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제품을 작동하기 전에 반드시 매뉴얼을 읽어보십시오.

M2 Corporation
Man · Machine · Interface

TOP RT / RC SERIES



(주)엠투아이코퍼레이션

본사 주소: 경기도 안양시 동안구 시민대로327번길 11-35 (14055)
전화번호: 031-465-3366
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기술상담 안내 전화번호: 031-465-3366(2)

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남부영업소 주소: 대구광역시 북구 유통단지로 50 (산격동) 크리스탈 B/D 402호, 406호 (41518)
전화번호: 053-604-6166

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TOP RT / RC SERIES

Product Catalog

www.m2i.co.kr

TOPRT | RC SERIES

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TOPRT40 SERIES

방폭/비방폭 프리미엄 HMI

인터페이스

- 전면
- 카메라
- USB OTG
- USB HOST
- 자동 밝기 센서
- IrDA 센서
- 근접 센서
- 후면
- 시리얼 3포트
- 이더넷 2채널
- 3.0 USB HOST 2포트
- SD 카드
- 옵션 모듈(CAM32)



TOPRT40

특장점



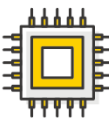
T6 온도 등급 방폭 인증

KCs, ATEX, IECEx, Hazloc 방폭 인증 획득



전면 카메라 내장

각도 조절 광각 카메라 내장
전면 카메라 유무 선택 가능
(미포함 모델: TOPRT□□40-Ex 01)



더 강력해진 CPU

TOPRT1210SD-Ex 모델 대비 2배 빠른 속도 지원



근접 센서 / 자동 밝기 센서 제공

작업 거리에 따라 모드 전환이 가능한 근접 센서 내장
화면의 밝기를 조절하는 자동 밝기 센서 내장



알루미늄 프레임

강력한 내구성과 고급스러운 디자인을 갖춘
알루미늄 프레임



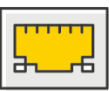
IrDA(적외선) 센서 내장

자사 바코드 스캐너와 무선 통신
0.5M 내 자동 인식



3.0 USB 포트 제공

후면 3.0 USB HOST 2포트 제공
전면 2.0 USB OTG, HOST 포트 제공



시리얼 / 이더넷 인터페이스

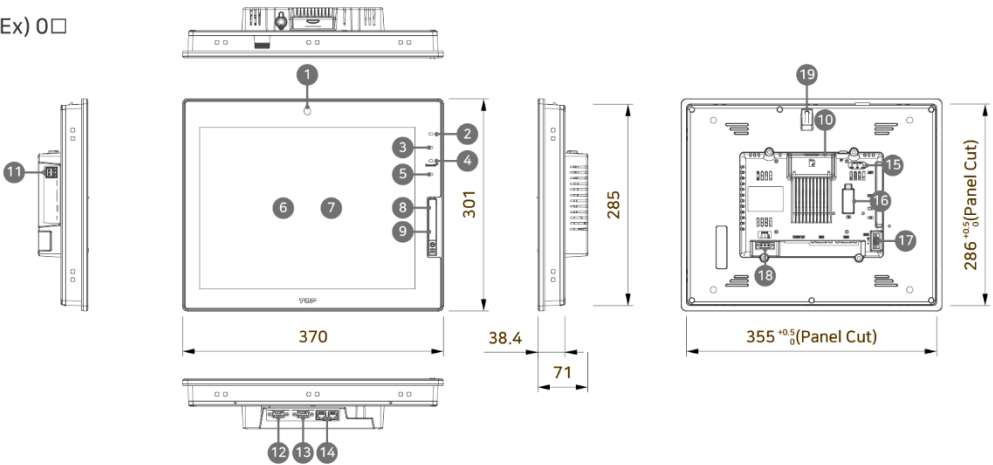
COM1/COM2/COM3 시리얼 3포트 제공
서로 다른 IP를 가진 이더넷 2채널 네트워크 지원

TOPRT40 SPECIFICATIONS

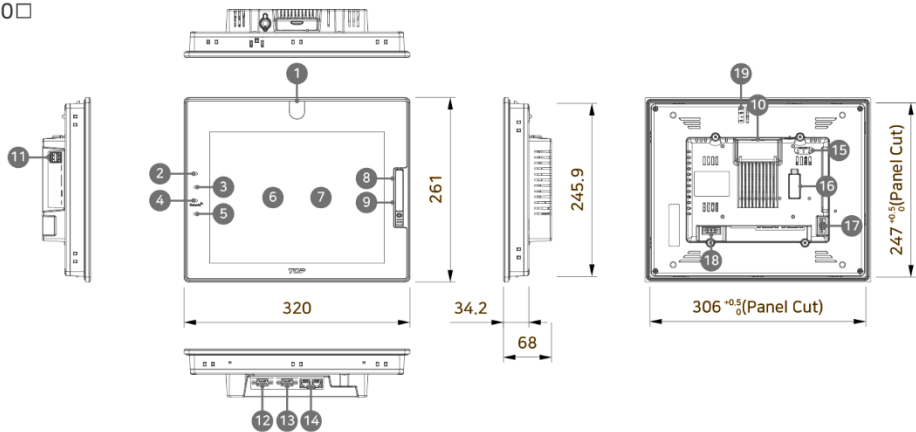
Functional		TOPRT1540XD(-Ex) 0□	TOPRT1240XD(-Ex) 0□	TOPRT1040SD(-Ex) 0□
Display	Display Type	15" TFT Color	12.1" TFT Color	10.4" TFT Color
	Color		16M Colors	
	Display Area(mm)	304.1 x 228.1	246 x 184.5	211.2 x 158.4
	Resolution(dot)	1024 x 768		800 x 600
	Brightness Level	10 Levels(by Software)		
	Backlight Type	LED		
	Backlight Life	50,000 hours		
Touch	Touch Type	Analog Resistive Film		
	Resolution(Cell)	1024 x 768		800 x 600
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		
Interface	Ethernet	IEEE802.3i/IEEE802.3u/IEEE802.3ab, 10BASE-T/100BASE-TX/1000BASE-T Connector: RJ-45 x 2		
	USB Host	USB 3.0 compatible, Output 5Vdc/0.9A, USB 2.0 compatible, Output 5Vdc/0.5A Support: USB storage, USB barcode scanner(Standard keyboard protocol) Connector: USB Type A x 3(Rear(USB 3.0) x 2, Front(USB 2.0) 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		
	IrDA	Compliant to IrDA physical layer standard up to 115.2 kbit/s (SIR), Range up to 0.7M in open space *Dedicated use of M2I HMI Equipment		
SD Card		-	SD Card Slot x 1, SDHC(Max. 32GB)	-
Option Modules		CAM32		
Front Camera		USB UVC Max. Resolution: 640 x 480, 4 Adjustable Angles: Up20°, 10°, 0°, Down10°		USB UVC Max. Resolution: 640 x 480
Proximity Sensor		YES		
Illumination Sensor		YES		
Printer		Roll Printer(EPSON protocol)		
Screen Memory		128MB		
Memory & Others	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	20 ~ 28Vdc		
	Power Consumption	18W		
	Voltage Sag	25W	24Vdc, Within 10ms	15W
	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	IP54(Front)		
	Certification(On Progress)	General Model: CE, KC, UL/cUL Explosion Proof Model: CE, KC, KCs, CCC, IECEx/ATEX, UL/cUL in Hazloc		
Structure	Panel Cut(mm)	355 x 286	306 x 247	260 x 202
	External Dimension(mm)	370 x 301 x 71	320 x 261 x 68	275 x 217 x 68
	Weight(kg)	5.2	3.6	2.7
	Cooling System	Natural Air Circulation		
	Case Material	Aluminum		

DRAWING

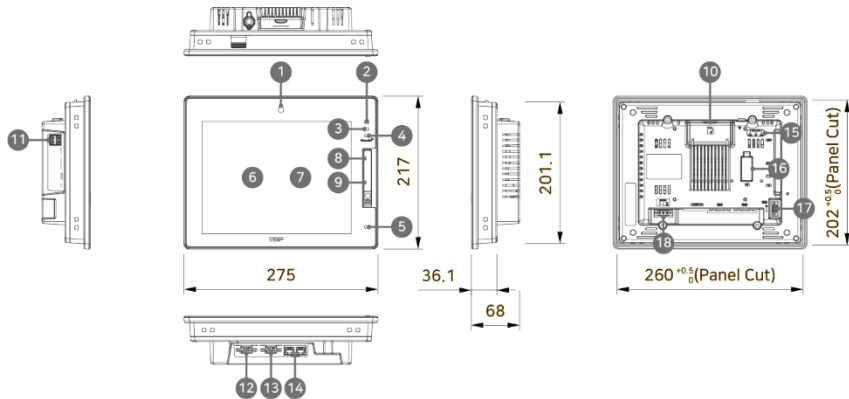
TOPRT1540XD(-Ex) 0□



TOPRT1240XD(-Ex) 0□



TOPRT1040SD(-Ex) 0□



- 1

Camera
- 2

Power LED
- 3

Illumination Sensor
- 4

IrDA Sensor
- 5

Proximity Sensor

6

LCD Panel

7

Touch Panel

8

USB OTG

9

USB Host

10

SD Card Slot

11

USB Host 2P

12

Serial COM2

13

Serial COM1

14

Ethernet 2Ch

15

Status LED

16

Expansion Module Connector

17

Serial COM3

18

Power Input

19

Camera Angle Adjustment Lever

TOPRT WIDE SERIES

방폭/비방폭 프리미엄 WIDE HMI

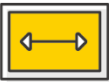
인터페이스

- 전면
- USB OTG ■ USB HOST ■ 카메라 ■ 근접 센서 ■ IrDA 센서
- 후면
- 시리얼 3포트 ■ 이더넷 2채널 ■ 3.0 USB HOST 2포트 ■ WiFi ■ Bluetooth
-
- HDMI ■ AUDIO ■ SD 카드 ■ 옵션 모듈(CAM32)



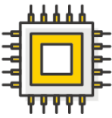
TOPRT WIDE

특장점



선명한 WIDE 화면

16:9 WIDE 1366 x 768 고해상도 화면
선명하고 튼튼한 정전용량 터치 센서 적용
충격 내구성 IK07 등급 강화 유리 적용



더 강력해진 CPU

TOPRT1210SD-Ex 모델 대비 2배 빠른 속도 지원



전면 카메라 내장

각도 조절 광각 카메라 내장



무선 강화

WiFi 2.4G/5G 제공
자사 바코드 스캐너와 Bluetooth/IrDA 무선 통신
* [TOPRT□□50WD(-Ex) 01] 옵션 모델은
무선 기능(Wi-Fi, Bluetooth, IrDA)을 지원하지 않습니다.



T6 온도 등급 방폭 인증

ATEX, IECEx, Hazloc 방폭 인증 진행 중



견고한 프레임

강력한 내구성을 갖춘 전면 알루미늄 프레임
베젤을 최소화한 세련된 디자인



3.0 USB 포트 제공

후면 3.0 USB HOST 2포트 제공
전면 2.0 USB OTG, HOST 포트 제공



시리얼 / 이더넷 인터페이스

COM1/COM2/COM3 시리얼 3포트 제공
서로 다른 IP를 가진 이더넷 2채널 네트워크 지원

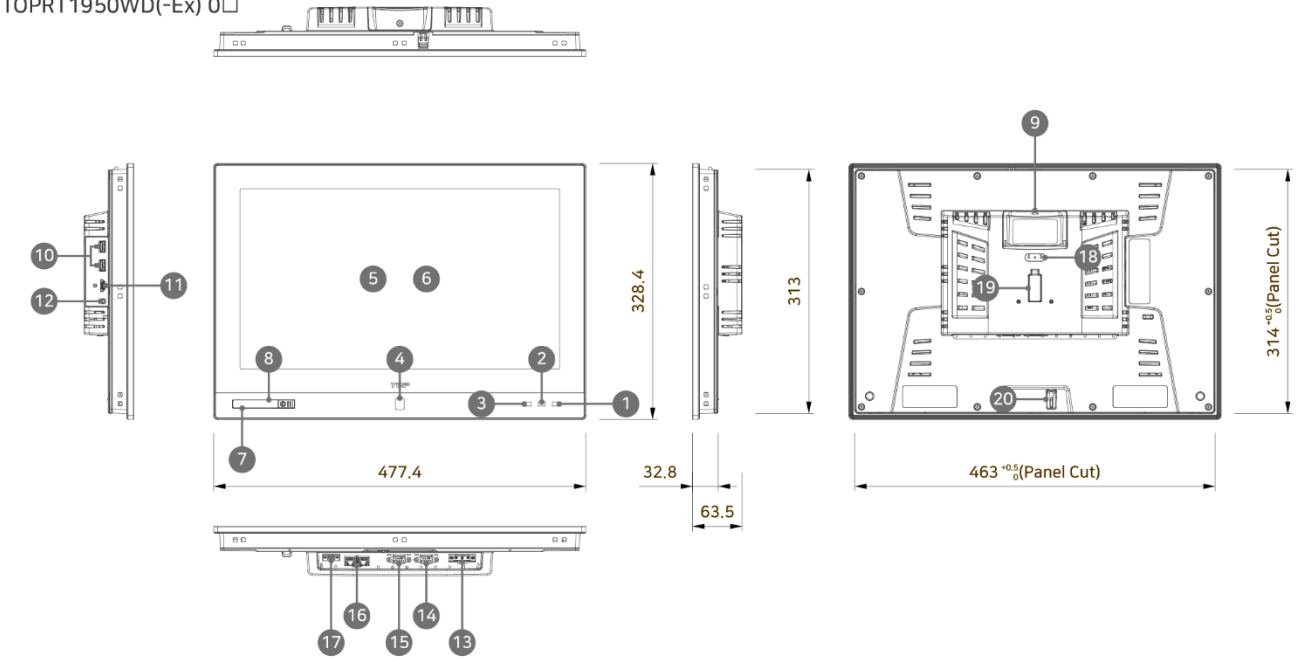
TOPRT WIDE SPECIFICATIONS

Functional		TOPRT1950WD(-Ex) 0□	TOPRT1550WD(-Ex) 0□
Display	Display Type	18.5" TFT Color	15.6" TFT Color
	Color	16M Colors	
	Display Area(mm)	409.8 x 230.4	344.2 x 193.5
	Resolution(dot)	1366 x 768	
	Brightness Level	10 Levels(by software)	
	Backlight Type	LED	
Touch	Backlight Life	50,000 hours	
	Touch Type	Capacitive	
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 Internal termination resistors(Software set-up) 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 Internal termination resistors(Software set-up) 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 Internal termination resistors(Software set-up) Connector: 3.5mm 3pin x 1	
	Ethernet	IEEE 802.3i, IEEE 802.3u, IEEE 802.ab, 10BaseT/100BaseT/1000BaseT Connector: RJ-45 x 2	
	USB Host	USB 3.0 compatible, Output 5Vdc/0.9A, USB 2.0 compatible, Output 5Vdc/0.5A Support: USB storage, USB barcode scanner(Standard keyboard protocol) Connector: USB Type A x 3(Rear(USB 3.0) x 2, Front(USB 2.0) 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	
	Wifi	2.4G: 2.400GHz ~ 2.483GHz 5G: 5.150GHz ~ 5.725GHz WLAN standard: IEEE 802.11a/b/g/n Operation range up to 20 meters in open space Security: WEP(64/128), WPA-PSK+(TKIP, AES), WPA2-PSK+(TKIP, AES)	
	Bluetooth	2402MHz ~ 2480MHz, Bluetooth® 5.0(BLE), Range up to 5M in open space	
	IrDA	Compliant to IrDA physical layer standard up to 115.2 kbit/s(SIR), Range up to 0.7M in open space *Dedicated use of M2I HMI equipment.	
	SD Card	SD card slot x 1, SDHC(Max. 32GB), SDXC(Max. 1TB)	
Memory & Others	Option Modules	CAM32	
	Audio	3.5mm Audio jack output	
	HDMI	HDMI v2.0, Max. 1366 x 768	
	Front Camera	USB UVC Max. resolution: 640 x 480 5 Adjustable angles: Up 20°, 10°, 0°, Down 10°, 20°	
	Proximity Sensor	YES	
	Printer	Roll printer(EPSON protocol)	
	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	40W	
	Voltage Sag	24Vdc, Within 10ms	
Environment	Insulation Resistance	500Vdc, 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)	
	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)	
Structure	Protection Classification	IP54(front)	
	Certification(On Progress)	General Model: CE, KC, UL/cUL Explosion Proof Model: CE, KC, KCs, CCC, IECEx/ATEX, UL/cUL in Hazloc	
	Panel Cut(mm)	463 x 314	392 x 272
	External Dimension(mm)	477.4 x 328.4 x 63.5	406.4 x 286.4 x 63.5
	Weight(kg)	5.30	4.10
	Cooling System	Natural air circulation	
	Case Material	Aluminum + Plastic	

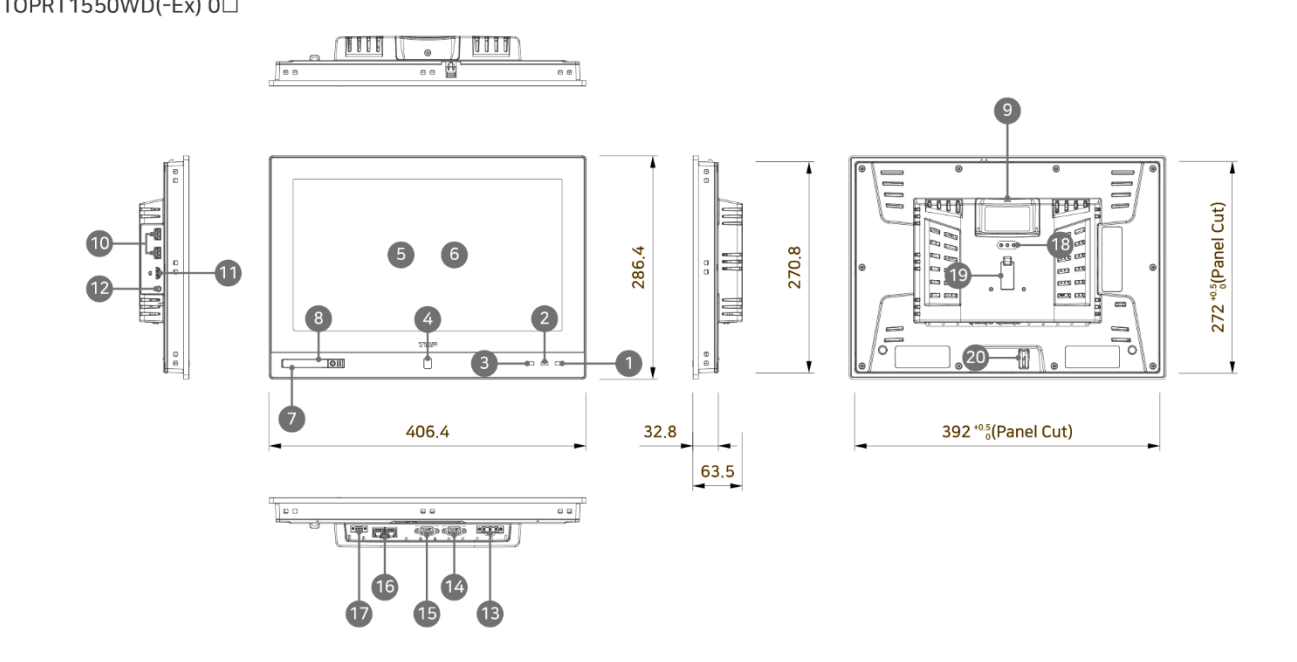
* [TOPRT□□50WD(-Ex) 01] 옵션 모델은 무선 기능(Wi-Fi, Bluetooth, IrDA)을 지원하지 않습니다. / * [-Ex] 모델은 방폭 인증을 획득한 제품입니다.

DRAWING

TOPRT1950WD(-Ex) 0□



TOPRT1550WD(-Ex) 0□



- | | | | | |
|--------------------|---------------|----------------|-----------------|----------------------------------|
| 1 Power LED | 5 LCD Panel | 9 SD Card Slot | 13 Power Input | 17 Serial COM3 |
| 2 IrDA Sensor | 6 Touch Panel | 10 USB Host 2P | 14 Serial COM1 | 18 Status LED |
| 3 Proximity Sensor | 7 USB OTG | 11 HDMI | 15 Serial COM2 | 19 Expansion Module Connector |
| 4 Camera | 8 USB Host | 12 AUDIO | 16 Ethernet 2ch | 20 Camera Angle Adjustment Lever |

TOPRC WIDE SERIES

방폭/비방폭 스탠다드 WIDE HMI

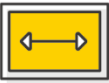
인터페이스

- 전면
- USB OTG ■ USB HOST ■ IrDA 센서
- 후면
- 시리얼 3포트 ■ 이더넷 2채널 ■ USB HOST 2포트 ■ WiFi ■ Bluetooth ■ SD 카드



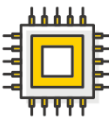
TOPRC WIDE

특장점



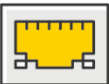
선명한 WIDE 화면

16:9 WIDE 1366 x 768 고해상도 화면
선명하고 튼튼한 정전용량 터치 센서 적용
충격 내구성 IK07 등급 강화 유리 적용



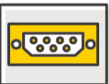
더 강력해진 CPU

TOPRT1210SD-Ex 모델 대비 2배 빠른 속도 지원



시리얼 / 이더넷 인터페이스

COM1/COM2/COM3 시리얼 3포트 제공
서로 다른 IP를 가진 이더넷 2채널 네트워크 지원



무선 강화

WiFi 2.4G/5G 제공
자사 바코드 스캐너와 Bluetooth/IrDA 무선 통신
* [TOPRC□□00WD(-Ex) 01] 옵션 모델은
무선 기능(Wi-Fi, Bluetooth, IrDA)을 지원하지 않습니다.



견고한 프레임

강력한 내구성을 갖춘 후면 알루미늄 프레임
베젤을 최소화한 세련된 디자인



전면 USB 2포트 제공

전면 USB OTG, HOST 포트 제공
후면 USB HOST 2포트 제공

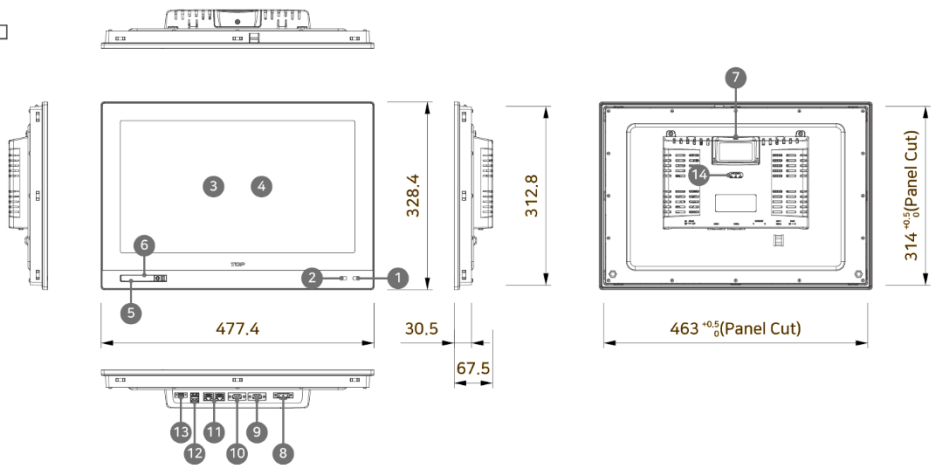
TOPRC WIDE SPECIFICATIONS

Functional		TOPRC1900WD(-Ex) 0□	TOPRC1500WD(-Ex) 0□	TOPRC1200WD(-Ex) 0□
Display	Display Type	18.5" TFT Color	15.6" TFT Color	12.1" TFT Color
	Color		16M Colors	
	Display Area(mm)	409.8 x 230.4	344.2 x 193.5	261.12 x 163.2
	Resolution(dot)	1366 x 768		1280 x 800
	Brightness Level		10 Levels(by software)	
	Backlight Type		LED	
	Backlight Life		50,000 hour	
Touch	Touch Type		Capacitive Touch	
	Resolution(Cell)	1366 x 768		1280 x 800
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 Internal termination resistors(Software set-up) 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 Internal termination resistors(Software set-up) 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 Internal termination resistors(Software set-up) Connector: 3.5mm 3pin x 1		
	Ethernet	IEEE802.3i/IEEE802.3u, 10BaseT / 100BaseT 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 3(Rear x 2, Front 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		
	WiFi	2.4G: 2.4000GHz ~ 2.4835GHz 5G: 5.150GHz ~ 5.725GHz WLAN Standard: IEEE 802.11a/b/g/n Operation Range Up to 20meters in open space Security: WEP(64/128), WPA-PSK+(TKIP, AES), WPA2-PSK+(TKIP, AES)		
	Bluetooth	2402MHz ~ 2480MHz, Bluetooth® 5.0(BLE), Range up to 5M in open space		
	IrDA	Compliant to IrDA physical layer standard up to 115.2 kbit/s (SIR), Range up to 0.7M in open space *Dedicated use of M2I HMI equipment.		
	SD Card	SD Card Slot x 1, SDHC(Max. 32GB), SDXC(Max. 1TB)		
	Printer	Roll Printer(EPSON protocol)		
	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	40W		
	Voltage Sag	24Vdc, Within 10ms		
	Insulation Resistance	500Vdc, 10MΩ		
Environment	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)		
	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)		
Structure	Protection Classification	IP65(Front)		
	Certification(On Progress)	General Model: CE, KC, UL/cUL Explosion Proof Model: CE, KC, KCs, CCC, IECEx/ATEX, UL/cUL in Hazloc		
	Panel Cut(mm)	463 x 314	392 x 272	310 x 240
	External Dimension(mm)	477.4 x 328.4 x 67.5	406.4 x 286.4 x 67.5	324.4 x 253.9 x 67.5
	Weight(kg)	4.2	3.12	2.3
	Cooling System	Natural air circulation		
	Case Material	Aluminium + Plastic		

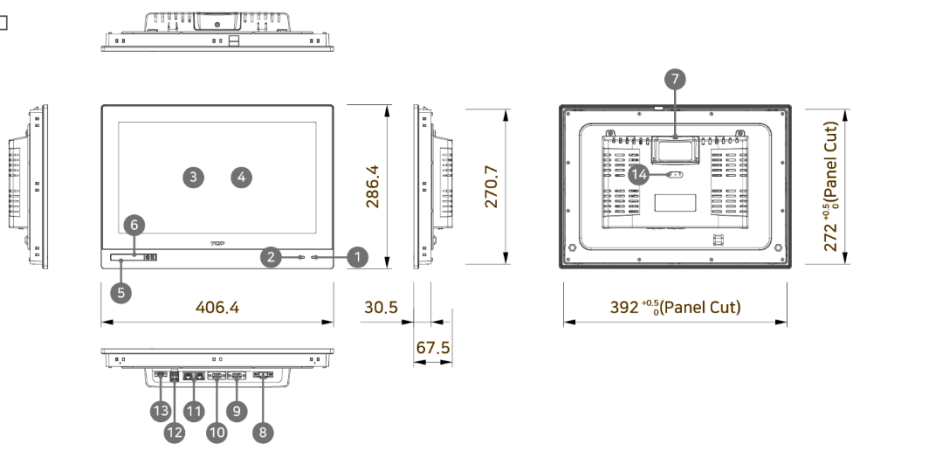
* [TOPRC□□00WD(-Ex) 01] 옵션 모델은 무선 기능(Wi-Fi, Bluetooth, IrDA)을 지원하지 않습니다. / * [-Ex] 모델은 방폭 인증을 획득한 제품입니다.

DRAWING

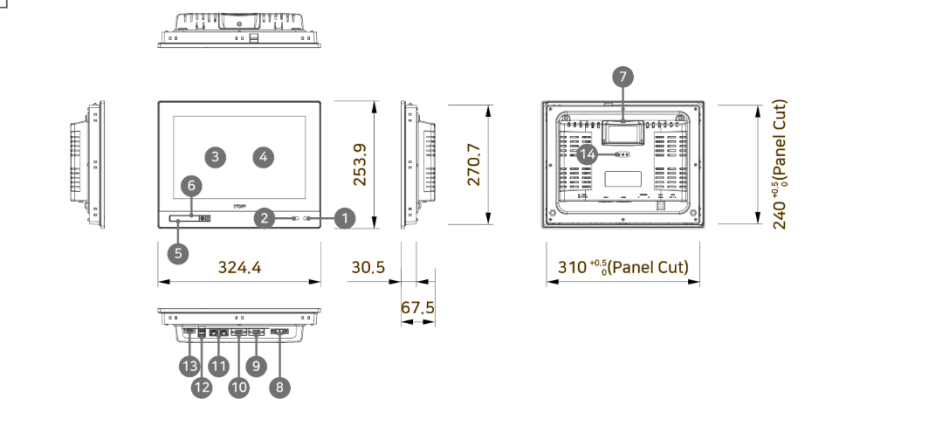
TOPRC1900WD(-Ex) 0□



TOPRC1500WD(-Ex) 0□



TOPRC1200WD(-Ex) 0□



- 1

Power LED
- 2

IrDA Sensor
- 3

LCD Panel
- 4

Touch Panel
- 5

USB OTG
- 6

USB Host
- 7

SD Card Slot
- 8

Power Input
- 9

Serial COM1
- 10

Serial COM2
- 11

Ethernet 2Ch
- 12

USB Host 2P
- 13

Serial COM3
- 14

Status LED