	
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32)</li> <li>USB Barcode/USB Scanner(Standard Keyboard Protocol)</li> </ul>	
	CF Card	CF Card(Type-II) Slot 1 Channel (FAT16/FAT32)	
	Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port	
	Memory & Others	Screen Memory	6MB
		Backup Memory	512KB: System buffer(5K Word), Including Alarm/Logging/Recipe
Backup Period		5 years(with rechargeable, ambient temperature 25°C)	
Battery		<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30 days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>	
Real Time Clock	Built in		
Status LED	Built in		

General	XTOP05TQ-ED-E	XTOP05TQ-ED
Power	Input Voltage	DC24V(20~28V)
	Power Consumption	12W or less
	Voltage Sag	24V, Within 10ms
Environment	Insulation Resistance	500V DC, 10MΩ
	Operation Temperature(°C)	-10 ~ +50
	Storage Temperature(°C)	-20 ~ +60
	Operation Humidity(%RH)	0 ~ 90(No dew)
	Atmosphere	No corrosive gas
	Vibration Endurance	Amplitude: 10sF < 25Hz(2G) X,Y,Z each direction(for 30 minutes)
	Noise Immunity	1000Vp-p(Pulse width 1μs)
	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X,Y,Z each direction(for 3 times)
	Surge Voltage	500V(Line-Line)
Structure	Ground Connection	Class 3(100Ω under)
	Protection Classification	IP65
	Panel Cut(mm)	158x126
External Dimension(mm)	170.5x138.5x60	
Weight(kg)	0.7	
Cooling System	Natural air circulation	
Case Material	ABS(Resistance to flame)	



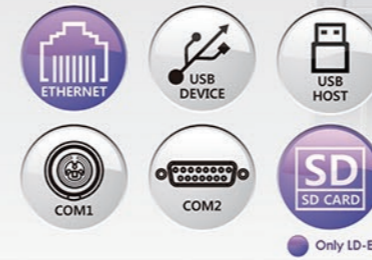
# XTOP 10"

DC XTOP10TW-UD-E DC XTOP10TW-UD



# XTOP 7"

DC XTOP07TW-LD-E DC XTOP07TW-LD

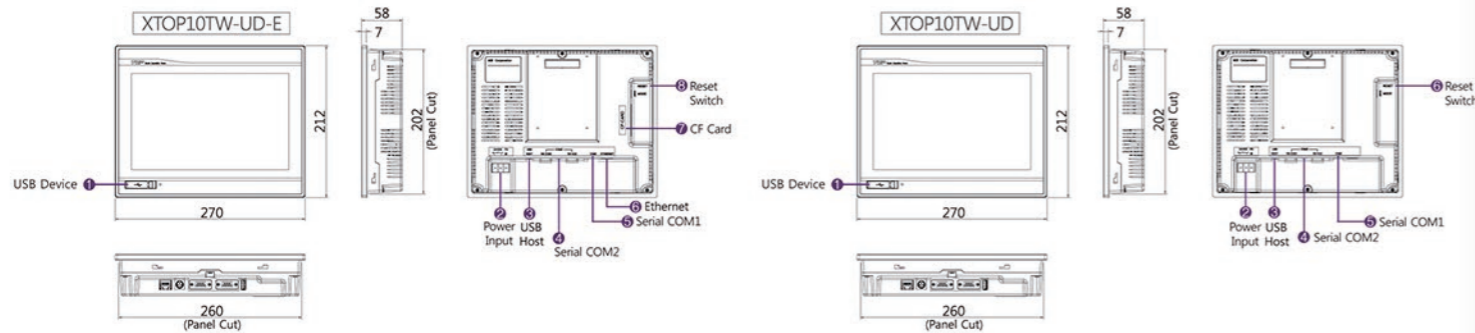


# XTOP 4"

DC XTOP04TW-UD



## • Drawing

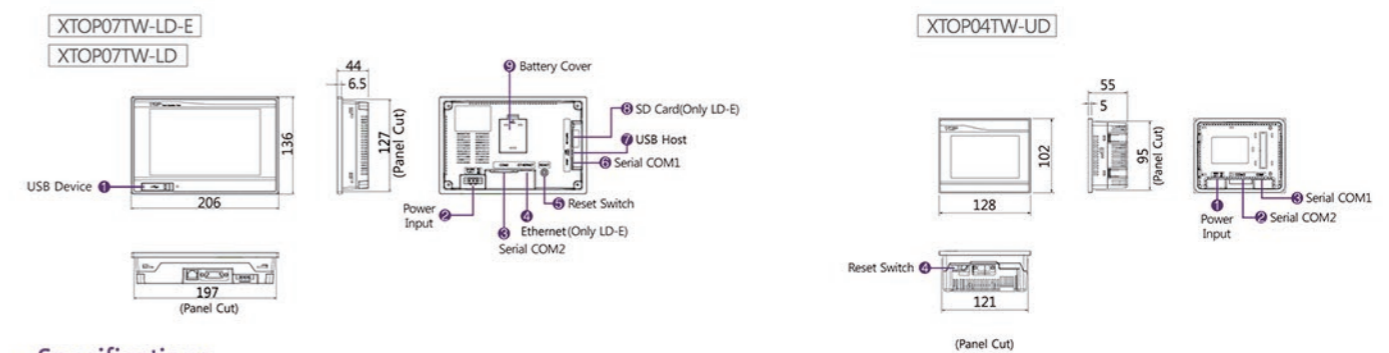


## • Specifications

Functional	XTOP10TW-UD-E	XTOP10TW-UD
Display	Display Type	10.2" TFT Color
	Color	65,536 Color
	Display Area(mm)	222x132.48
	Resolution(dot)	800x480
	Brightness Level	8 Level(by software)
	Backlight Type	LED
Touch	Backlight Life	50,000 hours
	Touch Type	Analog resistive film
	Touch Life	1 million times or more
Interface	Serial COM1	• RS-232C Asynchronous • Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even • Baud rate: 2400~115.2kbps • Connector: PS2 6pin or DSUB 9pin 1 Channel
	Serial COM2	• RS-232C, RS-422/485 Asynchronous • Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even • Baud rate: 2400~115.2k, 187.5kbps(MPI Direct) • Connector: DSUB 9pin 1 Channel
	Ethernet	• IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX • Connector: RJ-45 1 Channel
	Option Module	—
	USB Device	V1.1 Compatible 1 Channel, Max 5m
	USB Host	• Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32) • USB Barcode/USB Scanner(Standard Keyboard Protocol)
	CF Card	CF Card(Type-II) Slot 1 Channel(FAT16/FAT32)
Memory & Others	Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port
	Screen Memory	26MB
	Backup Memory	• 512KB: System buffer(5K Word), Including Alarm/Logging/Recipe
	Backup Period	5 years(with rechargeable, ambient temperature 25°C)
Memory & Others	Battery	• Lithium rechargeable: Main, Charging is completed in one day (when power 30 days backup without power input) • Coin type Lithium: Subsidiary(changeable), 2 years backup without power input
	Real Time Clock	Built in
	Status LED	Built in

General	XTOP10TW-UD-E	XTOP10TW-UD
Power	Input Voltage	DC24V(20~28V)
	Power Consumption	20W or less
	Voltage Sag	24V, Within 10ms
	Insulation Resistance	500V DC, 10MΩ
Environment	Operation Temperature(°C)	-10 ~ +50
	Storage Temperature(°C)	-20 ~ +60
	Operation Humidity(%RH)	0 ~ 90(No dew)
	Atmosphere	No corrosive gas
	Vibration Endurance	Amplitude: 10sF < 25Hz(2G) X,Y,Z each direction(for 30 minutes)
	Noise Immunity	1000Vp-p(Pulse width 1μs)
	Shock Endurance	Connective discharge from EN61000-4-2: ±4kV 10G X,Y,Z each direction(for 3 times)
Structure	Surge Voltage	500V(Line-Line)
	Ground Connection	Class 3(100Ω under)
	Protection Classification	IP65
	Panel Cut(mm)	260x202
Structure	External Dimension(mm)	270x212x58
	Weight(kg)	1.9
	Cooling System	Natural air circulation
Case Material	ABS(Resistance to flame)	

## • Drawing



## • Specifications

Functional	XTOP07TW-LD-E	XTOP07TW-LD	XTOP04TW-UD
Display	Display Type	7" TFT Color	4.3" TFT Color
	Color	65,536 Color	65,536 Color
	Display Area(mm)	152.4x91.5	152.4x91.5
	Resolution(dot)	800x480	800x480
	Brightness Level	8 Level(by software)	8 Level(by software)
	Backlight Type	LED	LED
Touch	Backlight Life	50,000 hours	50,000 hours
	Touch Type	Analog resistive film	Analog resistive film
	Touch Life	1 million times or more	1 million times or more
Interface	Serial COM1	• RS-232C Asynchronous • Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even • Baud rate: 2400~115.2kbps • Connector: PS2 6pin 1 Channel	• RS-232C, RS-422/485 Asynchronous • Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even • Baud rate: 2400~115.2k, 187.5kbps(MPI Direct) • Connector: DSUB 15pin 1 Channel
	Serial COM2	• RS-232C, RS-422/485 Asynchronous • Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even • Baud rate: 2400~115.2k, 187.5kbps(MPI Direct) • Connector: DSUB 15pin 1 Channel	• Connector: DSUB 9pin 1 Channel
	Ethernet	• IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX • Connector: RJ-45 1 Channel	—
	Option Module	—	—
	USB Device	V1.1 Compatible 1 Channel, Max 5m, USB gender option	—
	USB Host	• Output 5V/0.5A, USB Storage V1.0 Compatible(FAT16/FAT32) • USB Barcode/USB Scanner(Standard Keyboard Protocol)	—
	SD Card	MMC/SD Card Slot 1 Channel(FAT16/FAT32)	—
Memory & Others	Printer	Roll Printer(EPSON protocol): RS-232C, COM1 port	Roll Printer(EPSON protocol): RS-232C, COM1 port
	Screen Memory	26MB	26MB
	Backup Memory	• 512KB: System buffer(5K Word), Including Alarm/Logging/Recipe	• 512KB: System buffer(5K Word), Including Alarm/Logging/Recipe
	Backup Period	5 years(with rechargeable, ambient temperature 25°C)	5 years(with rechargeable, ambient temperature 25°C)
Memory & Others	Battery	• Lithium rechargeable: Main, Charging is completed in one day (when power input), 30days backup without power input • Coin type Lithium: Subsidiary(changeable), 2 years backup without power input	• Lithium rechargeable: Main, Charging is completed in one day (when power input), 30days backup without power input • Coin type Lithium: Subsidiary(changeable), 2 years backup without power input
	Real Time Clock	Built in	Built in
	Status LED	Built in	—

General	XTOP07TW-LD-E	XTOP07TW-LD	XTOP04TW-UD
Power	Input Voltage	DC24V(20~28V)	DC24V(20~28V)
	Power Consumption	12W or less	10W or less
	Voltage Sag	24V, Within 10ms	24V, Within 10ms
	Insulation Resistance	500V DC, 10MΩ	500V DC, 10MΩ
Environment	Operation Temperature(°C)	-10 ~ +50	-10 ~ +50
	Storage Temperature(°C)	-20 ~ +60	-20 ~ +60
	Operation Humidity(%RH)	0 ~ 90(No dew)	0 ~ 90(No dew)
	Atmosphere	No corrosive gas	No corrosive gas
	Vibration Endurance	Amplitude: 10sF < 25Hz(2G) X,Y,Z each direction(for 30 minutes)	Amplitude: 10sF < 25Hz(2G) X,Y,Z each direction(for 30 minutes)
	Noise Immunity	1000Vp-p(Pulse width 1μs)	1000Vp-p(Pulse width 1μs)
	Shock Endurance	Connective discharge from EN61000-4-2: ±4kV 10G X,Y,Z each direction(for 3 times)	Connective discharge from EN61000-4-2: ±4kV 10G X,Y,Z each direction(for 3 times)
Structure	Surge Voltage	500V(Line-Line)	500V(Line-Line)
	Ground Connection	Class 3(100Ω under)	Class 3(100Ω under)
	Protection Classification	IP65	IP65
	Panel Cut(mm)	197x127	121x95
Structure	External Dimension(mm)	206x136x44	128x102x55
	Weight(kg)	0.7	0.4
	Cooling System	Natural air circulation	Natural air circulation
Case Material	ABS(Resistance to flame)	ABS(Resistance to flame)	



# HTOP 5" (Wireless)

HTOP05TV-SD-W | HTOP05TQ-SD-W



HTOP-CRDL

# W-Station

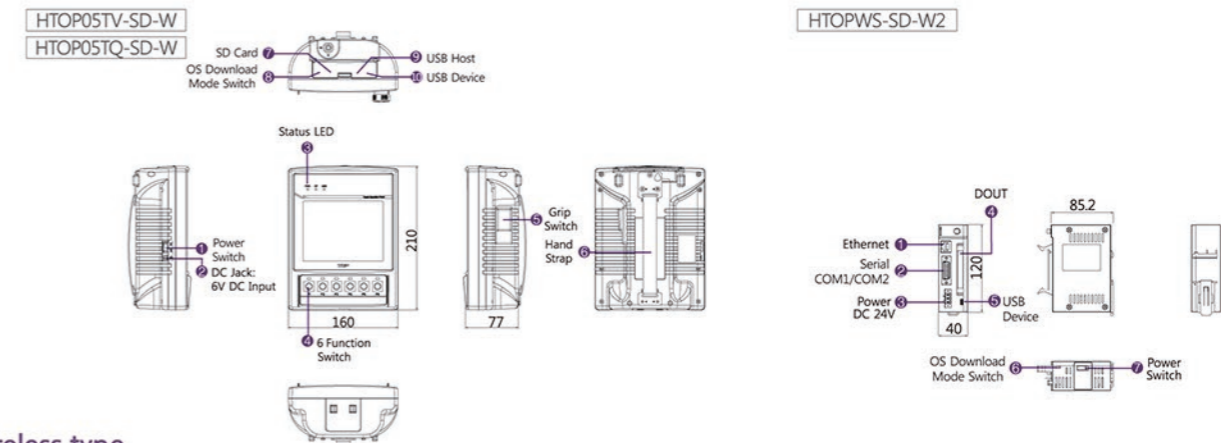
HTOPWS-SD-W2



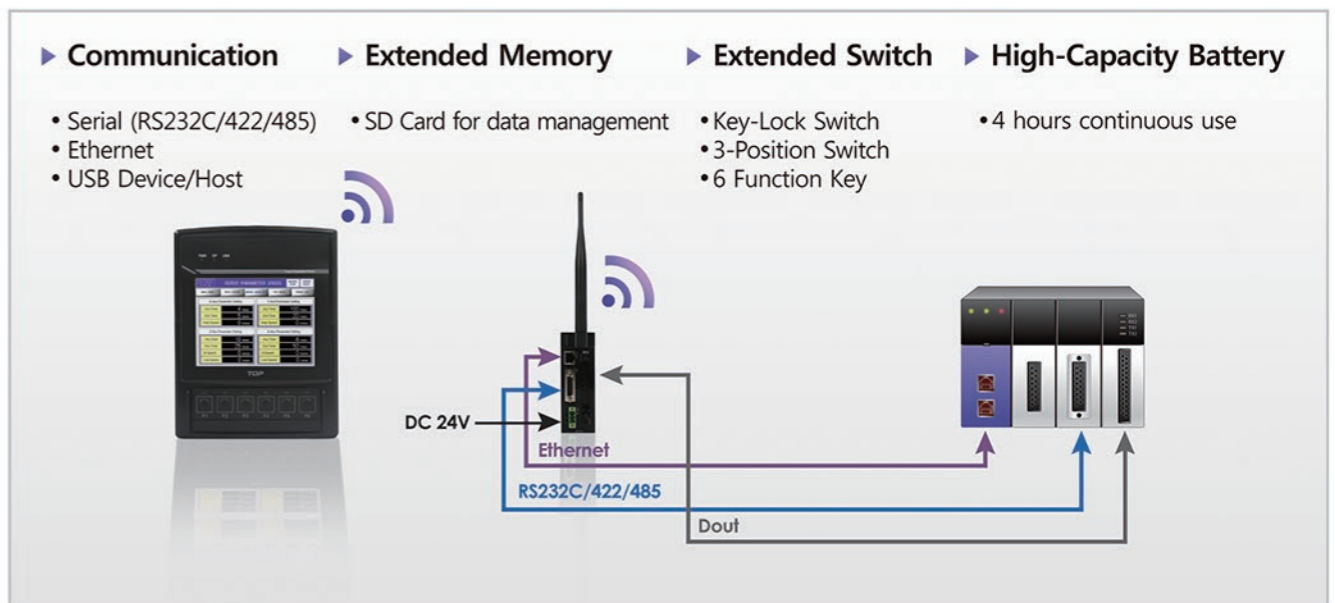
## Specifications

Functional	HTOP05TV-SD-W	HTOP05TQ-SD-W	HTOPWS-SD-W2 (W-Station)
Display	Display Type	5.7" TFT Color	—
	Color	65,536 Color	—
	Display Area(mm)	115.2x86.4	—
	Resolution(dot)	640x480	320x240
	Brightness Level	8 Level(by software)	—
	Backlight Type	LED	—
	Backlight Life	50,000 hours	—
Display Font	6x6/8x8/12x12/8x16/16x16/32x32 dot, MS Windows font possible	—	—
Touch	Touch Type	Analog resistive film	—
	Resolution(Cell)	640x480	320x240
	Touch Life	1 million times or more	—
Interface	Serial COM1	—	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: DSUB 15pin 1 Channel</li> </ul>
	Serial COM2	—	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: DSUB 15pin 1 Channel</li> </ul>
	Ethernet	—	<ul style="list-style-type: none"> <li>IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX</li> <li>Connector: RJ-45 1 Channel</li> </ul>
	Wireless Ethernet	WLAN Standard: IEEE802.11 b/g/n	
	USB Device	V1.1 Compatible 1 Channel, Max 5m	
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible (FAT16/FAT32)</li> <li>USB Barcode/USB Scanner (Standard Keyboard Protocol)</li> </ul>	—
	SD Card	MMC/SD Card Slot 1 Channel (FAT16/FAT32)	—
	Contact Switch	Keylock: 1A, 3-Position enabling (OFF-ON-OFF)	—
	Function Switch	6P: Function Key or Output (TTL Level Output)	—
	Contact	—	<ul style="list-style-type: none"> <li>1A-1B Key switch, DC24V/0.5A</li> <li>2bit 3-Position enabling, DC24V/0.5A</li> <li>6bit Digital output, DC24V/0.5A</li> <li>Alive output, DC24V/0.5A</li> </ul>
Memory & Others	Screen Memory	26MB	—
	Backup Memory	512KB: System buffer(5K Word), including Alarm/Logging/Recipe	—
	Backup Period	5 years(with rechargeable, ambient temperature 25°C)	—
	Battery	<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30 days backup without power input</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>	—
	Real Time Clock	Built in	—
Status LED	<ul style="list-style-type: none"> <li>Wireless ethernet LINK</li> <li>System operation OP</li> <li>Power PWR</li> </ul>	<ul style="list-style-type: none"> <li>Serial COM1/COM2 RX, TX</li> <li>Wireless ethernet LINK</li> <li>System operation OP</li> <li>Power PWR</li> </ul>	

## Drawing



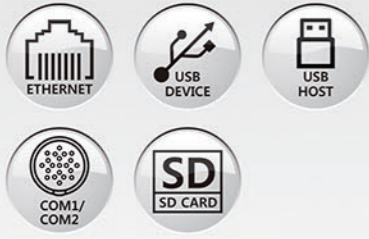
## Wireless type





# HTOP 5" (Wired)

HTOP05TV-SD | HTOP05TQ-SD



# W-Station

HTOPWS-SD

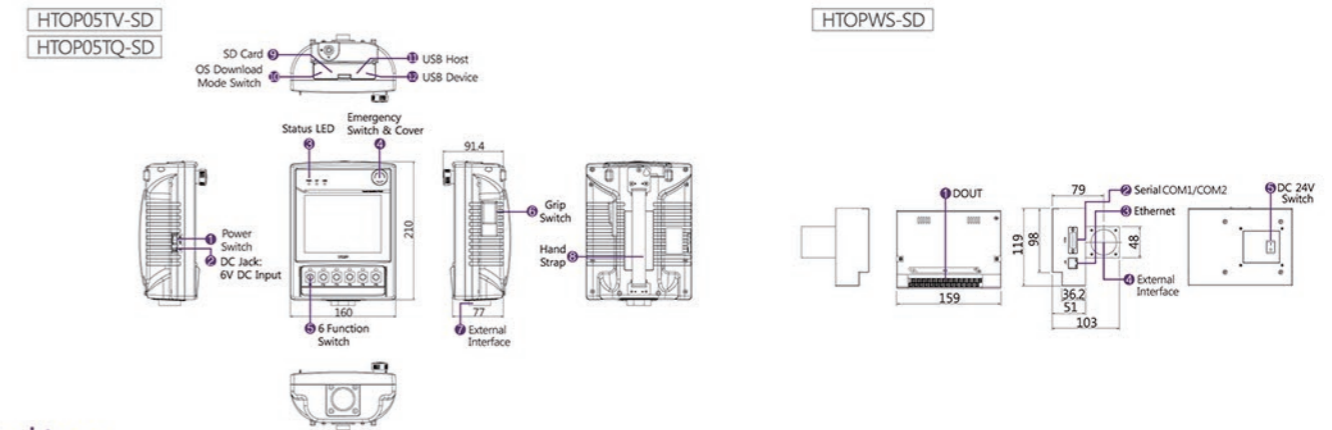


## Specifications

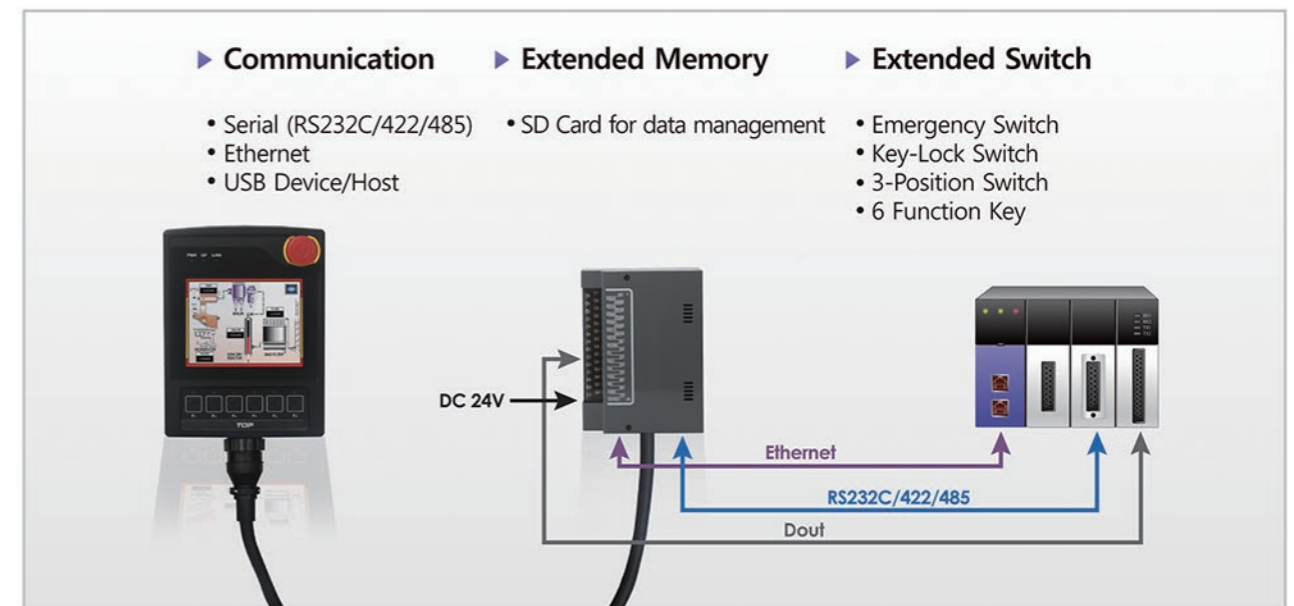
Functional	HTOP05TV-SD	HTOP05TQ-SD	HTOPWS-SD (W-Station)
Display	Display Type	5.7" TFT Color	—
	Color	65,536 Color	—
	Display Area(mm)	115.2x86.4	—
	Resolution(dot)	640x480	320x240
	Brightness Level	8 Level(by software)	—
	Backlight Type	LED	—
Touch	Touch Type	Analog resistive film	—
	Resolution(Cell)	640x480	320x240
	Touch Life	1 million times or more	—
Interface	Serial COM1	<ul style="list-style-type: none"> <li>RS-232C Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: Circular 37pin 1 Channel</li> </ul>	—
	Serial COM2	<ul style="list-style-type: none"> <li>RS-232C, RS-422/485 Asynchronous</li> <li>Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even</li> <li>Baud rate: 2400~115.2kbps</li> <li>Connector: Circular 37pin 1 Channel</li> </ul>	—
	Ethernet	IEEE802.3/IEEE802.3u, 10BASE-T/100BASE-TX	—
	USB Device	V1.1 Compatible 1 Channel, Max 5m	—
	USB Host	<ul style="list-style-type: none"> <li>Output 5V/0.5A, USB Storage V1.0 Compatible (FAT16/FAT32)</li> <li>USB Barcode/USB Scanner (Standard Keyboard Protocol)</li> </ul>	—
	SD Card	MMC/SD Card Slot 1 Channel (FAT16/FAT32)	—
	Contact Switch	Keylock : 1A, Emergency Stop : 1A-2B, 3-Position enabling (OF-ON-OFF)	—
	Function Switch	6P: Function Key or Output (TTL Level Output)	—
	Contact	—	<ul style="list-style-type: none"> <li>1A-1B Key switch, DC24V/0.5A</li> <li>1A-2B Emergency stop switch, DC24V/0.5A</li> <li>2bit 3-Position enabling, DC24V/0.5A</li> <li>6bit Digital output, DC24V/0.5A</li> </ul>
	Memory & Others	Screen Memory	26MB
Backup Memory		512KB: System buffer(5K Word), Including Alarm/Logging/Recipe	—
Backup Period		5 years(with rechargeable, ambient temperature 25°C)	—
Battery		<ul style="list-style-type: none"> <li>Lithium rechargeable: Main, Charging is completed in one day (when power input), 30 days backup without power input,</li> <li>Coin type Lithium: Subsidiary(changeable), 2 years backup without power input</li> </ul>	—
Real Time Clock		Built in	—
Status LED	<ul style="list-style-type: none"> <li>Wireless ethernet LINK</li> <li>System operation OP</li> <li>Power PWR</li> </ul>	—	

General	HTOP05TV-SD	HTOP05TQ-SD	HTOPWS-SD (W-Station)
Power	Input Voltage	DC24V(20~28V)	—
	Additional Input Voltage	AC adapter 6V DC(2A)	—
	Power Consumption	10W or less	—
	Voltage Sag	24V, Within 10ms	—
	Insulation Resistance	—	500V DC, 10MΩ
Environment	Operation Temperature(°C)	-10 ~ +50	—
	Storage Temperature(°C)	-20 ~ +60	—
	Operation Humidity(%RH)	0 ~ 90(No dew)	—
	Atmosphere	No corrosive gas	—
	Vibration Endurance	Amplitude: 10sF < 25Hz(2G) X,Y,Z each direction(for 30 minutes)	—
	Noise Immunity	1000Vp-p(Pulse width 1μs)	—
	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV	—
Structure	Shock Endurance	10G X,Y,Z each direction(for 3 times)	—
	Surge Voltage	500V(Line-Line)	—
	Ground Connection	—	Class 3(100Ω or less)
	External Dimension(mm)	160x210x77	159x119x103
	Weight(kg)	0.9(with battery)	0.9
Fixed Method	Hanger type	Standard DIN Rail	
Cooling System	Natural air circulation	—	
Case Material	PC/ABS VB-1401 (Resistance to flame)	Steel/Painting	

## Drawing



## Wired type



### Communication | Extended Memory | Extended Switch

- Serial (RS232C/422/485)
- Ethernet
- USB Device/Host
- SD Card for data management
- Emergency Switch
- Key-Lock Switch
- 3-Position Switch
- 6 Function Key



# XDesignerPlus



## Multi-functional software - Easy to design

- On-line update  
Easy update with connection with on-line
- Window 7 64bit / Vista 64bit available
- Language exchange  
Software-integrated multi language as Korean, English, Chinese, Arabic
- Various image library
- Run simulator  
Convenient debugging and running in PC, without TOP
- Mutiple font for numeric display  
Bitmap font, Image font(MS Window) available

The screenshot displays the XDesignerPlus software interface with several key components:

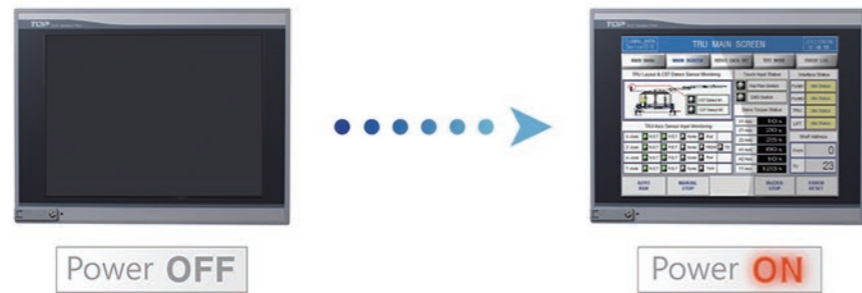
- Images Library:** A panel on the left containing various graphical elements like tanks, arrows, lamps, selectors, and gauges.
- TRU MAIN SCREEN:** The central control interface showing real-time data for a TRU system, including axis sensor input monitoring (X, Y, Z, A, T axes), servo torque status, and interface status.
- #3 Vacuum Furnace:** A detailed control screen for a vacuum furnace, featuring a temperature graph, a schematic diagram of the furnace, and various control buttons.
- Run Simulator:** A window on the right that allows for simulating the control logic, showing a schematic diagram and a list of device addresses.
- Property Panel:** A panel on the right side used for configuring the appearance and behavior of UI elements, such as shape type, fill style, and function keys.
- Font Display:** A small window at the bottom right demonstrating multiple font styles for numeric display, showing the numbers 12345 in various colors and fonts.



# 1. Outstanding Speed

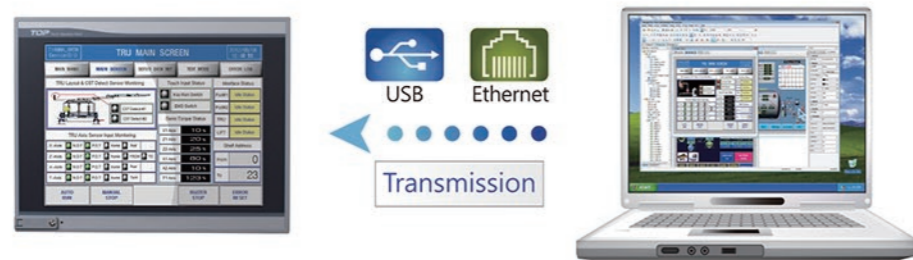
Best

## Boot speed



Best

## Transmission speed of design data



## Reduction of design process by fast editing

- ▶ Various and fast editing functions **Best**
- ▶ Simple organization of object arrange and size
- ▶ Global screen for common functions



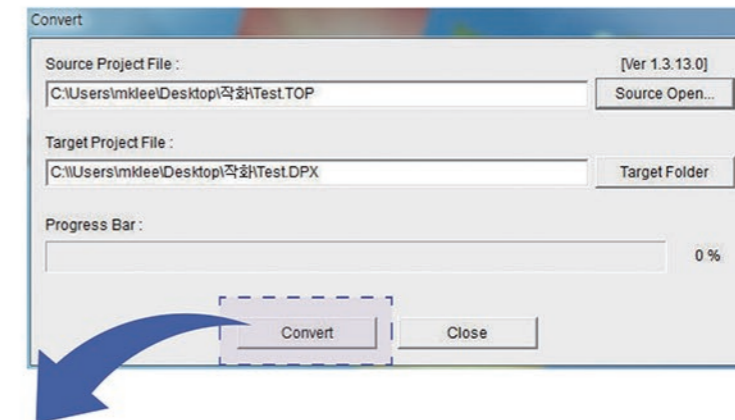
## Automatic screen change

- ▶ Project adjusting through resolution by model change



## Converting project file from previous version

- ▶ Project converting program from previous model's file



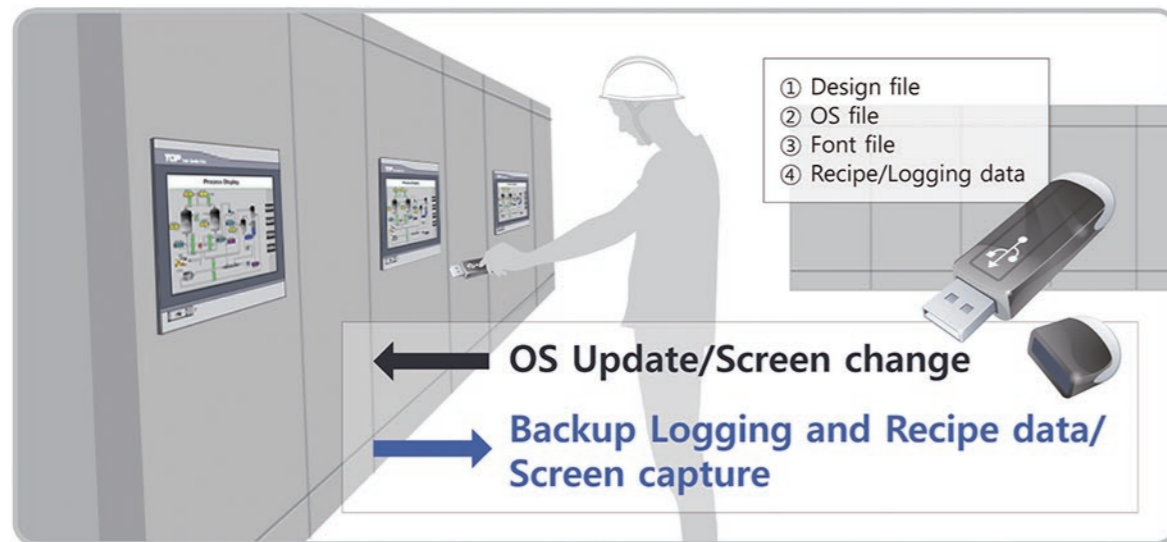
TOP, XOP files to DPX files



## 2. Convenient Maintenance, Security, Inspection

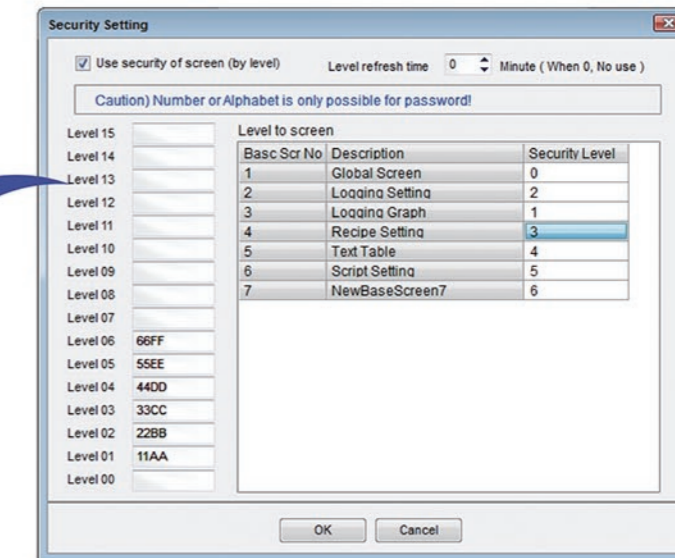
### Maintenance with USB memory

- ▶ Simple maintenance by USB memory, without PC



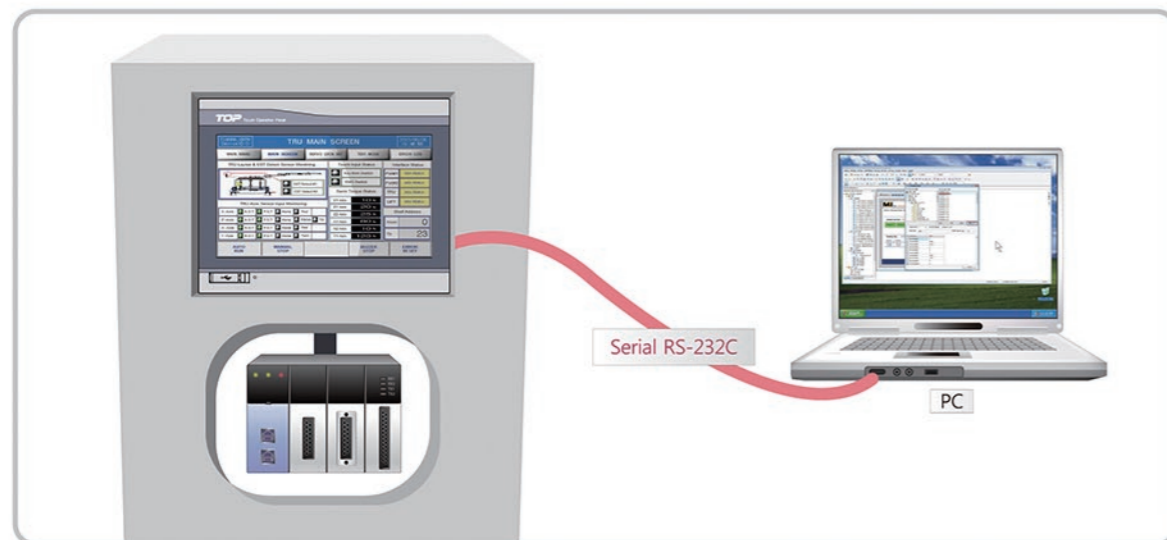
### Security settings

- ▶ 15 Levels of password
- ▶ Password for each screen, password for tag/draw
- ▶ Time setting for Log-in



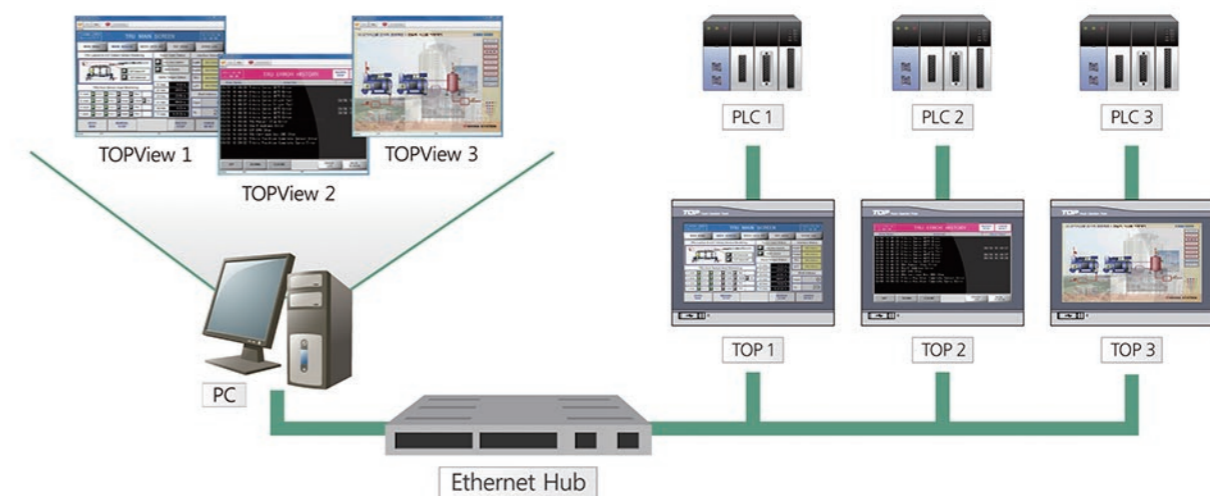
### PASS THROUGH

- ▶ Debugging PLC connected with TOP by PASS THROUGH



### Remote control by TOPView

- ▶ Field monitoring/control in office by PC connected with Ethernet

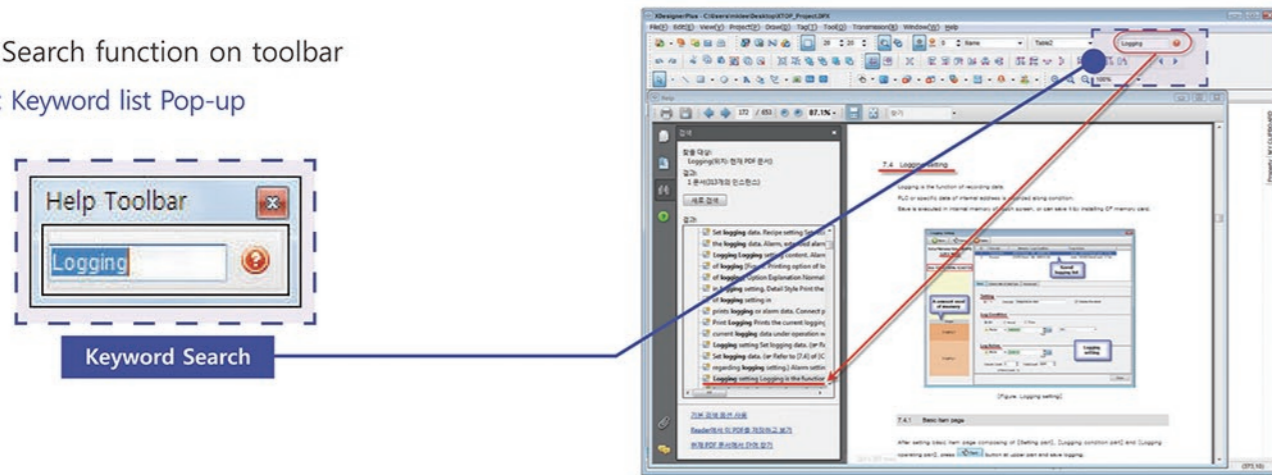




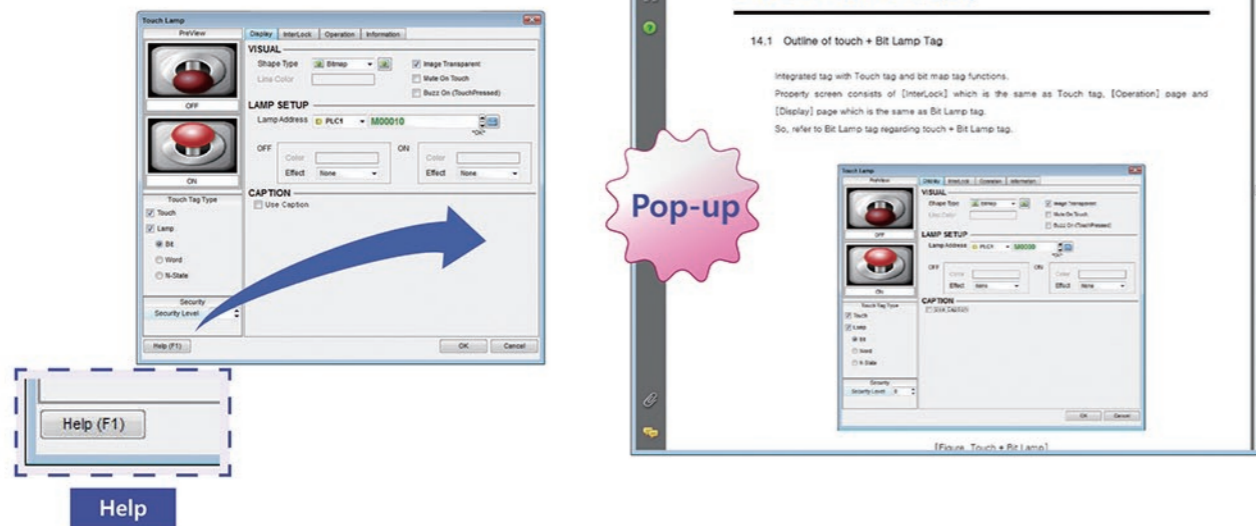
# 3. Easy and fast solution system

## Search by user request

- ▶ Search function on toolbar
- : Keyword list Pop-up

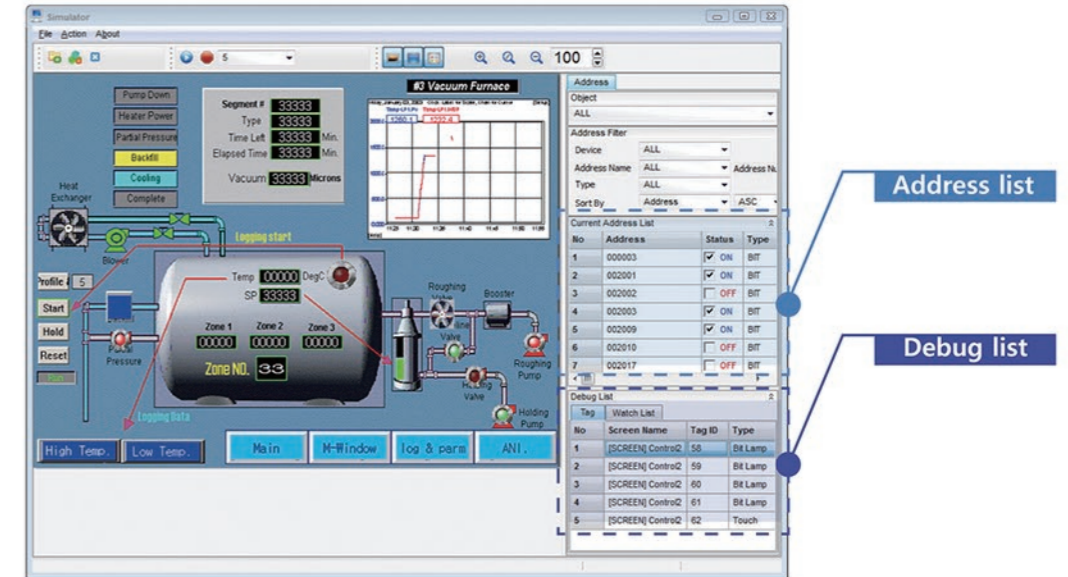


- ▶ F1 or Help button
- : Pop-up manual while editing a certain object



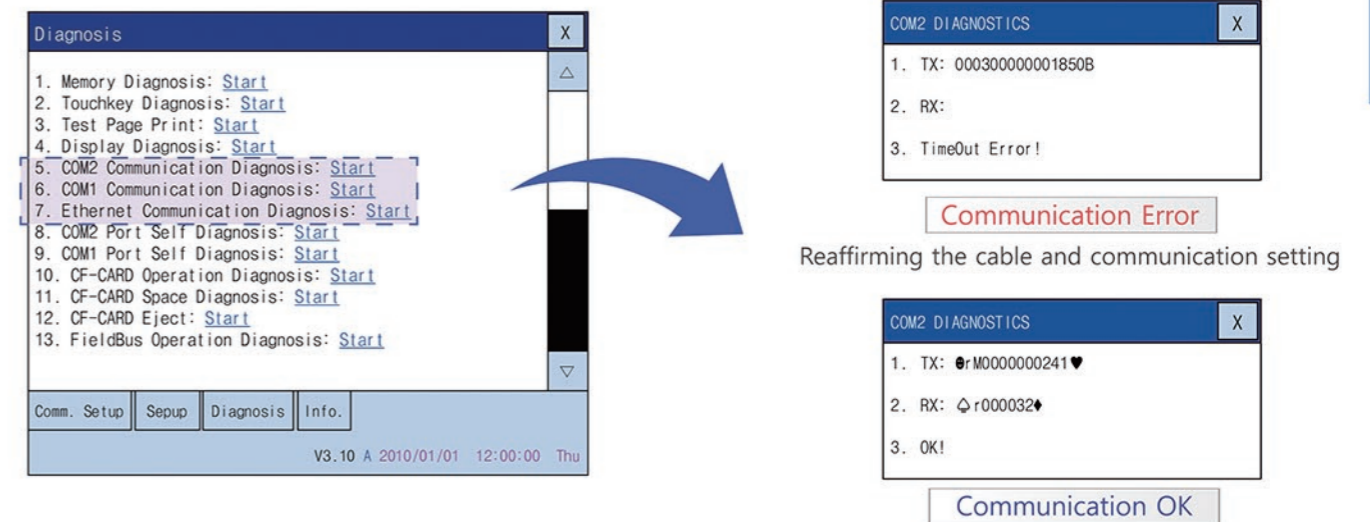
## Simulation

- ▶ Debugging and running available in PC, without TOP and PLC



## Communication diagnostics

- ▶ Simple checking of communication with PLC in TOP's main menu



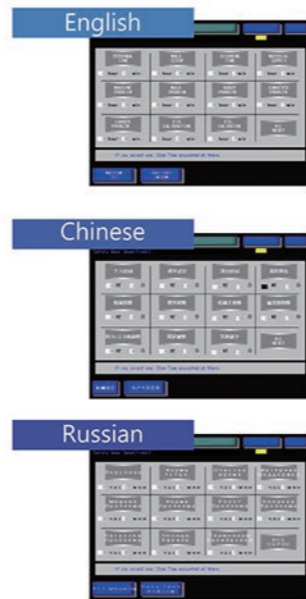


# 4. Powerful functions with multiple usability

## Multi language support

- ▶ Using text table function to change the languages during run mode

No	Length	0. Table1	1. Table2	2. Table3	3. Table4	4. Table5	5. Table6	6. Table7
1	20	Cycle time over	超出循环时间	사이클 시간 초과	Case cyklu prekr.	Case cyklu prekr.	Время истекло	Overim zam asmi
2	45	Fast detection time over	超出快速检测时间	빠른 검출 시간 초과	Case detekcie vyrobku prekr.	Case detekcie vyrobku prekr.	Время быстрого обнаружения истекло	Pasta detekt. Zam.asmi
3	24	Load protection alarm	负载保护(过载保护)报警	차일드(과중보호) 이상	Alarm ochrana formy	Alarm ochrana formy	Сигнал скачка формы	Kárp koruna ALM
4	44	Motor off in auto mode	自动模式的电动机未运行	자동 모드에서 시동오류 리포트	Motor vyp. v autom. mode	Motor vyp. v autom. mode	В автоматическом режиме электр. двигателя не работает	Ob. mod-da Motor kap.
5	43	Motor off in high clamping	高夹紧模式的电动机未运行	하이 클램핑 모드에서 리포트	Motor vyp. pri vysok.tisku	Motor vyp. pri vysok.tisku	В режиме высокого давления электр. двигателя не работает	Yuksek Kisi. Motor kap.
6	24	caution alarm	谨慎报警(机械停止)	주의이상 (기계정지)	Polster - alarm	Varnost - alarm	Сигнал скачка формы	Yasak ALM.
7	25	thin mold	模具厚度不足	공정두께 이상	Tenka forma	Tenka forma	Толщина формы	Ince olak kalipama
8	44	Comm. error(O.P)	通讯错误(O.P)	통신 오류(O.P)	komunik chyba(O.P)	komunik chyba(O.P)	Нет связи с Опер. панелью	Haber hatasi
9	32	change time over	超出换模最长时限	최대치환시간 초과	Doba nahr. prekr.	Doba nahr. prekr.	Время набора истекло	Mai alma zam. asmi
10	40	Wing time over	超出偏转时限	승강시간 초과	Doba pn. prekr.	Doba pn. prekr.	Время наклона истекло	Dot. zam. asmi
11	37	Injection pressure over	注射压力异常	사출압 이상	Vztl.tlak prekrocn.	Vztl.tlak prekrocn.	Давление впрыска превышено	Eri. bas. asmi
12	26	Back pressure over	背压异常	배압이상	Zpet.tlak prekrocn.	Spat.tlak prekrocn.	Противодавл.превышено	Get. bas. asmi
13	28	caution over	超出谨慎上限	주의상한 초과	Polster prekr.	Varnost prekr.	Подзрика предр.	Yasak asmi
14	28	caution under	低于谨慎下限	주의상한 미만	Polster nspzy	Varnost nspzy	Подзрика недост.	Yasakimaya ulasmasi
15	36	Over Upper limit (HN)	超过HN上限	HN 상한 초과	Nad horni limit (HN)	Nad horni limit (HN)	Пределы верх.пред. (HN)	Ust.lim. asmi(HN)
16	36	Under lower limit (HN)	低于HN下限	HN 하한 미만	Pod dolni limit (HN)	Pod dolni limit (HN)	Пределы ниж.пред. (HN)	Ust.lim. asmi(HN)
17	37	Over Upper limit (H2N)	超过H2N上限	H2N 상한 초과	Nad horni limit (H2N)	Nad horni limit (H2N)	Пределы верх.пред. (H2N)	Ust.lim. asmi(H2N)
18	37	Under lower limit (H2N)	低于H2N下限	H2N 하한 미만	Pod dolni limit (H2N)	Pod dolni limit (H2N)	Пределы ниж.пред. (H2N)	Ust.lim. asmi(H2N)
19	26	Over Upper limit (H1)	超过H1上限	H1 상한 초과	Nad horni limit (H1)	Nad horni limit (H1)	Пределы верх.пред. (H1)	Ust.lim. asmi(H1)
20	26	Under lower limit (H1)	低于H1下限	H1 하한 미만	Pod dolni limit (H1)	Pod dolni limit (H1)	Пределы ниж.пред. (H1)	Ust.lim. asmi(H1)
21	26	Over Upper limit (H2)	超过H2上限	H2 상한 초과	Nad horni limit (H2)	Nad horni limit (H2)	Пределы верх.пред. (H2)	Ust.lim. asmi(H2)



## Template function NEW Adopted from V4.0

- ▶ Using template, make common used project more simply

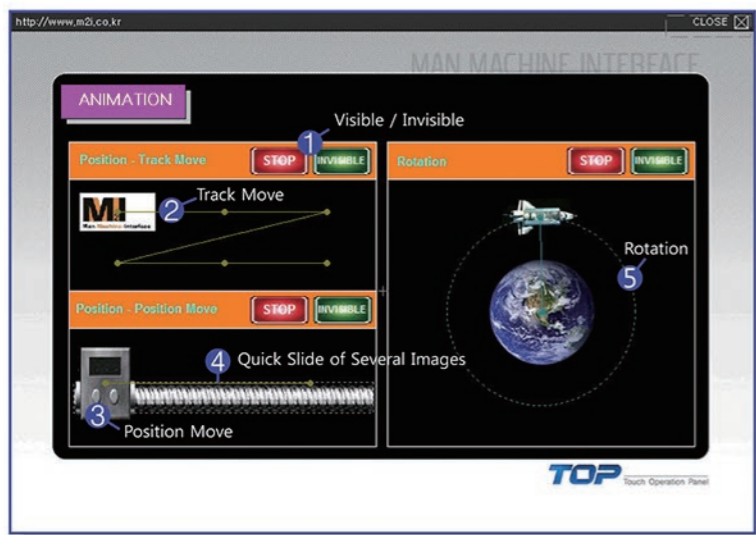
- ✓ By offset of addresses in project, auto-completion support
- ✓ Set certain property of one object, and macro function support multi-create
- ✓ Edit captions and properties of objects in one time on grid

Type	Screen Name	Tag Name	Address	Bit	Offset	Memo	Block
- BASE	1.65536Color	Word Part(2)	(SYS)0099	16	(SYS)0099		REMOVE ALL
	1.65536Color	Calculation(5)	(SYS)0099	16	+0		REMOVE
	1.65536Color	Calculation(5)	(SYS)0099	16	+0		REMOVE
	1.65536Color	Calculation(4)	(SYS)0099	16	+0		REMOVE
	1.65536Color	Calculation(3)	(SYS)0099	16	+0		REMOVE
	1.65536Color	Calculation(4)	(SYS)0099	16	+0		REMOVE
- BASE	4.Alarm	Touch + Bit Lamp(9)	(SYS)0001.00	1	(SYS)0001.00		REMOVE ALL
	4.Alarm	Touch + Bit Lamp(9)	(SYS)0001.00	1	+0		REMOVE
	4.Alarm	Touch + Bit Lamp(10)	(SYS)0001.01	1	+0		REMOVE
	4.Alarm	Touch + Bit Lamp(10)	(SYS)0001.01	1	+0		REMOVE
	4.Alarm	Touch + Bit Lamp(11)	(SYS)0001.02	1	+0		REMOVE
	4.Alarm	Touch + Bit Lamp(11)	(SYS)0001.02	1	+0		REMOVE
	4.Alarm	Touch + Bit Lamp(12)	(SYS)0001.03	1	+0		REMOVE
	4.Alarm	Touch + Bit Lamp(12)	(SYS)0001.03	1	+0		REMOVE
	4.Alarm	Touch + Bit Lamp(13)	(SYS)0001.04	1	+0		REMOVE

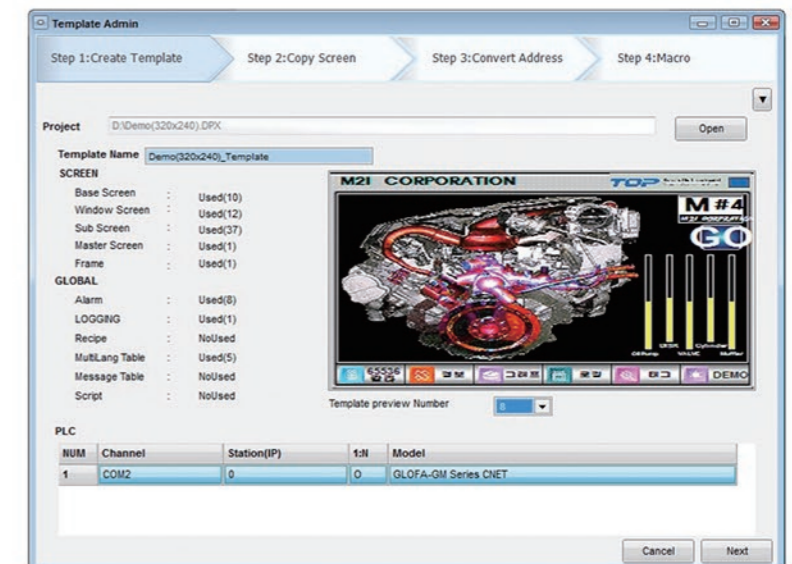
Wizard UI, helping user understanding

## Dynamic animation

- ▶ Visible/Invisible, Move, Rotate, Slide function



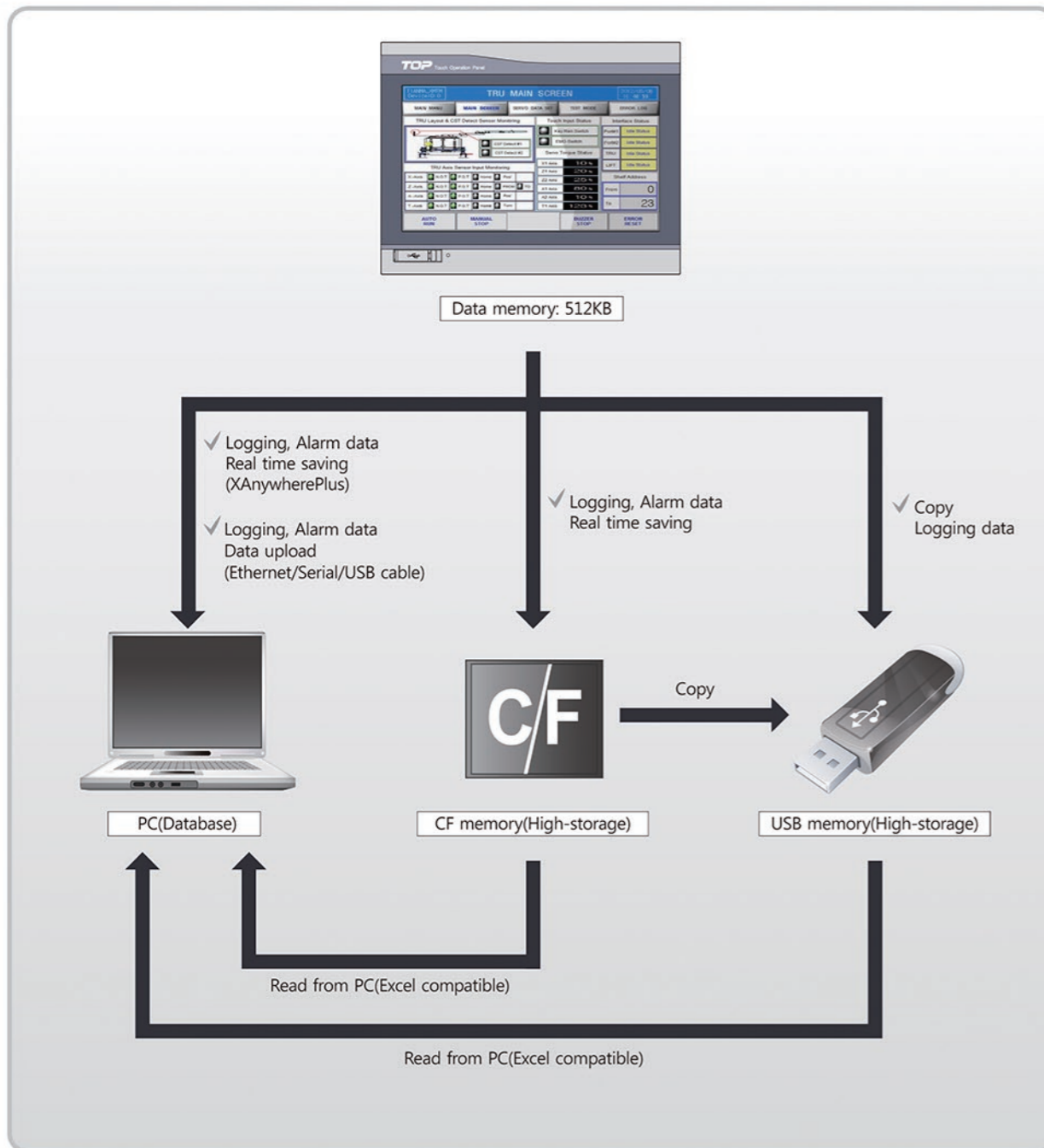
- 1 Visible/Invisible
- 2 Track Move
- 3 Position Move
- 4 Quick slide of several images
- 5 Rotation





# 5. Alarm/Logging/Recipe

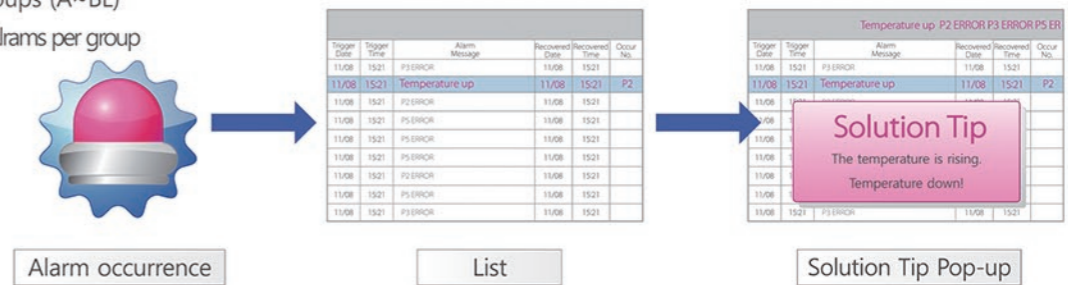
## Data management diagram



## Alarm

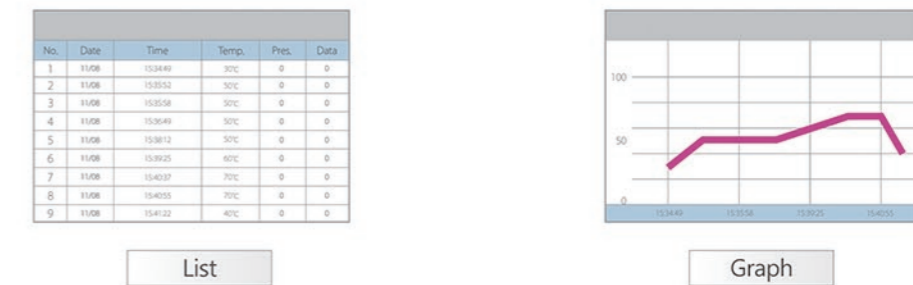
▶ Register the errors occurred in machine, and display in various ways

- ✓ Register alarms
- ✓ 64 Groups (A~BL)
- ✓ 5,000 Alarms per group



## Logging

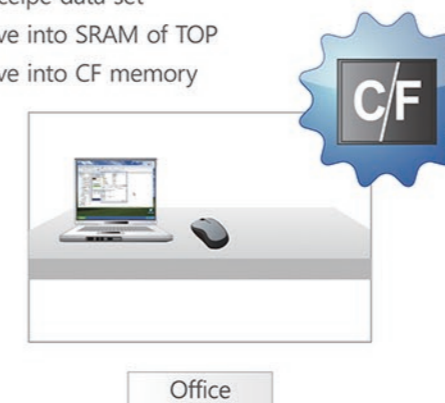
▶ Real-time saving of PLC data



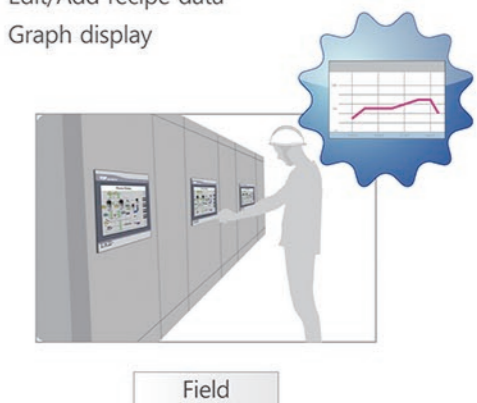
## Recipe

▶ Adopting data blocks set in office, to operating field

- ✓ Recipe data set
- ✓ Save into SRAM of TOP
- ✓ Save into CF memory



- ✓ Edit/Add recipe data
- ✓ Graph display





# Data Management Software

## XAnywherePlus

Adopted from V4.0



Download in M2I's homepage now.

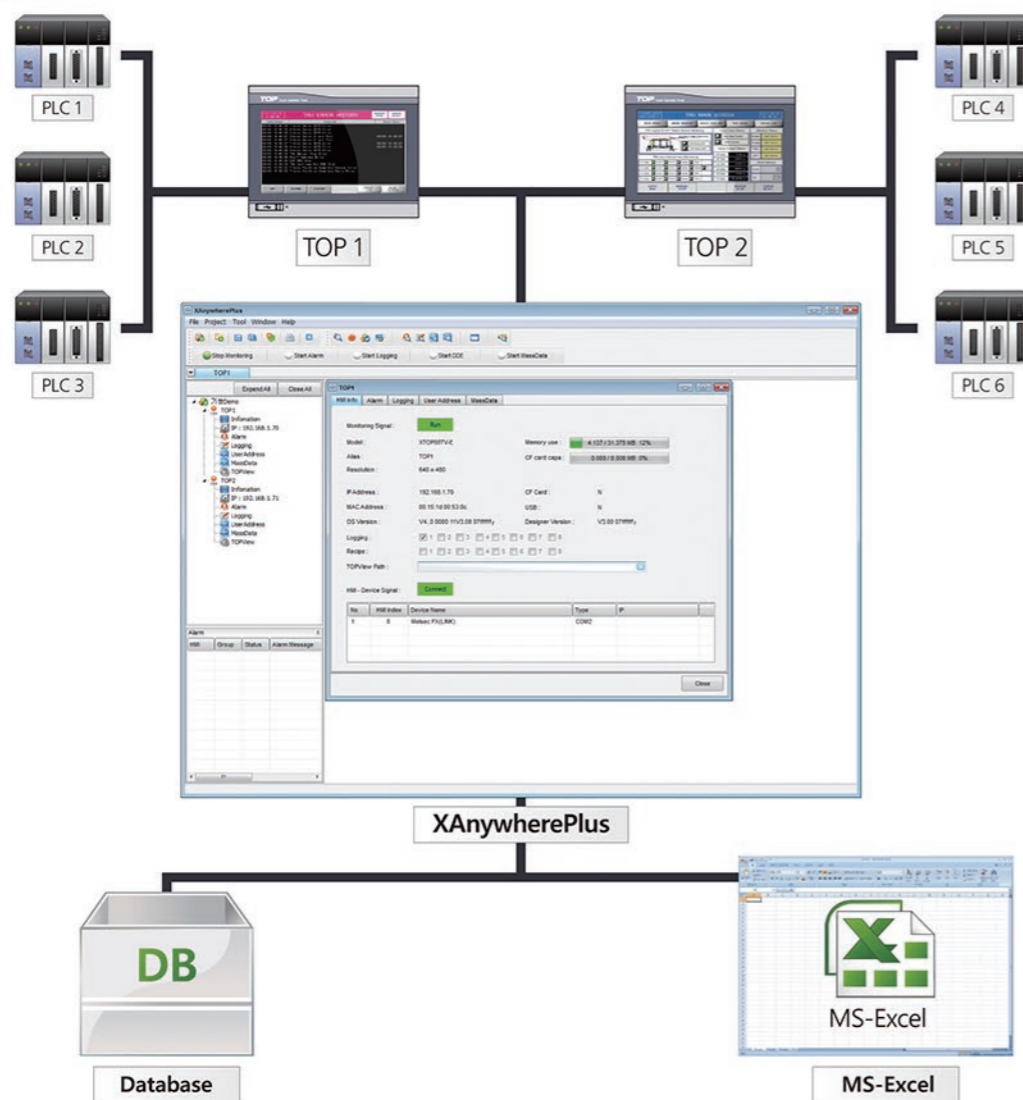
www.m2i.co.kr

### Managing data made in **TOP**

- **Real-time save**  
Saving the Logging and Alarm data into PC's Database by Ethernet
- **Saved data**  
Search by Month/Day/Hour
- **DDE(Dynamic Data Exchange)**  
Interlock PLC data with excel

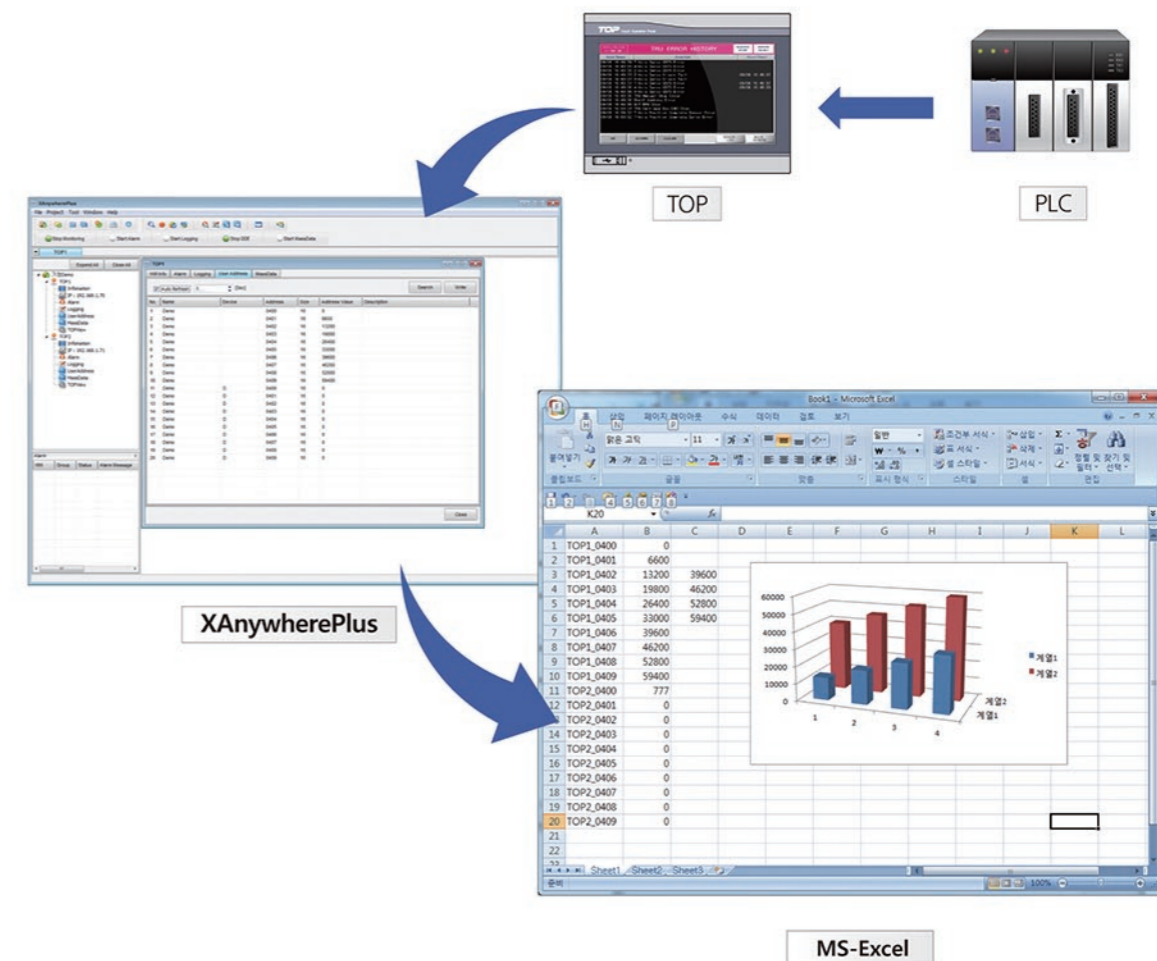
- **TOPView**  
Remote monitor and control
- **Trigger/Event**  
Control TOP data in diverse situation
- **Collect Mass Data**  
Collect and save data from multiple TOPs into a PC

#### Diagram



#### DDE(Dynamic Data Exchange) function

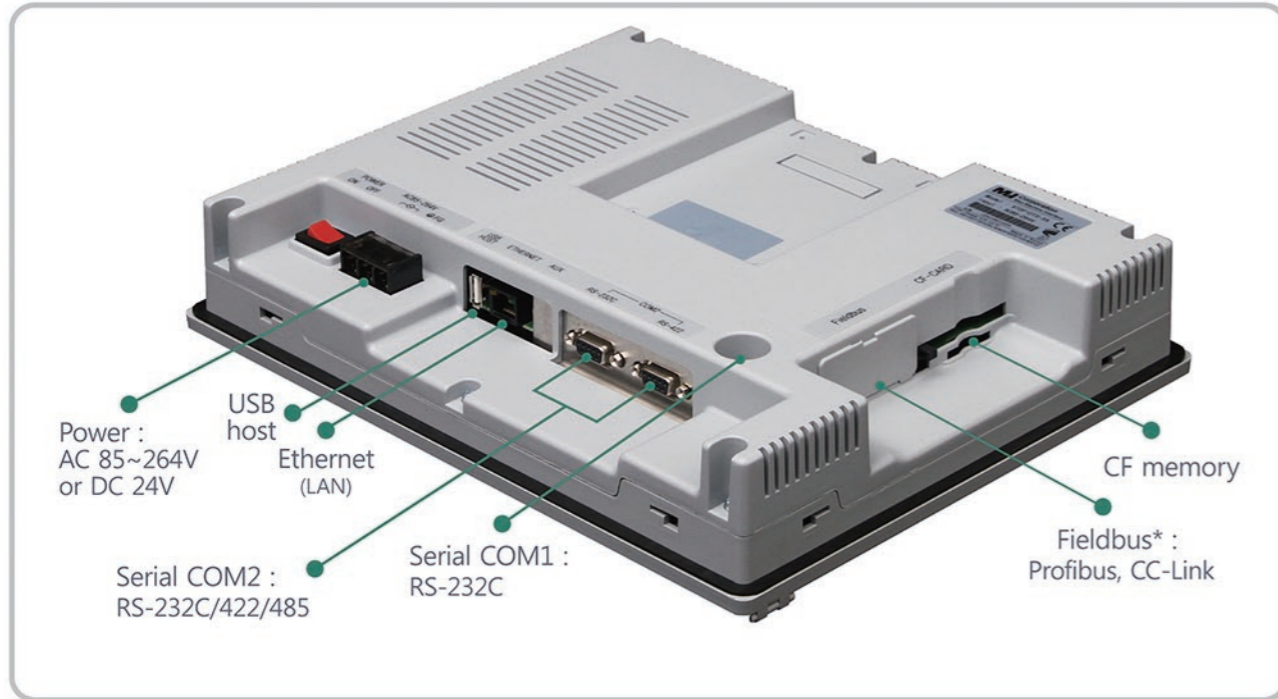
XAnywherePLUS supports interlock the PLC data with excel



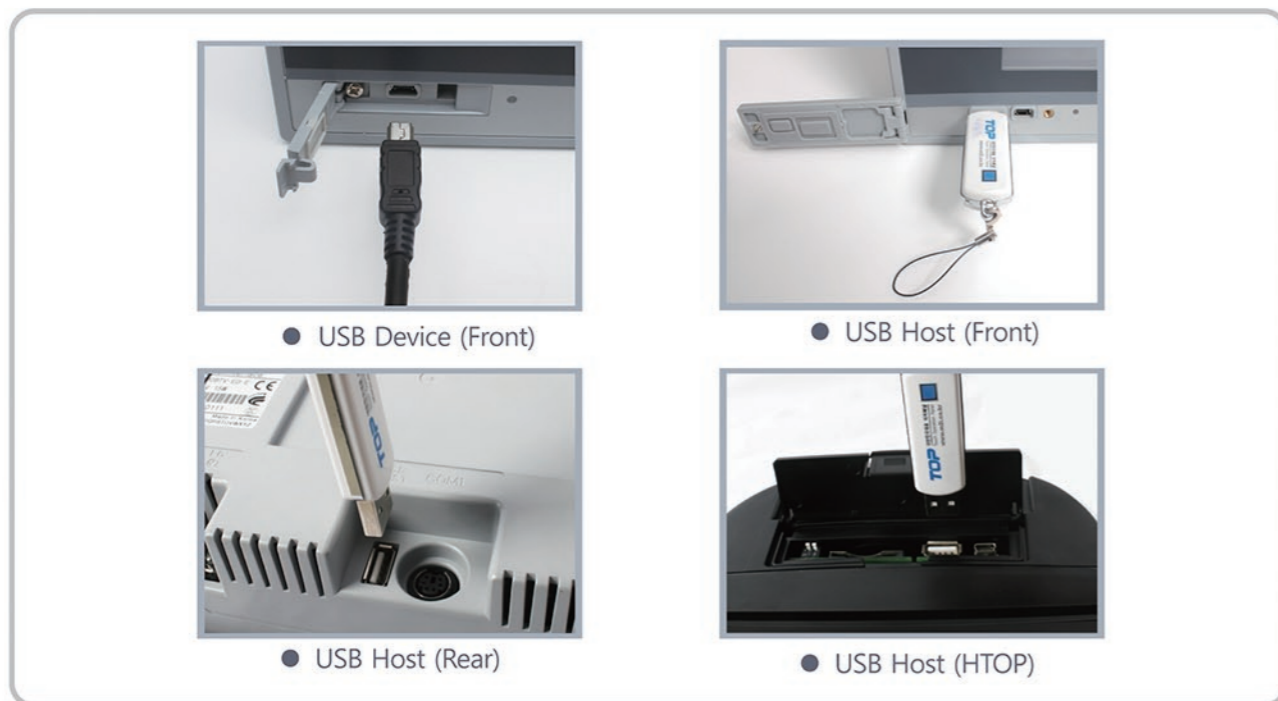


# Interface

## TOP Rear Port [ \* Option ]

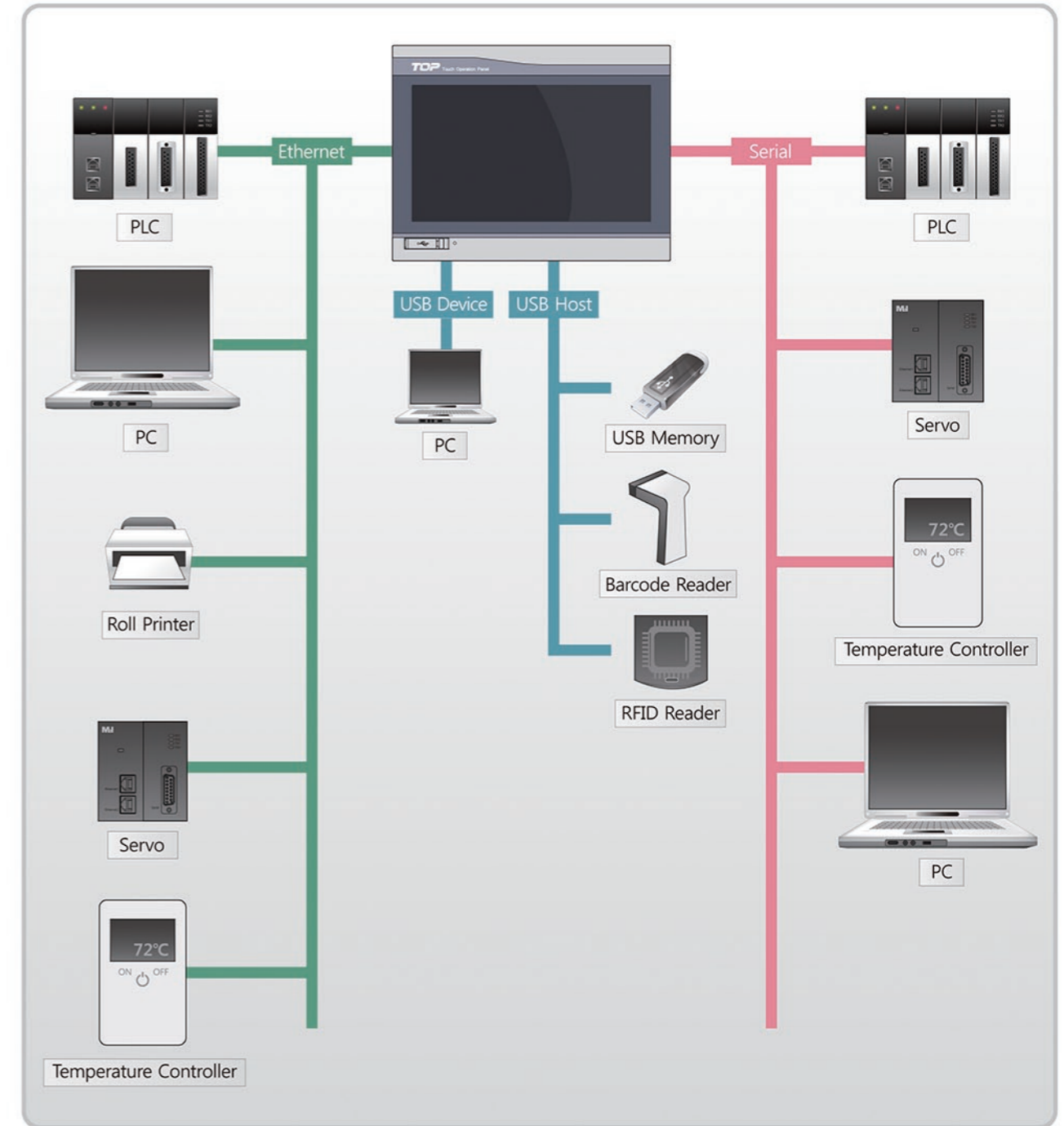


## TOP USB Port



# 1. Ports and Configuration

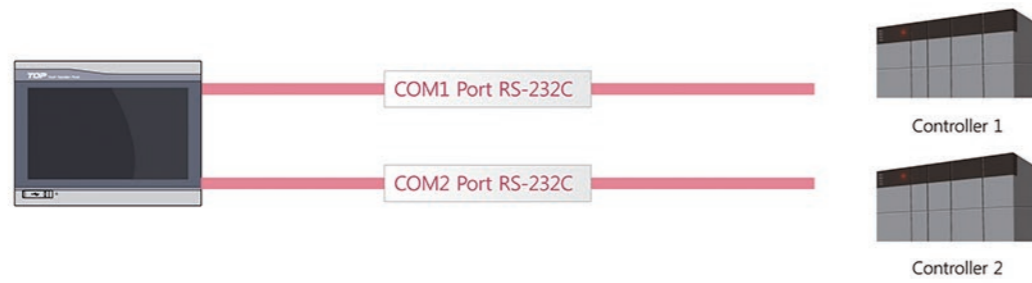
## Configuration



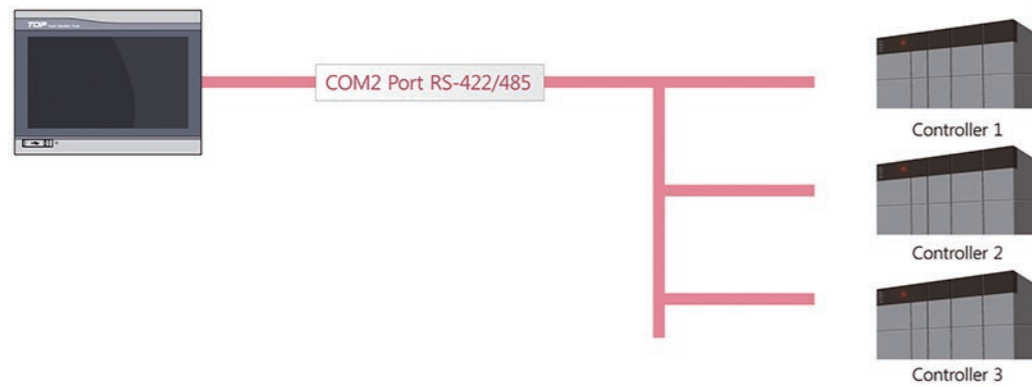


## 2. Communication Method

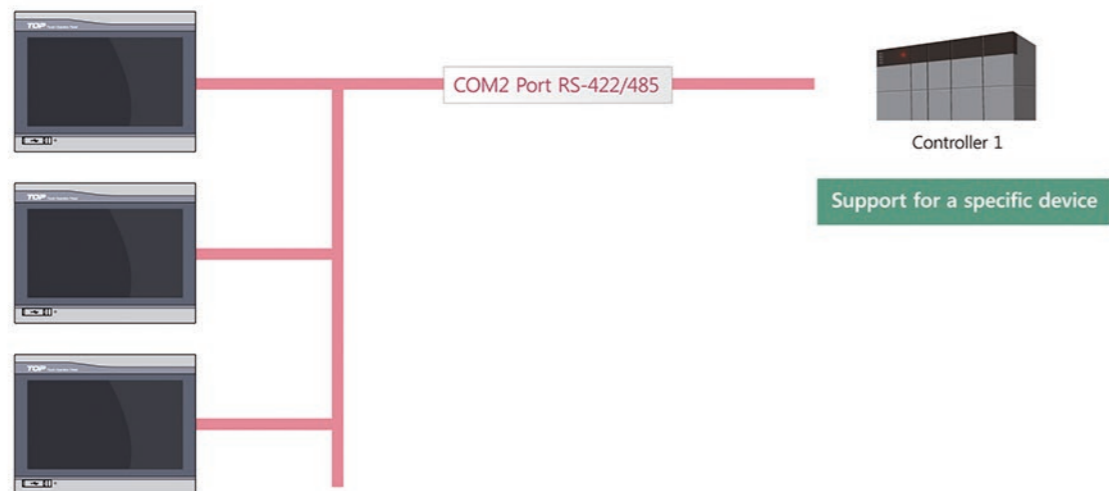
### Serial RS-232C (MAX 2 controllers)



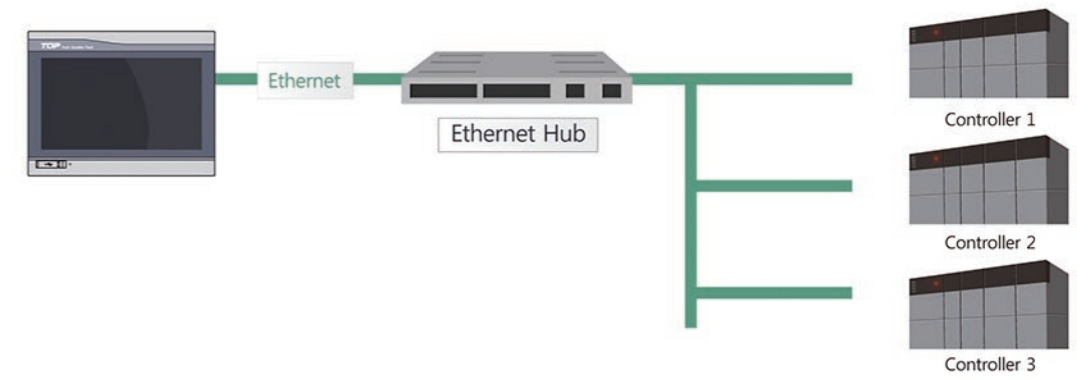
### Serial RS-422/485, 1:N(TOP:Controller)



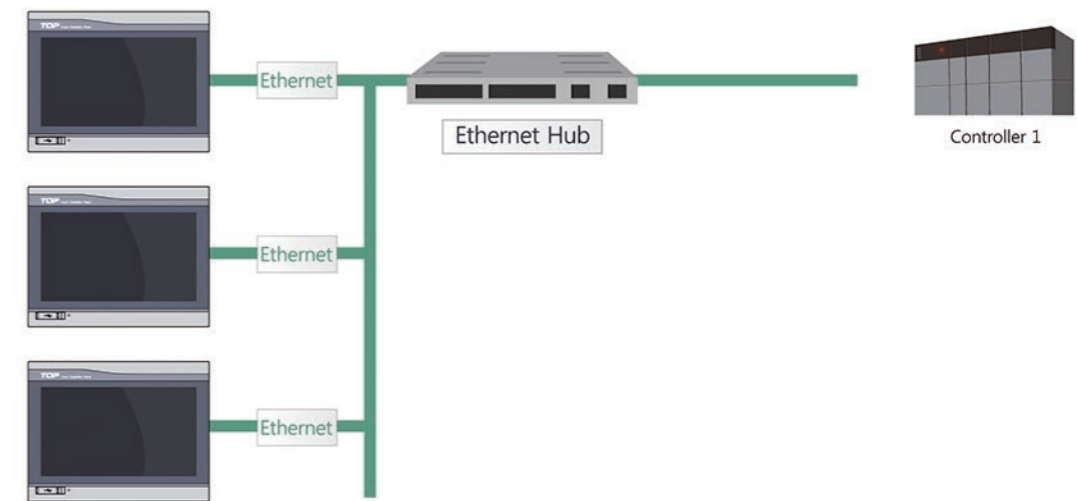
### Serial RS-422/485, N:1(TOP:Controller)



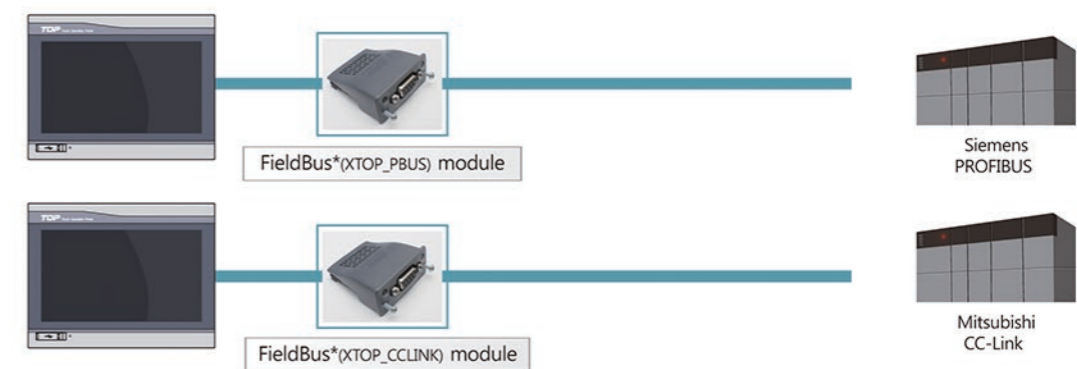
### Ethernet 1:N(TOP:Controller)



### Ethernet N:1(TOP:Controller)



### FieldBus [ \* Option ]





# 3. Connectable PLC

Manufacturer	Series	CPU Type	RS-232C/422/485	Ethernet	
<b>Connectable PLC</b>					
MITSUBISHI Electronic Corporation	MELSEC-Q	Q□□/00J/□□H/□□UDH/□□UDEH	●	●	
	MELSEC-FX	FX0/1/2/1S/1N/2N/2NC/3U/3UC/3G 10/20GM	●	●	
	MELSEC-A	A1N/2N/3N	A1S(H)/2S(H)/AOJ2(H)	●	●
		A2A/3A/2A-S1	A2U/3U/4U/2USH	●	●
		CC-Link(RD)	CC-Link Master Device	●	●
OMRON Industrial Automation	SYSMAC C.J2	CJ2H	●	●	
	SYSMAC C.J1	CJ1G/1M	●	●	
	SYSMAC CS1	CS1G/H	●	●	
	SYSMAC CP	CP1L/1H	●	●	
	SYSMAC C	C50/120/200/500/1000 CQM1/1H CPM1/2A/2C	●	●	
LS Industrial Systems	XGT	XGK/XGI/XGR	●	●	
	XGB	XEC/XBC/XBM	●	●	
	GLOFA-GM	GM1/2/3/4/6/7	●	●	
	Master-K	80/120/200/300/1000S	10S1/10/30/60/100S	●	●
		60/200H	500(H)/1000	●	●
SIEMENS AG.	SIMATIC S7-1200	All Models	●	●	
	SIMATIC S7-400	All Models	●	●	
	SIMATIC S7-300	All Models	●	●	
	SIMATIC S7-200	All Models	●	●	
	SIMATIC S5	90/95/100/115/135/155U	●	●	
Rockwell Automation (Allen Bradley)	PROFIBUS DP	PROFIBUS DP Master Device	●	●	
	ControlLogix	1756	●	●	
	CompactLogix	1768/1769	●	●	
	MicroLogix	1000/1200/1500 system	●	●	
	SLC500	SLC5/03/04/05	●	●	
MODBUS	PLC-5	PLC5/11/20/30/40/40L/60/60L	●	●	
	MODBUS	All Models	●	●	
	MODBUS/TCP	All Models	●	●	
	GE Fanuc Intelligent Platforms	VersaMax PLC	IC200C/N/U□□□□□□	●	●
		Series 90-30 PLC	IC693C□□□□□□	●	●
Series 90-70 PLC		IC697C□□□□□□	●	●	
PACSystems RX3i		IC695□□□□□□	●	●	
PACSystems RX7i		IC698C□□□□□□	●	●	
Schneider Electric Industries	Micro	TSX37 All models	●	●	
	Premium	TSX/TPMX P57 All models	●	●	
	Twido	TWD LCAA/LMDA All models	●	●	
	Quantum	140 CPU All models	●	●	
	Momentum	171 CCS/CCC All models	●	●	
PANASONIC Electric Works	M340	M340	●	●	
	MDrive	MAI3CRL23□6-□□□□	●	●	
	FP	FP2(SH)/X/Z/O/e/M/10S(H)/3/1,FP-X	●	●	
	PROGIC-8	PROGIC-8	●	●	
	MP900/2000	MP920/930/2200/2300	●	●	
YASKAWA Electric Corporation	Control Pack	CP-9200SH	●	●	
	FA-M3	F3SP□□-□N/H/S	●	●	
	Micrex-SX	SPH□□□	●	●	
	Micrex-F	F, F□□(S/H), F1□□(S/H), F200	●	●	
	KV	KV-700/1000 KV-10/24	●	●	
KEYENCE Corporation	KV	KV-700/1000 KV-10/24	●	●	
	DL-205/305/405	D2 240/330/430	●	●	
	FBs	FBs-□□MA/MC/MN	●	●	
	FBe	FBe-□□MA/MC	●	●	
	FBn	FBn-□□MCT	●	●	
FATEK Automation Corporation	Alpha	N7/NX(70/700/750/CCU)	●	●	
	Plus	NX7/NX Plus(70P/700P/CCU+)	●	●	
	SPC	SPC-10/100/120S/300	●	●	
	X8	All models	●	●	
	CP	CM1-CP3/4□	●	●	
KDT Systems	XP	CM1-XP1/2/3□	●	●	
	BP	CM2-BP16/32□□	●	●	
	Tiny PLC	TCP-3X/9X	●	●	
	Qubloc	All models	●	●	
	EH-150	EH-150	●	●	
Hitachi Industrial Equipment Systems	HIDIC-H	Micro EH	●	●	
	POSFAA	POSFAA-A	●	●	
	EC20	EC20	●	●	
	DVP	DVP series	●	●	
	M/VB/VH	M series / VB series / VH series	●	●	

Manufacturer	Series	CPU Type	RS-232C/422/485	Ethernet
<b>Connectable DDC</b>				
ASIC	DDC	DDC	●	●
Speed tech	ExtDDC	ST/PS, ST/RS, ASIC/2-7040	●	●
SAIA	SAIA	PCD2	●	●
<b>Connectable Temperature Controller</b>				
RKC Instrument	CB	CB100/400/500/700/900	●	●
	FB900/400	All models	●	●
	HA900/400	All models	●	●
	MA900/901	All models	●	●
	SRV	V-TIO-A/V-TIO-C	●	●
	SRX	X-TIO-A	●	●
	SA200/100	SA100	●	●
	SR Mini HG	H-PCP-A/H-PCP-J	●	●
HanyoungNux	SRZ	Z-TIO/DIO/CT/COM	●	●
	NP200/100	All models	●	●
	NX, PX	NX9/7/3/2, PX9/7	●	●
	RT	RT9	●	●
	LX100	LX100	●	●
SamwonTech	NOVA500	SD5□□/SL5□□/SP5□□/ST5□□	●	●
	NOVA300	SD3□□/SS3□□/ST3□□	●	●
	SP790	SP7□□	●	●
YOKOGAWA Electric Corporation	UT/UP/UM	UT/UP/UM/UD)3/4/5/7/10□□	●	●
CHINO Corporation	DB	DB1/DB2 All models	●	●
	KP	KP1/2/3 All models	●	●
	LT	LT23/3/4/830 All models	●	●
	JU	JU All models	●	●
	JW	JW All models	●	●
IMO	DTP	DTP/TP	●	●
<b>Connectable Inverter</b>				
Sanken	SAMCO-i	ihf/ipl/QS/QT/It/IF	●	●
LS Industrial Systems	Starvert Inverter	SV-IS7/G5A/PSA/C5/V5/G5/S5/HV/S3	●	●
ABB	ACS	ACS140/400/500	●	●
Huropec	HC	HC	●	●
FEBA	UDICON	UDICON	●	●
	SMARTCON	SMARTCON	●	●
FUJI Electric Systems	Inverter	FRN□□□□11S-□	●	●
IMO	Jaguar	CUB/VXSM/VXM	●	●
<b>Connectable Weigh Indicator</b>				
AND	AD	AD4326/4327/4328/4329	●	●
CAS	CI/NT	CI/NT	●	●
BONGSHIN	BS	BS	●	●
SEWHACNM	SI 3000	SI 3000	●	●
SinHan	SH5100	SH5100	●	●
<b>Connectable Barcode Reader</b>				
General Barcode Reader	USB/RS-232C	USB/RS-232C	●	●
<b>Connectable RFID Reader</b>				
OMRON	RFID	V680	●	●
LS Industrial Systems	RFID	XCODE-1306/1307	●	●
CEYON Technology	RFID	RIM125 TRA5	●	●
<b>Connectable Motion Controller</b>				
DONGBU (DASAROBOT)	iMS-J	iMS-J	●	●
	iM-Σ	iM-Σ2/3/4/5/6/7/8	●	●
	UNICON	UNICON	●	●
ROBOSTAR	DTR	DTR2/3/4	●	●
	Newro	RCS6000/RCM	●	●
EMOTIONTEK	MCU	MCU-MA/MP/XA/XP	●	●
	MCU2	MCU-MA2/MP2/XA2/XP2	●	●
	MCS	MCS-80A4/P4/A8/P8	●	●
OMRON	Campositioner	3F88L-160/162	●	●
	Gidding & Lewis	MMC	●	●
Hyundai Heavy Industries	Hi4 Robot	BD412 Board	●	●
Bosch-Rexroth AG	VisualMotion	VM7, VM8	●	●
Delta-Tau	PMAC	Mini-PMAC	●	●
<b>Connectable Servo</b>				
MITSUBISHI Electronic Corporation	MELSERVO	MR-J2S/M, MR-J3	●	●
HIGEN Motor (OTIS)	FDA	FDA6000/7000	●	●
LS MECAPION (Metronix)	Anypack	APD-VS/VP/VK/VN□□	●	●
<b>Connectable Pump</b>				
Alcatel	ADP/ADS		●	●
Ebra	EST/ESR/ESA		●	●
Edward	iM		●	●
Kashiyama	SDE		●	●
LOT	DD		●	●

Communication

Communication



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always communicates with customers for satisfaction and enhances the quality of products by endless R&D.



Touch Operation Panel

