



EMBEDDED HMI

TOP SERIES

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

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SMART X HMI
EMBEDDED HMI
TOP SERIES





Detachable Aluminum Body with Multimedia Functions
Premium/Standard/ATEX Model

EMBEDDED HMI

SMART X HMI



INTERFACE

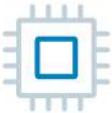
SERIAL 3 PORTS | ETHERNET 2 CHANNEL | USB HOST 2 PORTS | USB OTG | SD CARD
OPTION MODULE | WIFI | CAMERA | HDMI OUT | AUDIO OUT | VIDEO IN

* Multimedia functions are supported only in premium model

CERTIFICATION



FEATURES



QUAD CORE CPU

Quad core processor supplying rapid processing speed



ALUMINUM FRAME

Aluminum body with outstanding durability and splendid design



SUPPORTING 2 ETHERNET CHANNELS

2 Ethernet channels with different IP



T6 TEMPERATURE LEVEL CERTIFICATION

Qualified for KCs(Korea), CCC(China) certification



FRONT-SIDE PROXIMITY/
BRIGHTNESS SENSOR

Switch power saving mode to operating mode depends on how closer the operator is adjusting brightness of display depended on surrounding circumstances



16M FULL COLOR

Bright and vivid full color, supports vector image library



DETACHABLE UNIT STRUCTURE

Efficient combination of variable-size display unit and process unit depend on system requirement



FRONT-SIDE OTG USB

Supporting both HOST mode(USB devices i.e.memory, barcode reader, camera, etc) and program transmission mode



MULTIMEDIA FEATURE(PREMIUM MODEL)

Front-side camera, audio output, video input, HDMI output

DISPLAY UNIT

Functional		TOPRD1520X	TOPRD1220X	TOPRD1020S
Display	Display Type	15" TFT Color	12.1" TFT Color	10.4" TFT Color
	Color		16M Colors	
	Display Area(mm)	304.1x228.1	246x184.5	211.2x158.4
	Resolution(dot)	1024x768	1024x768	800x600
	Brightness Level		10 Levels(by software)	
	Backlight Type		LED	
Touch	Backlight Life		50,000 hours	
	Touch Type		Analog resistive film	
	Resolution(Cell)	1024x768	1024x768	800x600
	Touch Life		1 million times or more	
Embedded Device	Front Camera		USB UVC Max. Resolution: 640x480	
	Proximity Sensor		Yes	
	Illumination Sensor		Yes	
Structure	Panel Cut(mm)	355x286	306x247	260x202
	External Dimension(mm)	370x301x36.7	320x261x34.2	276x219.5x32.6
	Weight(kg)	3.58	2.44	1.88

PREMIUM MODEL

DISPLAY UNIT

Functional		TOPRD1510X	TOPRD1210S	TOPRD1010S
Display	Display Type	15" TFT Color	12.1" TFT Color	10.4" TFT Color
	Color		16M Colors	
	Display Area(mm)	304.1x228.1	246x184.5	211.2x158.4
	Resolution(dot)	1024x768	800x600	800x600
	Brightness Level		10 Levels(by software)	
	Backlight Type		LED	
Touch	Backlight Life		50,000 hours	
	Touch Type		Analog resistive film	
	Resolution(Cell)	1024x768	800x600	800x600
	Touch Life		1 million times or more	
Structure	Panel Cut(mm)	355x286	306x247	260x202
	External Dimension(mm)	370x301x36.7	320x261x34.2	276x219.5x32.6
	Weight(kg)	3.58	2.44	1.88

PROCESS UNIT

* Process unit can be assembled with variable display units

Functional		TOPRP20D
Interface	Serial COM1	RS-232C, RS-422/485 Asynchronous +5Vdc PWR Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1
	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: 2400~115.2kbps Connector: DSUB 9pin x 1
	Serial COM3	RS-485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: 3.5mm 3pin x 1
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 2
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 2
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Micro-B(Front) x 1
	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)
	Option Modules	EtherCAT, CAM32
	HDMI Output	HDMI v1.4a, HDMI Output, Max. Resolution: 1920x1080 at 60Hz Connector: HDMI x 1
	Video Input	Decodes NTSC, PAL or SECAM composite video, S-Video Connector: RCA socket x 1
	Audio Output	Stereo output Connector: 3.5mm Audio socket x 1
	Wifi	2.4G: 2.4000GHz~2.4835GHz WLAN Standard: IEEE808.11b/g/n Operation Range Up to 150meters in open space Security: WEP, TKIP, AES, WPA, WPA2
	Printer	Roll Printer(EPSON protocol): RS-232C
	Screen memory	128MB
	Backup memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe
	Backup Period	Permanent
	Real Time Clock	Built in
	Status LED	3 LEDs(Power, Operation, Link) Built in
Structure	External Dimension(mm)	201.6x147.6x37.3
	Weight(kg)	0.82

PROCESS UNIT

* Process unit can be assembled with variable display units

Functional		TOPRP10D
Interface	Serial COM1	RS-232C, RS-422/485 Asynchronous +5Vdc PWR Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1
	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: 2400~115.2kbps Connector: DSUB 9pin x 1
	Serial COM3	RS-485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: 3.5mm 3pin x 1
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 2
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 2
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Micro-B(Front) x 1
Memory & Others	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)
	Option Modules	EtherCAT, CAM32
	Printer	Roll Printer(EPSON protocol): RS-232C
	Screen memory	128MB
	Backup memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe
Structure	Backup Period	Permanent
	Real Time Clock	Built in
	Status LED	3 LEDs(Power, Operation, Link) Built in
	External Dimension(mm)	201.6x147.6x37.3
	Weight(kg)	0.82

DISPLAY + PROCESS UNIT

PREMIUM/STANDARD MODEL

Functional		15"	12.1"	10.4"
Power	Input Voltage		24Vdc(20~28Vdc)	
	Power Consumption	18W or less	15W or less	15W or less
	Voltage Sag		24Vdc, Within 10ms	
	Insulation Resistance		500Vdc, 10MΩ	
	Operation Temperature(℃)		-10 ~ +50	
Environment	Storage Temperature(℃)		-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)	
	Ground Connection		Class 3(100Ω or less)	
	Protection Classification		IP65(Front)	
	Certification		CE, KC, UL	
Structure	Weight(kg)	4.4	3.26	2.7
	Cooling System		Natural air circulation	
	Case Material		AL(Aluminum)	

DISPLAY UNIT

Functional		TOPRT1210SD-Ex
Display	Display Type	12.1" TFT Color
	Color	16M Colors
	Display Area(mm)	246x184.5
	Resolution(dot)	1024x768
	Brightness Level	10 Levels(by software)
Touch	Backlight Type	LED
	Backlight Life	50,000 hours
	Touch Type	Analog resistive film
	Resolution(Cell)	1024x768
	Touch Life	1 million times or more
Embedded Device	Front Camera	USB UVC Max. resolution: 640x480, 4 Adjustable angles: Up 20°, 10°, 0°, Down 10°
	Proximity Sensor	Yes
	Illumination Sensor	Yes
Structure	Panel Cut(mm)	306x247
	External Dimension(mm)	320x261x34.2
	Weight(kg)	0.82

ATEX MODEL

PROCESS UNIT

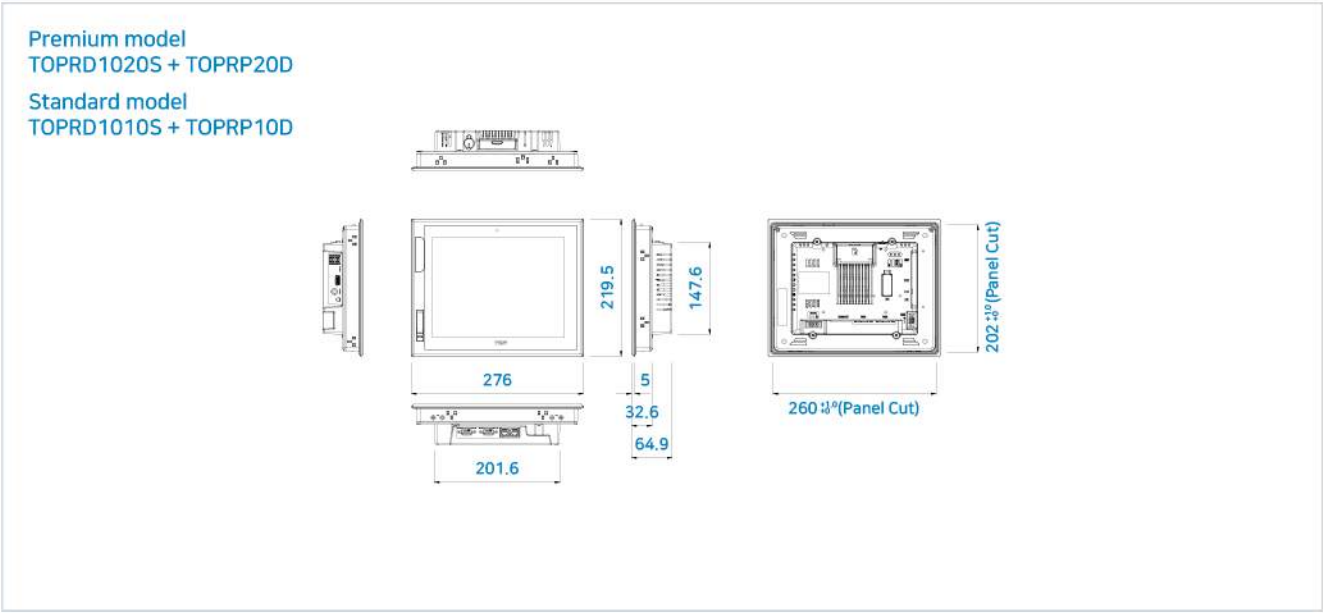
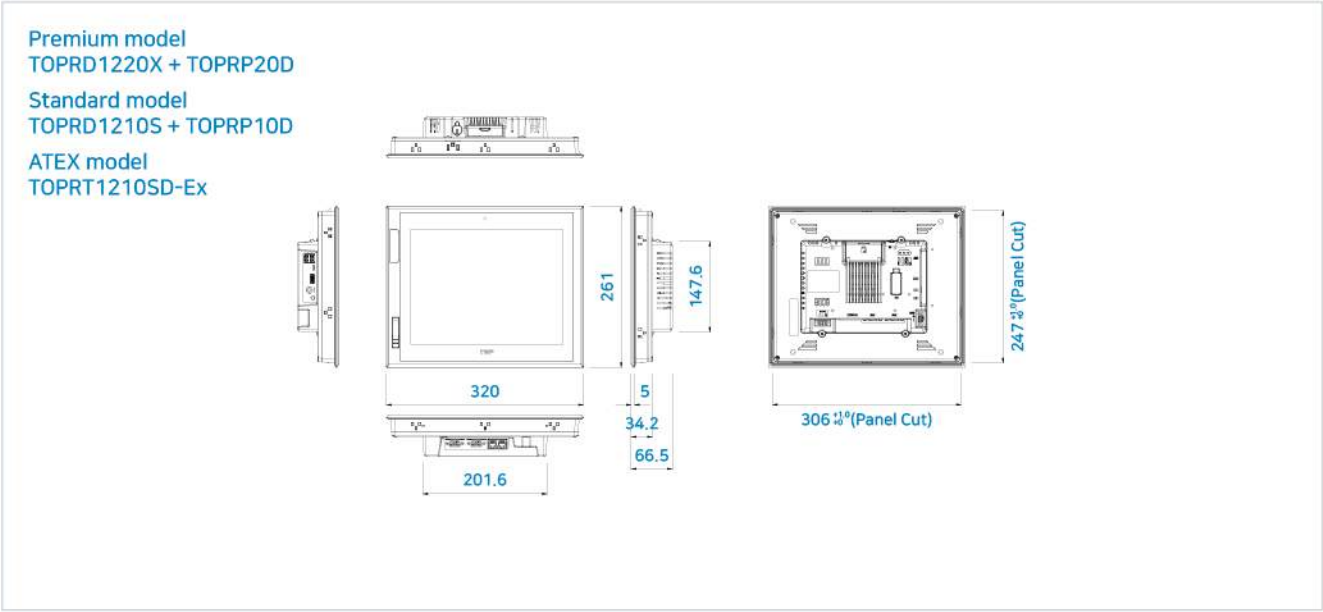
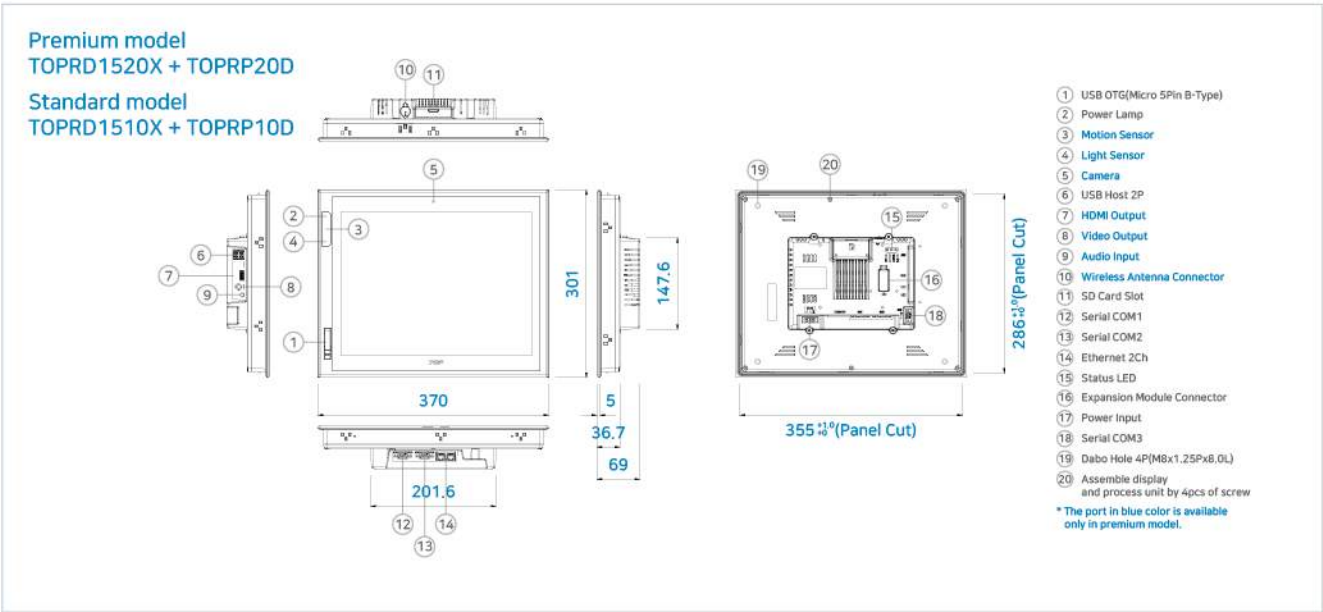
Functional		TOPRT1210SD-Ex
Interface	Serial COM1	RS-232C, RS-422/485 Asynchronous +5Vdc PWR Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1
	Serial COM2	RS-232C, RS-422/485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1
	Serial COM3	RS-485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connection: 3.5mm 3pin x 1
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 2
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 2
Memory & Others	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Micro-B(Front) x 1
	SD Card	SD Card Slot x 1, SDHC(Max. 32GB)
	Option Modules	EtherCAT, CAM32
	Printer	Roll Printer(EPSON protocol): RS-232C
	Screen Memory	128MB
Structure	Backup Memory	512KB: System Buffer(10K Word), Including Alarm/Logging/Recipe
	Backup Period	Permanent
	Real Time Clock	Built in
Structure	Status LED	3 LEDs(Power, Operation, Link) Built in
	External Dimension(mm)	201.6x147.6x37.3
	Weight(kg)	0.82

DISPLAY + PROCESS UNIT

Functional		TOPRT1210SD-Ex
Power	Input Voltage	24Vdc(20~28Vdc)
	Power Consumption	15W or less
	Voltage Sag	24Vdc, Within 10ms
	Insulation Resistance	500Vdc, 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)
Structure	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X,Y,Z each direction(for 3 times)
	Ground Connection	Class 3(100Ω or less)
	Protection Classification	IP65(Front) for CE/KC/UL, IP54(Front) for CCC, IP4X(Front) for KCs
	Certification	CE, KC, UL, KCs, CCC
Structure	Weight(kg)	3.26
	Cooling System	Natural air circulation
	Case Material	AL(Aluminum)

DRAWING

* Each inch model's blueprint size of premium model and standard model are same
* Each port's name and position are referred to 15 inch model's blueprint





The Series Developed TOPR's Function from
XTOP Products

Normal/EX Model

EMBEDDED HMI

SMART X HMI



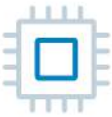
INTERFACE

SERIAL 3(2) PORTS | ETHERNET 2(1) CHANNEL | USB HOST | USB OTG | SD CARD
* 15", 12", 10", 8", 5" please check the number of ports by each model

CERTIFICATION



FEATURES



QUAD CORE CPU

Quad core processor supplying rapid processing speed



TOUCH DRAG FEATURE

Available touch drag to make a picture memo or scroll down to appear top-side menu



COMPATIBILITY WITH XTOP SERIES

Same panel cut size of XTOP series easy to replace discontinued XTOP model



FRONT-SIDE OTG USB

Supporting both HOST mode(USB devices i.e.Memory, barcode reader, camera, etc) and program transmission mode



16M FULL COLOR

Bright and vivid full color, supports vector image library



RRFIND INTEGRATED BODY

Refined integrated body with advantage of easy



SUPPORTING 2 ETHERNET CHANNELS

2 Ethernet channels with different IP (10" or upper model)



T6 TEMPERATURE LEVEL CERTIFICATION

Qualified for KCs(Korea), CCC(China) certification

TOPRX SPECIFICATIONS

Functional		General model	TOPRX 1500XD	TOPRX 1200XD	TOPRX 1200SD	TOPRX 1000SD	TOPRX 1000VD	TOPRX 0800SD	TOPRX 0800VD	TOPRX 0500VD	
		Explosion proof model	TOPRX 1500XD-Ex	TOPRX 1200XD-Ex	TOPRX 1200SD-Ex	TOPRX 1000SD-Ex	TOPRX 1000VD-Ex				
Display	Display Type	15" TFT Color	12.1" TFT Color	12.1" TFT Color	10.4" TFT Color	10.4" TFT Color	8.4" TFT Color	8.4" TFT Color	5.6" TFT Color		
	Color	16M Colors									
	Display Area(mm)	304.1x228.1	246x184.5	246x184.5	211.2x158.4	211.2x158.4	170.4x127.8	170.9x128.2	112.9x84.7		
	Resolution(dot)	1024x768	1024x768	800x600	800x600	640x480	800x600	640x480	640x480		
	Brightness Level	10 Levels(by software)									
	Backlight Type	LED									
Touch	Backlight Life	50,000 hours									
	Touch Type	Analog resistive film									
	Resolution(cell)	1024x768	1024x768	800x600	800x600	640x480	800x600	640x480	640x480		
	Touch Life	1 million times or more									
Interface	Serial COM1	RS-232C, RS-422/485 Asynchronous +5Vdc PWR Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1									
	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: 2400~115.2kbps Connector: DSUB 9pin x 1									
	Serial COM3	RS-485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: 3.5mm 3pin x 1						Not available			
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 2						IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 1			
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 1									
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Mini-B(Front) x 1									
	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)									
	Printer	Roll Printer(EPSON protocol): RS-232C									
	Memory & Others	Screen Memory	128MB								
		Backup Memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe								
Backup Period		Permanent									
Real Time Clock		Built in									
Status LED		3 LEDs(Power, Operation, Link) Built in									
Power	Input Voltage	24Vdc(20~28Vdc)									
	Power Consumption	18W or less	15W or less				12W or less				
	Voltage Sag	24Vdc, Within 10ms									
Environment	Insulation Resistance	500Vdc, 10MΩ									
	Operation Temperature(℃)	-10 ~ +50									
	Storage Temperature(℃)	-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)									
	Ground Connection	Class 3(100Ω under)									
Protection Classification	General model: IP65(Front), Explosion proof model: IP54(Front) for CCC, IP4X(Front) for KCs										
Structure	Certification	General model: CE, KC, UL Explosion proof model: CE, KC, UL, KCs, CCC, ATEX									
	Panel Cut(mm)	355x286	306x247	306x247	260x202	260x202	222x168	222x168	158x126		
	External Dimension(mm)	369x300x67.2	320x261x64.7	320x261x64.7	274x216x64.7	274x216x64.7	236x182x58.9	236x182x58.9	172x140x58		
	Weight(kg)	2.78	2.18	2.18	1.68	1.68	1.06	1.06	0.62		
	Cooling System	Natural air circulation									
	Case Material	PC(Resistance to flame)									

DRAWING

Standard model
TOPRX1500XD

EX model
TOPRX1500XD-Ex

369
300
6
67.2
355.4^{±0.5}(Panel Cut)
286.3^{±0.5}(Panel Cut)

① USB OTG(Mini 5Pin B-Type)
② USB Host 1P
③ Ethernet 2Ch
④ Serial COM2
⑤ Serial COM1
⑥ SD Card Slot
⑦ Status LED
⑧ Power Input
⑨ Serial COM3

Standard model
TOPRX1200XD
TOPRX1200SD

EX model
TOPRX1200XD-Ex
TOPRX1200SD-Ex

320
261
6
64.7
306.4^{±0.5}(Panel Cut)
247.3^{±0.5}(Panel Cut)

① USB OTG(Mini 5Pin B-Type)
② USB Host 1P
③ Ethernet 2Ch
④ Serial COM2
⑤ Serial COM1
⑥ SD Card Slot
⑦ Status LED
⑧ Power Input
⑨ Serial COM3

Standard model
TOPRX1000SD
TOPRX1000VD

EX model
TOPRX1000SD-Ex
TOPRX1000VD-Ex

274
216
6
64.7
260.3^{±0.5}(Panel Cut)
202.3^{±0.5}(Panel Cut)

① USB OTG(Mini 5Pin B-Type)
② USB Host 1P
③ Ethernet 2Ch
④ Serial COM2
⑤ Serial COM1
⑥ SD Card Slot
⑦ Status LED
⑧ Power Input
⑨ Serial COM3

Standard model
TOPRX0800SD
TOPRX0800VD

236
182
6
58.9
222.4^{±0.5}(Panel Cut)
168.3^{±0.5}(Panel Cut)

① USB OTG(Mini 5Pin B-Type)
② USB Host 1P
③ Ethernet 1Ch
④ Serial COM2
⑤ Serial COM1
⑥ SD Card Slot
⑦ Status LED
⑧ Power Input

Standard model
TOPRX0500VD

172
140
6
58
158.4^{±0.5}(Panel Cut)
126.3^{±0.5}(Panel Cut)

① USB OTG(Mini 5Pin B-Type)
② USB Host 1P
③ Ethernet 1Ch
④ Serial COM2
⑤ Serial COM1
⑥ SD Card Slot
⑦ Status LED
⑧ Power Input



With a Wider Screen
TOPRW Series

EMBEDDED HMI

SMART X HMI



INTERFACE

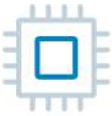
SERIAL 2 PORTS | ETHERNET 1 CHANNEL | **USB HOST** | USB OTG | SD CARD

* USB HOST functions is supported only in 10" and 7"

CERTIFICATION



FEATURES



QUAD CORE CPU

Quad core processor supplying rapid processing speed



16M FULL COLOR

Bright and vivid full color, supports vector image library



TOUCH DRAG FEATURE

Available touch drag to make a picture memo or scroll down to appear top-side menu



REFINED INTEGRATED BODY

Refined integrated body with advantage of easy



800x480 HIGH RESOLUTION

With 10", 7", 5" wide screen ratio, expansion of work-area available



COMPATIBILITY WITH XTOP SERIES

With same panel cut size of XTOP, easy to replace discontinued XTOP model



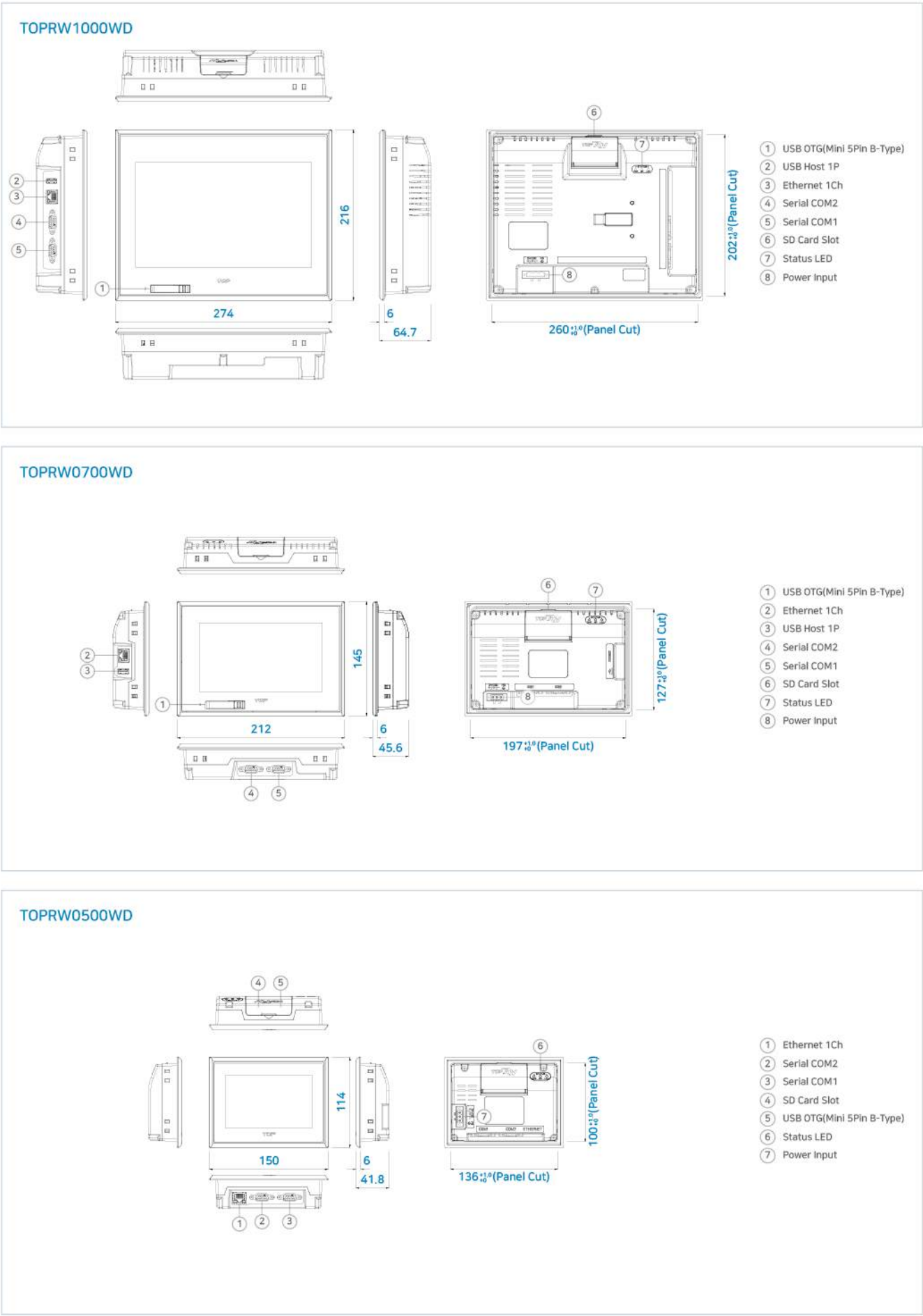
FRONT-SIDE OTG USB

Supporting both HOST mode(USB devices i.e.Memory, barcode reader, camera, etc) and program transmission mode

TOPRW SPECIFICATIONS

Functional		TOPRW1000WD	TOPRW0700WD	TOPRW0500WD
Display	Display Type	10.2" TFT Color	7" TFT Color	5" TFT Color
	Color		16M Colors	
	Display Area(mm)	222x132.48	154x86	108x64.8
	Resolution(dot)		800x480	
	Brightness Level		10 Levels(by software)	
	Backlight Type		LED	
Touch	Backlight Life		50,000 hours	
	Touch Type		Analog resistive film	
	Resolution(Cell)		800x480	
	Touch Life		1 million times or more	
Interface	Serial COM1	RS-232C Asynchronous +5Vdc PWR Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1		
	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: 2400~115.2kbps Connector: DSUB 9pin x 1		
	Ethernet	IEEE802.3/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 1		
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 1		Not available
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Mini-B(Front) x 1		
	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)		
	Printer	Roll Printer(EPSON protocol): RS-232C		
	Screen Memory	128MB		
	Backup Memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe		
	Backup Period	Permanent		
Memory & Others	Real Time Clock	Built in		
	Status LED	3 LEDs(Power, Operation, Link) Built in		
	Input Voltage	24Vdc(20~28Vdc)		
Power	Power Consumption	15W or less		12W or less
	Voltage Sag		24Vdc, Within 10ms	
Environment	Insulation Resistance	500Vdc, 10MΩ		
	Operation Temperature(℃)	-10 ~ +50		
	Storage Temperature(℃)	-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)		
	Ground Connection	Class 3(100Ω under)		
Structure	Protection Classification	IP65(Front)		
	Certification	CE, KC, UL		
	Panel Cut(mm)	260x202	197x127	136x100
	External Dimension(mm)	274x216x64.7	212x145x45.6	150x114x41.8
	Weight(kg)	1.7	0.72	0.4
	Cooling System	Natural air circulation		
	Case Material	PC(Resistance to flame)		

DRAWING





Integrated I/O HMI
with Flexible Composition and Control

TOPRW-IO Series

EMBEDDED HMI

SMART X HMI



INTERFACE

SERIAL 2 PORTS | ETHERNET 1 CHANNEL | USB HOST | USB OTG | SD CARD

CERTIFICATION



FEATURES



FLEXIBLE I/O SUPPORT

DIGITAL INPUT 16ch,
DIGITAL OUT SINK 16ch,
ANALOG INPUT(Voltage 2ch, current 2ch),
ANALOG OUTPUT(Voltage 2ch, current 2ch),
RTD 2ch



16M FULL COLOR

Bright and vivid full color,
supports vector image library



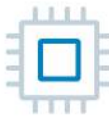
REFINED INTEGRATED BODY

Refined integrated body with advantage
of easy



COMPATIBILITY WITH XTOP SERIES

With same panel cut size of XTOP,
easy to replace discontinued XTOP model



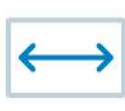
QUAD CORE CPU

Quad core processor supplying rapid
processing speed



TOUCH DRAG FEATURE

Available touch drag to make a picture
memo or scroll down to appear top-side
menu



800x480 HIGH RESOLUTION

With 7" wide screen ratio,
expansion of work-area available



FRONT-SIDE OTG USB

Supporting both HOST mode(USB devices
i.e.Memory, barcode reader, camera, etc)
and program transmission mode

TOPRW-IO SPECIFICATIONS

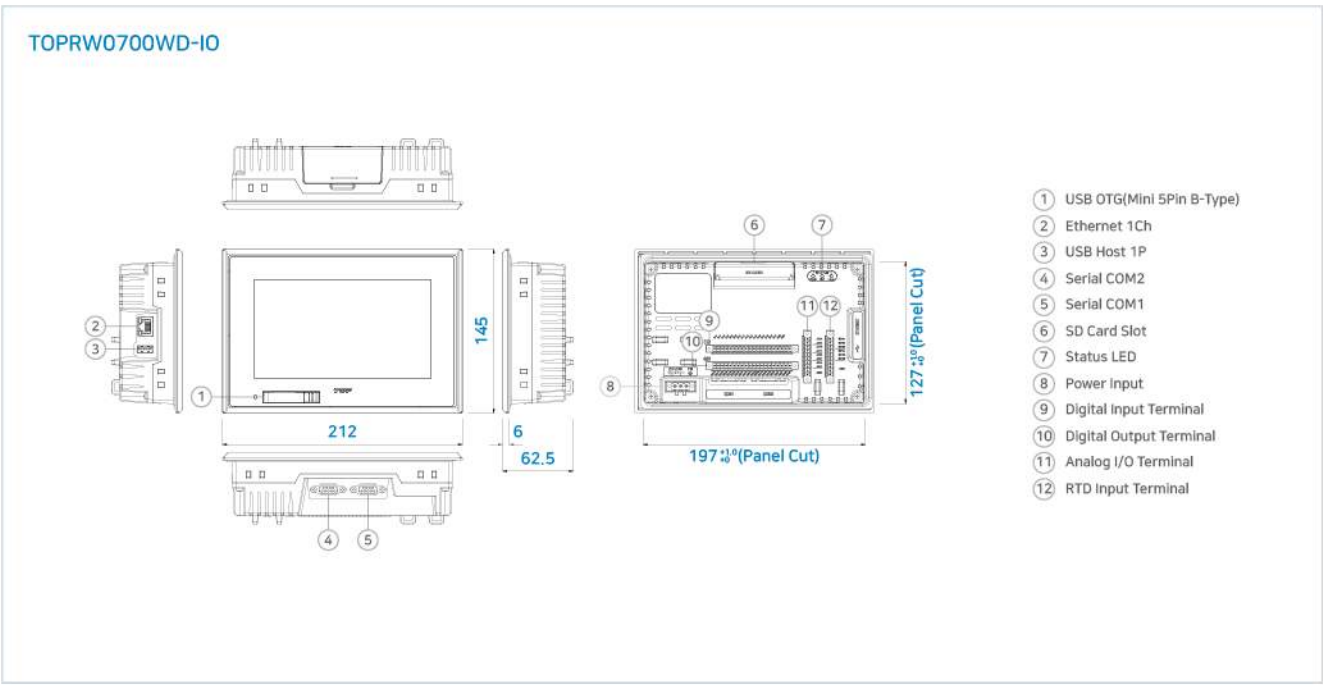
Functional		TOPRW0700WD-IO
Display	Display Type	7" TFT Color
	Color	16M Colors
	Display Area(mm)	154x86
	Resolution(dot)	800x480
	Brightness Level	10 Levels(by software)
	Backlight Type	LED
Touch	Backlight Life	50,000 hours
	Touch Type	Analog resistive film
	Resolution(Cell)	800x480
	Touch Life	1 million times or more
Interface	Serial COM1	RS-232C Asynchronous +5Vdc PWR Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1
	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: 2400~115.2kbps Connector: DSUB 9pin x 1
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 1
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 1
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Mini-B(Front) x 1
Memory & Others	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)
	Printer	Roll Printer(EPSON protocol): RS-232C
	Screen Memory	128MB
	Backup Memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe
	Backup Period	Permanent
	Real Time Clock	Built in
Power	Status LED	3 LEDs(Power, Operation, Link) Built in
	Input Voltage	24Vdc(20~28Vdc)
	Power Consumption	15W or less
	Voltage Sag	24Vdc, Within 10ms
	Insulation Resistance	500Vdc, 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: 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)
	Ground Connection	Class 3(100Ω under)
	Protection Classification	IP65(Front)
	Certification	CE, KC
	Panel Cut(mm)	197x127
Structure	External Dimension(mm)	212x145x62.5
	Weight(kg)	0.808
	Cooling System	Natural air circulation
	Case Material	PC(Resistance to flame)

TOPRW-IO SPECIFICATIONS

Functional		Digital Input	Digital Output
Type	Input/Output Type	16 channels Sink and Source Type	16 channels Sink Type
Power	Input/Output Voltage	24Vdc typ. On-State Min. 10.2Vdc ~ Max. 28.8Vdc, Off-State Max. 5Vdc	24Vdc typ. Min. 11.0Vdc ~ Max. 28.8Vdc, On-State Voltage Drop: Max. 0.3Vdc@25°C Off-State Leakage Current: Max. 50uA
			Max. 120mA
	System Power Dissipation	Max. 70mA	
	Input Current in On State	Max. 6mA/Channel@28.8Vdc	N/A
	Output Current in On State	N/A	Max. 0.5A/Channel@28.8Vdc
	Max. On-State Voltage Drop	N/A	Max. 0.3Vdc@25°C
Interface	Off-State Leakage Current	N/A	Max. 50uA
	Typ. Input Impedance	Typ. 4.7KΩ	N/A
	Input/Output Signal Delay	Off to On: Max. 0.1ms On to Off: Max. 0.5ms	Off to On: Max. 0.3ms On to Off: Max. 0.5ms
			N/A
	Input Filter(Digital)	0.5ms	
	Isolation	I/O to Logic: Photocoupler isolation	
Other	Field Power	Typ. 24Vdc(11.0Vdc ~ 28.8Vdc)	
	Wiring	AWG 26 to 20	
	Pin No.	Removable Terminal Block 20P	

Functional		Temperature Input	Analog Input (AIV)	Analog Input (AIC)	Analog Output (AOV)	Analog Output (AOC)
Type	Input / Output Type	2 Channels Analog RTD Type	2 Channels Analog Voltage Type	2 Channels Analog Current Type	2 Channels Analog Voltage Type	2 Channels Analog Current Type
Power	Sensor Type and Input / Output Range	PT100 * -200.0 to +850.0°C	0 ~ 5 Vdc	0 ~ 20mA	0 ~ 5 Vdc	0 ~ 20mA
	System Power Dissipation	Max. 70mA@5.0Vdc		Max. 200mA		
	Field power	N/A		Max. 60mA@24Vdc		
	Typ. Input Impedance	N/A	Min. 500KΩ	Max. 250Ω		N/A
	Load		N/A		Min. 5KΩ	Max. 350Ω
	Data Format			16bits Integer		
Characteristic	Resolution	0.0312°C/1bit	16bits, 0.076mV/1bit	16bits, 0.3uA/Bit	16bits, 0.076mV/1bit	16bits, 0.3uA/Bit
	Conversion Time	Approx. 70ms, All Channel@50Hz		4ms/All Channel		
	Module Error			±0.1% Full Scale@+25°C, ±0.3% Full Scale@0°C, +60°C		
	Isolation			Capacitive isolation		
	Common Type	2COM (1 Common/1 Channel)		2 COM(Single Common)		
	Wiring			AWG 26 to 20		
Other	Pin No.			Removable Terminal Block 10P(3.5mm pitch)		

DRAWING





Compact Size, Light and Convenient

TOPRE Series

EMBEDDED HMI

SMART X HMI



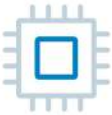
INTERFACE

SERIAL 1 PORT | ETHERNET 1 CHANNEL | USB OTG | SD CARD

CERTIFICATION



FEATURES



QUAD CORE CPU

Quad core processor supplying rapid processing speed



16M FULL COLOR

Bright and vivid full color, supports vector image library



TOUCH DRAG FEATURE

Available touch drag to make a picture memo or scroll down to appear top-side menu



REFINED INTEGRATED BODY

Refined integrated body with advantage of easy



4.3" COMPACT SIZE

Powerful performance with compact size



FRONT-SIDE OTG USB

Supporting both HOST mode(USB devices i.e.Memory, barcode reader, camera, etc) and program transmission mode

TOPRE SPECIFICATIONS

Functional		TOPRE0400WD	
Display	Display Type	4.3" TFT Color	
	Color	16M Colors	
	Display Area(mm)	95.04x53.85	
	Resolution(dot)	480x272	
	Brightness Level	10 Levels(by software)	
	Backlight Type	LED	
Touch	Backlight Life	50,000 hours	
	Touch Type	Analog resistance film	
	Resolution(Cell)	480x272	
	Touch Life	1 million times or more	
Interface	Serial COM1 (RS-232C Only)	RS-232C, RS-422/485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1	
	Serial COM2 (RS-422/485 Only)	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 1 NE(No Ethernet) model: cannot support Ethernet interface	
	Ethernet	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Mini-B(Side) x 1	
	USB OTG	SD Card Slot x 1, SDHC(MAX 32GB)	
	SD Card	Roll Printer(EPSON protocol): RS-232C	
	Printer	64MB	
Memory & Others	Screen Memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe	
	Backup Memory	Permanent	
	Backup Period	Built in	
	Real Time Clock	3 LEDs(Power, Operation, Link) Built in	
Power	Status LED	Input Voltage	24Vdc(20~28Vdc)
	Input Voltage	Power Consumption	12W or less
	Power Consumption	Voltage Sag	24Vdc, Within 10ms
	Voltage Sag	Insulation Resistance	500Vdc, 10MΩ
Environment	Insulation Resistance	Operation Temperature(℃)	-10 ~ +50
	Operation Temperature(℃)	Storage Temperature(℃)	-20 ~ +60
	Storage Temperature(℃)	Operation Humidity(%RH)	0 ~ 90(No dew)
	Operation Humidity(%RH)	Atmosphere	No corrosive gas
	Atmosphere	Vibration Endurance	Amplitude: 10sF < 25Hz(2G) X,Y,Z each direction(for 30 minutes)
	Vibration Endurance	Noise Immunity	1000Vp-p(Pulse width 1μs)
	Noise Immunity	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV
	Static Electricity Discharge	Shock Endurance	10G X,Y,Z each direction(for 3 times)
	Shock Endurance	Ground Connection	Class 3(100Ω under)
	Ground Connection	Protection Classification	IP65(Front)
Structure	Certification	CE, KC, UL	
	Panel Cut(mm)	121 x 95	
	External Dimension(mm)	128.6 x 102.6 x 38	
	Weight(kg)	0.28	
	Cooling System	Natural air circulation	
	Case Material	PC(Resistance to flame)	

DRAWING

TOPRE0400WD

The drawing includes three views of the TOPRE0400WD HMI:

- Front View:** Shows the 4.3" TFT display with a width of 128.6 mm and a height of 102.6 mm. Below the display is a control panel with callouts 1, 2, 3, 4, and 5.
- Side View:** Shows the device's profile with a total height of 38 mm and a mounting bracket height of 5.9 mm.
- Panel Cut View:** Shows the internal layout with a width of 121 mm and a height of 95 mm (labeled as 95±0.5 (Panel Cut)).

Callout Legend:

- ① USB OTG(Mini 5Pin B-Type)
- ② SD Card Slot
- ③ Ethernet 1Ch
- ④ Serial COM1/COM2
- ⑤ Power Input



Wireless Handy Type with Egronomic Designed
Hand Grip

TOPRH Wireless Model

EMBEDDED HMI

SMART X HMI



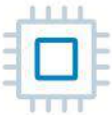
INTERFACE

WIFI | USB HOST 2 PORTS | USB OTG | SD CARD

CERTIFICATION



FEATURES



QUAD CORE CPU

Quad core processor supplying rapid processing speed



16M FULL COLOR

Bright and vivid full color, supports vector image library



HIGH PERFORMANCE WIRELESS CHIP

Wireless control features extended control distance



ERGONOMIC AND REFINED DESIGN

Stable and comfortable grip



KEY LOCK/3 POSITION SWITCH /FUNCTION KEYS/TOUCH PENCIL

6 Function keys including LED light, and touch pencil to easy operation



SHOCK PREVENTING BUMPER

Solid body and added silicon bumper for safer use



TOUCH DRAG FEATURE

Available touch drag to make a picture memo or scroll down to appear top-side menu



SUPPORT HIGH RESOLUTION

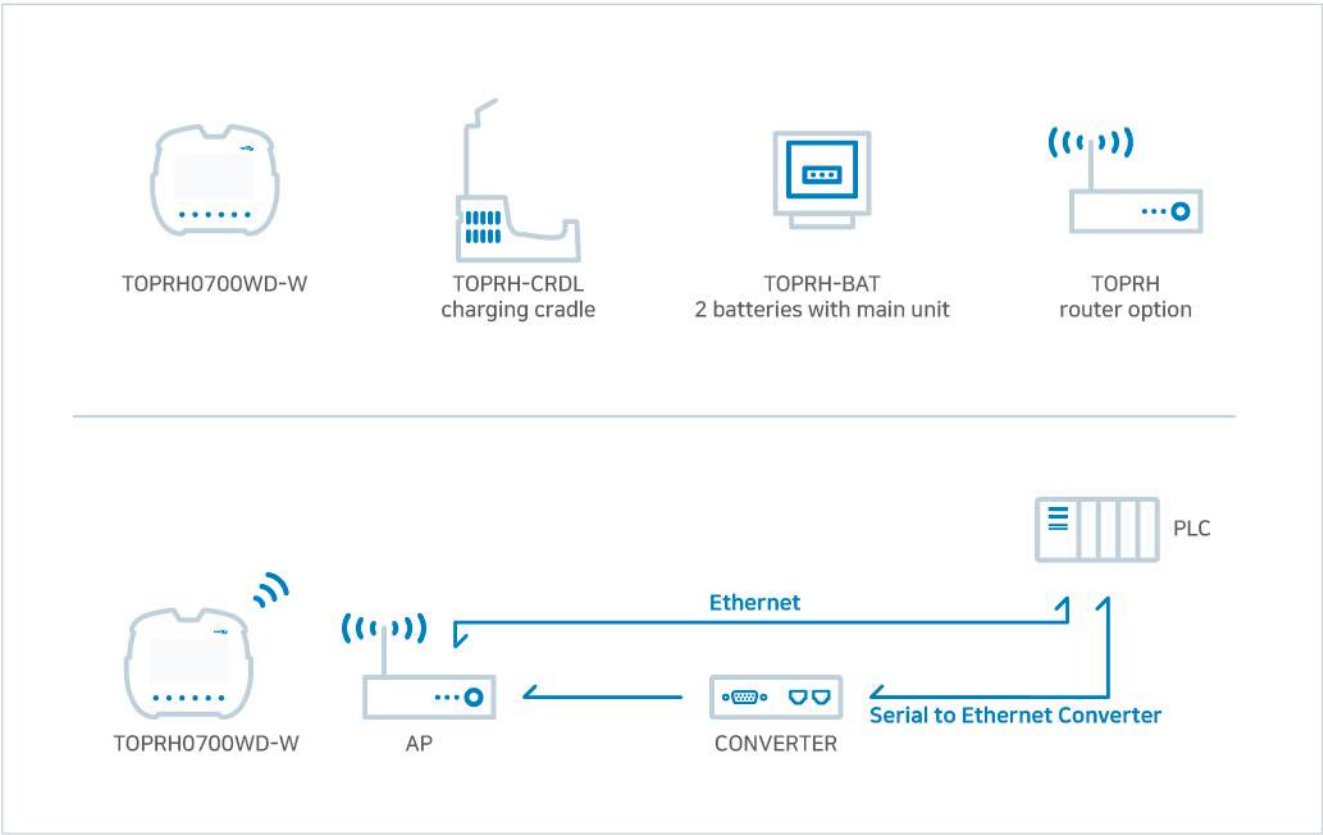
Support 1024x600 high resolution screen

TOPRH WIRELESS / CHARGING CRADLE SPECIFICATIONS

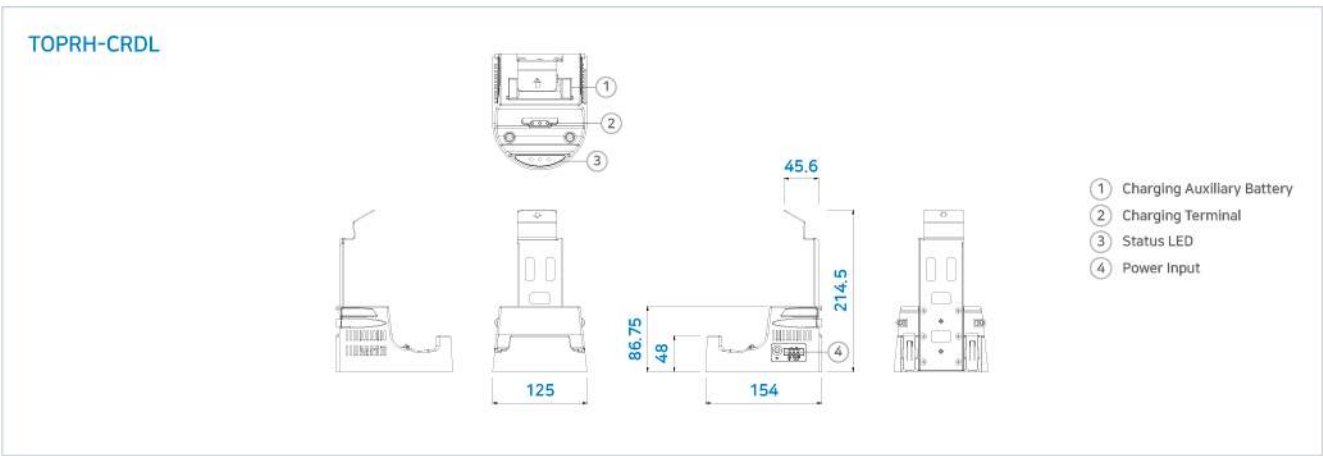
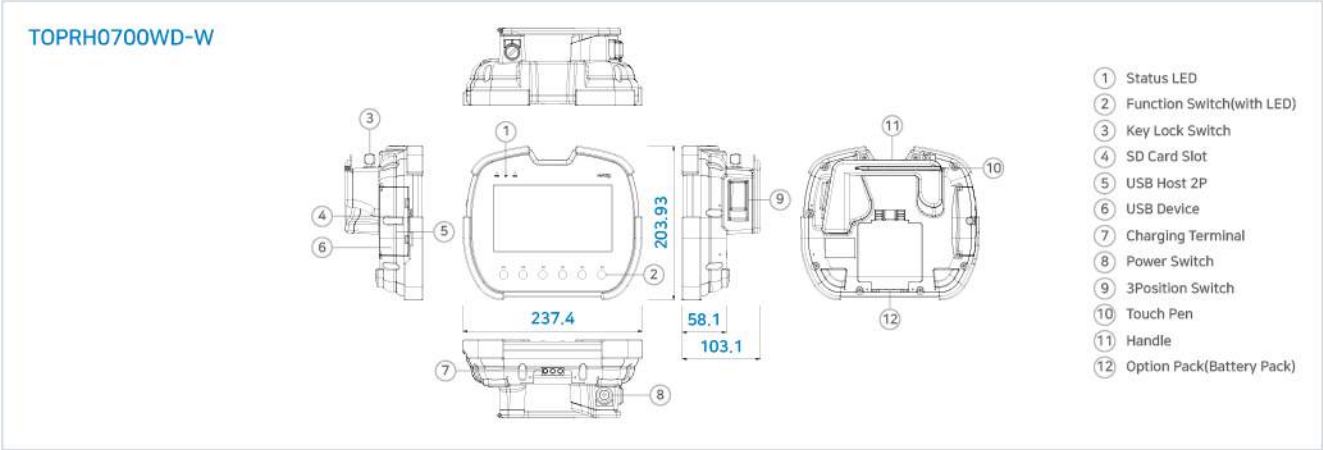
Functional		TOPRH0700WD-W
Display	Display Type	7" TFT Color
	Color	16M Colors
	Display Area(mm)	154.21x85.92
	Resolution(dot)	1024x600
	Brightness Level	10 Levels(by software)
	Backlight Type	LED
Touch	Backlight Life	50,000 hours
	Touch Type	Analog resistive film
	Resolution(Cell)	1024x600
	Touch Life	1 million times or more
Wireless LAN	2.4G:	2.4000GHz ~ 2.4835GHz
	5G:	5.150GHz ~ 5.725GHz
	WLAN Standard:	IEEE802.11 a/b/g/n
	Operation Range	Up to 150meters in open space
Interface	Security:	WEP, TKIP, AES, WPA, WPA2
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 2
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Mini-B x 1
	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)
Memory & Others	Function Key	6Position with LED
	Machanical Switchs	Keylock Switch 1A, 3Position enable Switch OFF-ON-OFF(1CH)
	Power Switch	Push-Push power on-off switch built in
	Screen Memory	128MB
	Backup Memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe
	Backup Period	Permanent
	Real Time Clock	Built in
	Status LED	3 LEDs(Power, Operation, Link) Built in
Battery	Rechargeable & Extractable Battery Pack	2S-2P Li-ion 4Cells 7.2Vdc 6800mAh Charging time 3 hours(Non-operating) Running time: 7 hours with wireless communication
Power	Consumption	20W or less(In Battery Pack)
	Operation Temperature(°C)	+10 ~ +45
	Storage Temperature(°C)	-20 ~ +60
	Operation Humidity(%RH)	0 ~ 90(No dew)
Environment	Atmosphere	No corrosive gas
	Vibration Endurance	Amplitude: 10sF<25Hz(2G) X,Y,Z each direction(for 30 minutes)
	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X,Y,Z each direction(for 3 times)
Structure	Protection Classification	IP65
	Certification	CE, KC, UL
	External Dimension(mm)	237x205x103
	Weight(kg)	1.32(Including Battery Pack)
	Cooling System	Natural air circulation
	Case Material	PC(Resistance to flame)

Functional		TOPRH-CRDL
Power	Input Voltage	24Vdc(18~26Vdc)
	Output Voltage	8.4Vdc 5.7A
	Power Consumption	60W or less(with Main Body + Extra Battery Pack)
	Voltage Sag	24Vdc, Within 10ms
	Insulation Resistance	500Vdc, 10MΩ
Environment	Status LED	3 LEDs(Main Battery Pack, Power, Sub Battery Pack) Built in
	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)
	Ground Connection	Class 3(100Ω under)
	Certification	CE, KC
	External Dimension(mm)	214.5x125x154
	Weight(kg)	0.6
	Cooling System	Natural air circulation
	Case Material	PC(Resistance to flame)

PRODUCT COMPOSITION



DRAWING





Wired Handy Type with Egronomic Designed
Hand Grip

TOPRH Wired Series

EMBEDDED HMI

SMART X HMI



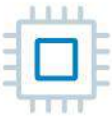
INTERFACE

SERIAL 2 PORTS | ETHERNET 1 CHANNEL | USB HOST 2 PORTS | USB OTG | SD CARD

CERTIFICATION



FEATURES



QUAD CORE CPU

Quad core processor supplying rapid processing speed



16M FULL COLOR

Bright and vivid full color, supports vector image library



ERGONOMIC AND REFINED DESIGN

Stable and comfortable grip



KEY LOCK/EMERGENCY /3 POSITION SWITCH

Safe use with KEY lock/Emergency /3 Position switch



FUNCTION KEY, TOUCH PENCIL

6 Function keys including LED light, and touch pencil to easy operation



SHOCK PREVENTING BUMPER

Solid body and added silicon bumper for safer use



TOUCH DRAG FEATURE

Available touch drag to make a picture memo or scroll down to appear top-side menu



SUPPORT HIGH RESOLUTION

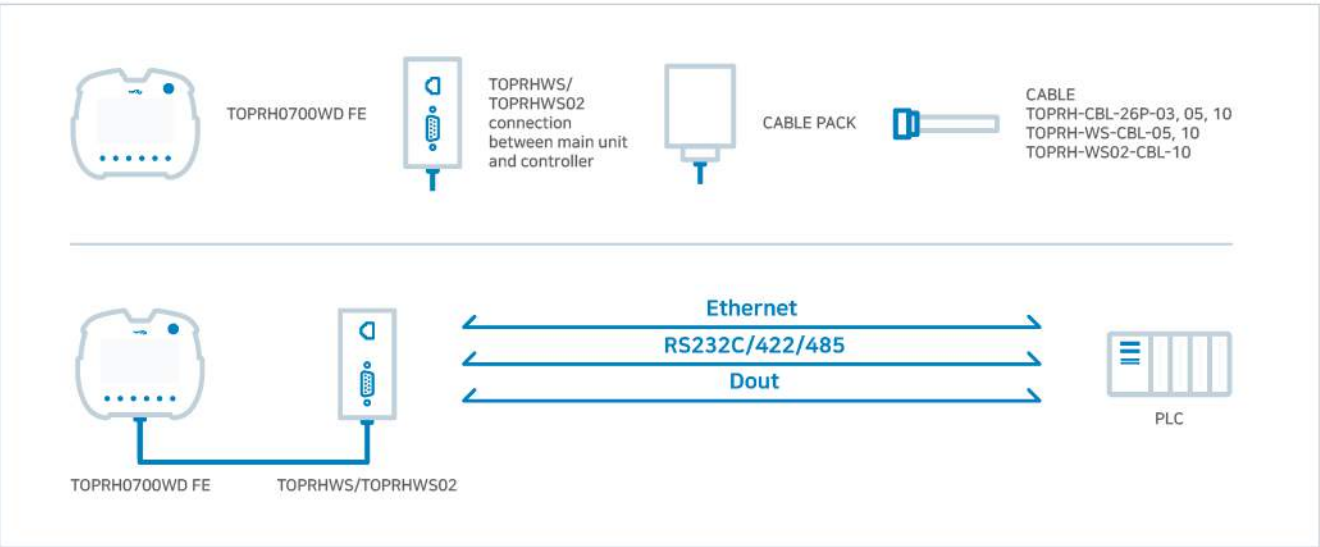
Support 1024x600 high resolution screen

TOPRH WIRED / TOPRHWS SPECIFICATIONS

Functional		TOPRH0700WD FE
Display	Display Type	7" TFT Color
	Color	16M Colors
	Display Area(mm)	154.21x85.92
	Resolution(dot)	1024x600
	Brightness Level	10 Levels(by software)
	Backlight Type	LED
Touch	Backlight Life	50,000 hours
	Touch Type	Analog resistive film
	Resolution(Cell)	1024x600
	Touch Life	1 million times or more
Interface	Serial COM1	RS-232C, RS-422/485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even, Baud rate: 2400~115.2kbps
	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: 2400~115.2kbps
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 2
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Mini-B x 1
	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)
	Function Key	6Position with LED
	Printer	Roll Printer(EPSON protocol): RS-232C
	Machanical Switchs	Emergency Switch 1A-2B, Keylock Switch 1A, 3Position enable Switch OFF-ON-OFF(2CH)
	Power Switch	Push-Push power on-off switch built in
Memory & Others	Screen Memory	128MB
	Backup Memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe
	Backup Period	Permanent
	Real Time Clock	Built in
Power	Status LED	3 LEDs(Power, Operation, Link) Built in
	Consumption	20W or less
	Voltage Sag	24Vdc, Within 10ms
	Insulation Resistance	500Vdc, 10MΩ
Environment	Operation Temperature(℃)	-10 ~ +45
	Storage Temperature(℃)	-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)
	Ground Connection	Class 3(100Ω under)
	Protection Classification	IP65
Structure	Certification	CE, KC
	External Dimension(mm)	237x205x103
	Weight(kg)	1.1(Except Cable Pack)
	Cooling System	Natural air circulation
	Case Material	PC(Resistance to flame)

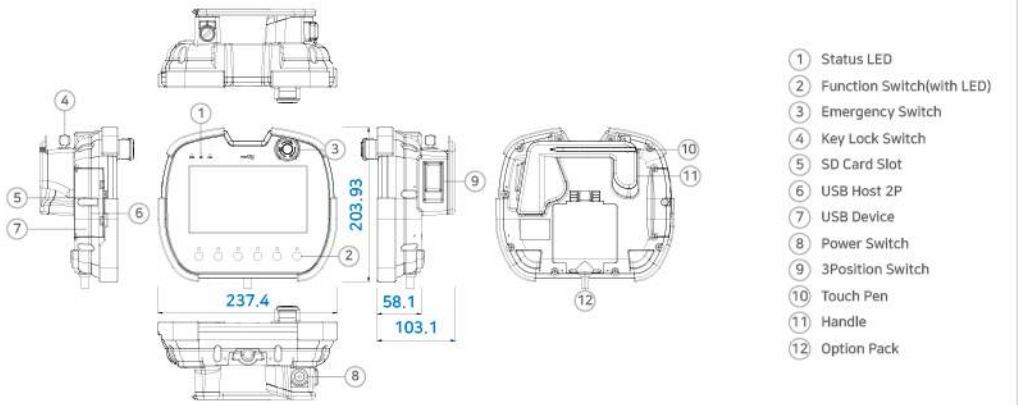
Functional		TOPRHWS	TOPRHWS02
Interface	Serial COM1	RS-232C, RS-422/485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps, Connector: DSUB 9pin x 1	
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX, Connector: RJ-45 x 1	
	Power Switch	Push-Push power on-off switch built in	
	26P Connector	To TOPRH, SRC6A21-26P	To TOPRH, 1981919-1 or 1981921-1
	Function Connector	Emergency Switch 1A-2B, Keylock Switch 1A, 3Position enable Switch OFF-ON-OFF(2CH), DOUT(6CH)	
	Input Voltage	24Vdc(20~28Vdc)	
Power	Power Consumption	20W or less	
	Voltage Sag	24Vdc, Within 10ms	
	Insulation Resistance	500Vdc, 10MΩ	
	Operation Temperature(℃)	-10 ~ +50	
Environment	Storage Temperature(℃)	-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)	
	Ground Connection	Class 3(100Ω under)	
Structure	Certification	CE, KC	
	External Dimension(mm)	145x119x54	148x119x54
	Weight(kg)	0.3	
	Cooling System	Natural air circulation	
	Case Material	PC(Resistance to flame)	

PRODUCT COMPOSITION

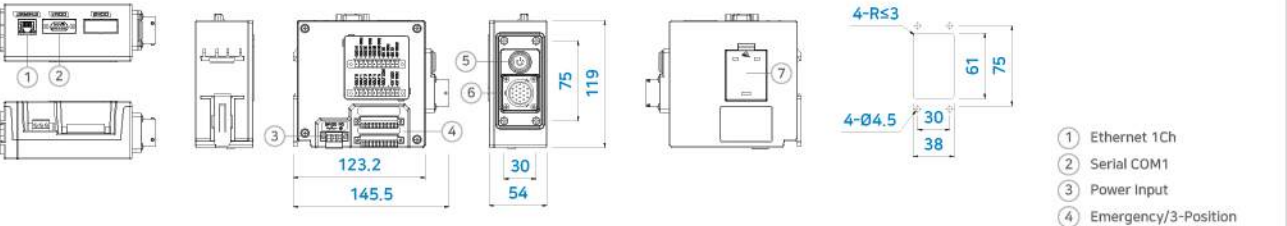


DRAWING

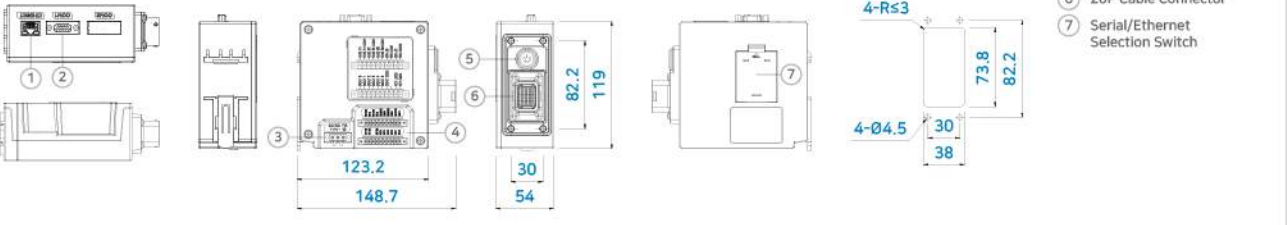
TOPRH0700WD FE



TOPRHWS



TOPRHWS02





Miniaturized New Form Factor,
Smaller and Simple

TOPRP Series

BOX HMI

SMART X HMI



Model: TOPRP1000D

INTERFACE

SERIAL 2 PORTS | ETHERNET 2 CHANNEL | USB HOST 2 PORTS | USB OTG | SD CARD | HDMI OUT

CERTIFICATION



FEATURES



MINIATURIZED BODY FRAME

Small size able to install in a minimum space



STANDARD DIN RAIL
/VESA HALL SUPPORTED

Easy installation by standard DIN rail
simple assemble with monitors by standard
VESA bracket(*Option)



HDMI OUTPUT

Connecting with variable monitors by HDMI
M2I Touch Monitor will be launched



COMPATIBILITY WITH TOP SERIES

Quad core cpu supplying rapid processing
speed
Same menu and instructions as TOP series



SUPPORTING ETHERNET 2 CHANNELS

2 Ethernet channels with different IP
VNC(Remote Monitor/Control)
Function Support



SUPPORTING SERIAL 2 PORTS

COM1/COM2 DSUB 9pin
RS-232C, RS-422/485 support



SUPPORTING USB HOST 2 PORTS

Connecting mouse, keyboard, USB memory,
barcode scanner etc.



OTG USB

Mode switch between transmission mode
(Program transfer) and host mode
(Connecting USB devices as mouse,
keyboard, USB memory, barcode scanner
etc.)

TOPRP SPECIFICATIONS

Functional		TOPRP1000D
Interface	Serial COM1	RS-232C, RS-422/485 Asynchronous +5Vdc PWR Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: DSUB 9pin x 1
	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: 2400~115.2kbps Connector: DSUB 9pin x 1
	Ethernet	IEEE802.3/IEEE802.3u, 10BASE-T/100BASE-TX Connector: RJ-45 x 2
	USB Host	USB 2.0 Compatible, Output 5Vdc/0.5A Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Type A x 2
	USB OTG	USB 2.0 Compatible, Output 5Vdc/0.5A, Max 3m Support: USB Storage, USB Barcode Scanner(Standard Keyboard Protocol) Connector: USB Mini-B(Front) x 1
	SD Card	SD Card Slot x 1, SDHC(MAX 32GB)
	HDMI Output	HDMI v1.4, HDMI Output, Max. Resolution: 1280x720 at 60Hz Connector: HDMI x 1
	Printer	Roll Printer(EPSON protocol): RS-232C
	Screen Memory	128MB
	Backup Memory	512KB: System buffer(10K Word), Including Alarm/Logging/Recipe
Memory & Others	Backup Period	Permanent
	Real Time Clock	Built in
	Status LED	3 LEDs(Power, Operation, SD Card) Built in
Power	Input Voltage	24Vdc(20~28Vdc)
	Power Consumption	10W or less
	Voltage Sag	24Vdc, Within 10ms
	Insulation Resistance	500Vdc, 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)
	Electrostatic Discharge	Connective discharge from EN61000-4-2: ±4kV
	Shock Endurance	10G X,Y,Z each direction(for 3 times)
	Ground Connection	Class 3(100Ω or less)
	Protection Classification	IP20
Structure	Certification	CE, KC
	External Dimension(mm)	128.9x131.2x29.2
	Weight(kg)	0.23
	Installation Method	Standard DIN Rail(35mm), VESA
	Cooling System	Natural air circulation
	Case Material	PC(Resistance to flame)

DRAWING

