M2I Corporation
Man · Machine · Interface

TOP NEXT

TOP NEXT

Product Catalog

M2I Corporation Is an AX·DX-Based Smart Factory Total Solution Platform Company with Technical Expertise Extending from HMI/SCADA Development and Manufacturing to Robot Control and Logistics Automation.

TOP NEXT

CONTENTS

TOP NEXT LINE-UP

TOP RT 40 PREMIUM Ex   15 12 10

Next-Generation TOPR Series Premium HMI Featuring High-Speed Performance, IrDA Sensor, and Wide-Angle Camera

Ex / Non-Ex Premium HMI

TOP RT WIDE PREMIUM Ex   19 15

Capacitive Touch, Wide Display, High-Speed Performance, and Advanced Features Including Wi-Fi, Bluetooth, IrDA, and Wide-Angle Camera

Ex / Non-Ex Premium Wide HMI

TOP RC WIDE STANDARD Ex   19 15 12

Capacitive Touch, Wide Display, and High-Speed Performance, Setting a New HMI Standard

Ex / Non-Ex Standard Wide HMI

TOP RW I/O   7

High-Efficiency All-in-One HMI Integrating Analog and Digital I/O

HMI with Integrated I/O

TOP RP

Box-Type HMI with Compact Design, Enhancing Flexibility in System Configuration
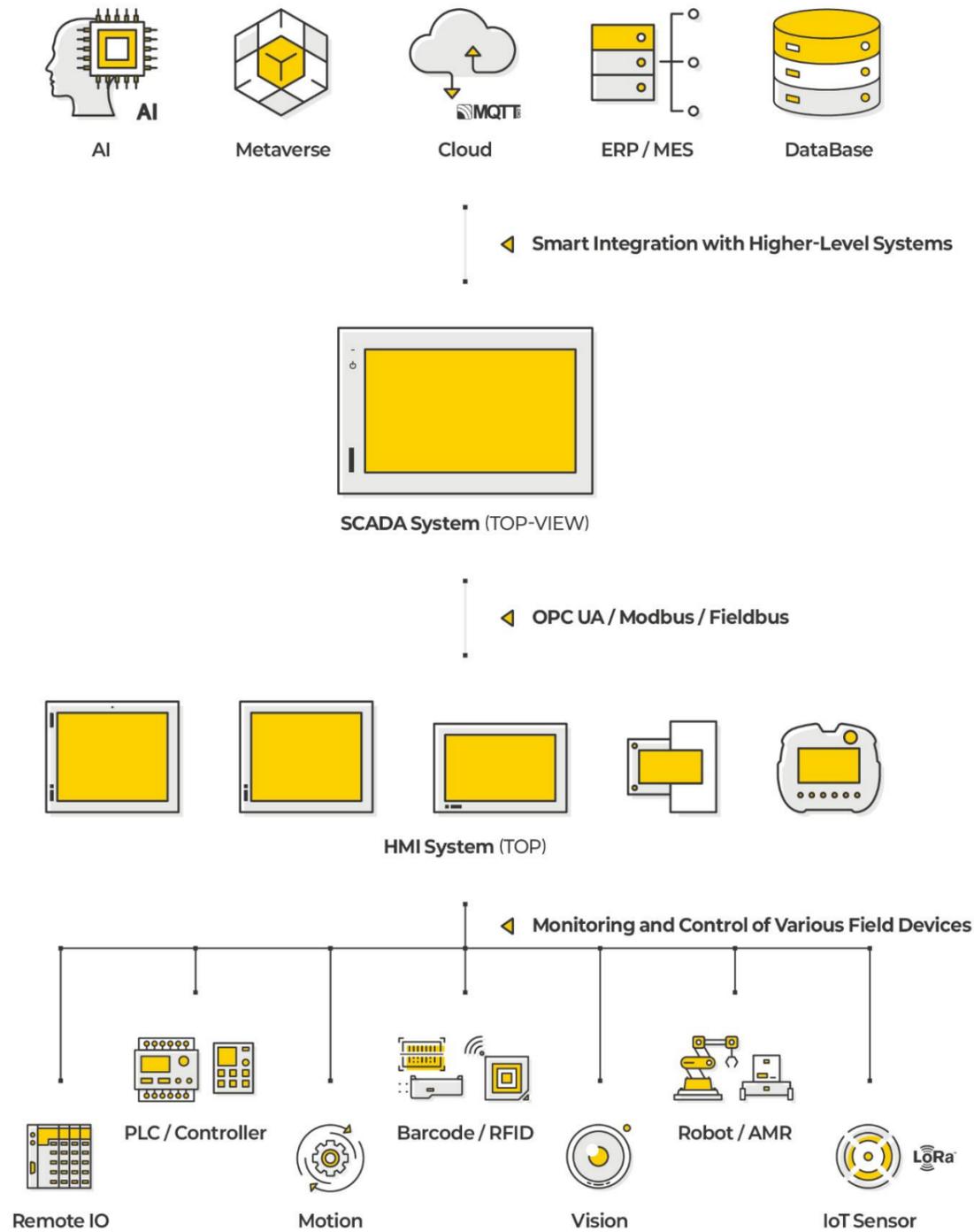
Box Type HMI

TOP RN   10 7 4

Open Frame HMI Optimized for Free Design and Customization

Open Frame HMI

HMI (TOP) / SCADA (TOP-VIEW) Operation in Industrial Sites

AI

AI Metaverse Cloud ERP / MES DataBase

◄ **Smart Integration with Higher-Level Systems**

SCADA System (TOP-VIEW)

◄ **OPC UA / Modbus / Fieldbus**

HMI System (TOP)

◄ **Monitoring and Control of Various Field Devices**

Remote IO PLC / Controller Motion Barcode / RFID Vision Robot / AMR IoT Sensor LoRa

KEY FEATURES

400+ Protocol

Supports Over 400 Industrial Communication Protocols

Provides Stable Data Integration Between Equipment and Systems by Supporting a Wide Range of Industrial Communication Protocols, Enabling Flexible System Configuration and Operation Even in Complex Industrial Environments.

21 CFR Part 11

21 CFR Part 11 Compliance

Compliant with the U.S. FDA's 21 CFR Part 11 Standards, Providing a Safe and Efficient Work Environment Through Operator Authentication, Supervisory Control History Tracking, Database Management, and PDF Management.

OPC UA

Industrial-Standard OPC UA Support

Through the Forward-Looking and Highly Extensible OPC UA Protocol, It Enables Reliable Data Collection and Management, Ensuring Seamless Integration with Higher-Level Systems.

SECS / GEM

SECS / GEM Protocol Support

Supports HSMS SECS/GEM Communication Protocols Used in the Semiconductor Industry, Providing Reliable Data Communication Tailored to Specific Operational Scenarios.

VNC

Proprietary VNC Provided

Our High-Performance, In-House Developed VNC Allows Remote Access to TOP & TOP-VIEW Screens in Industrial Environments, Enabling Real-Time Monitoring and Control via Mobile Devices, Tablets, and PCs.

SMS & Email

SMS & Email Dispatch

Automatically Sends SMS and Emails Stored in the Program According to On-Site Conditions, Allowing Supervisors or Customers to Instantly Check the Factory Status.

TOP Design Studio

**TOP Design Studio Is Software for Creating and Editing HMI Project Files.
It Is Available for Free Download on the M2I Website (m2i.co.kr).**

· **Intuitive UI** – Easy for Everyone
· **Legacy Model Migration** – ATOP / XTOP Compatible
· **Vivid Animations** – Smooth and Lifelike
· **Structured User Training** – Supported at Headquarters and Daegu Sales Office
· **YouTube Training Content** – Accessible Anytime, Anywhere
· **KakaoTalk Technical Support** – Instant Assistance On-Site
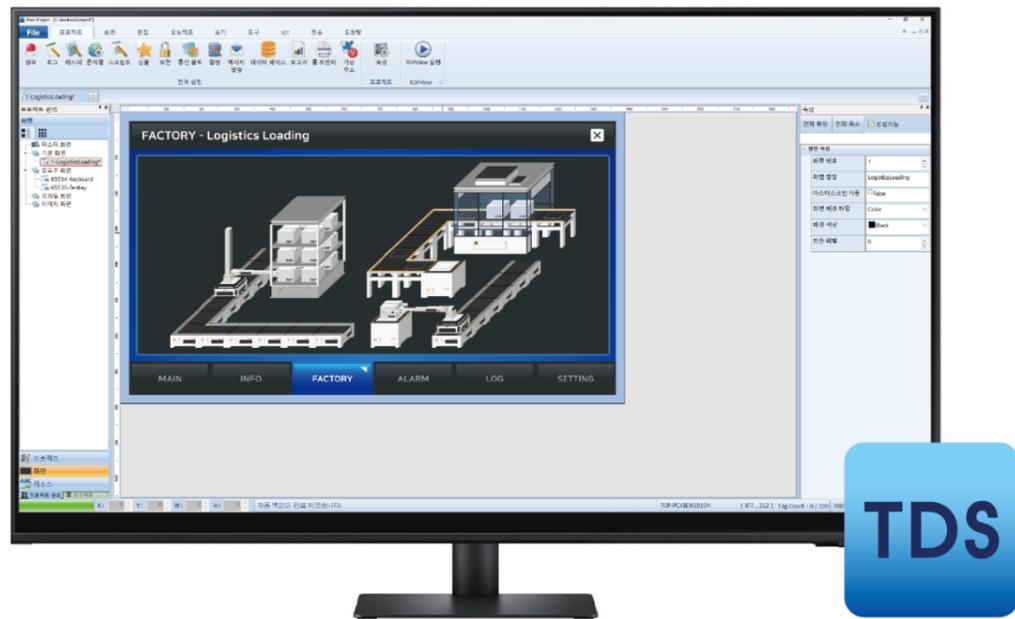
TOP Design Studio

KEY FEATURES

Function Implementation Integrated via [Effects & Actions]

Regardless of the Object's Shape or Type, Functions Can Be Implemented in a Consistent Manner Using the [Effects & Actions] Properties. Structured as [Condition] → [Effect] → [Action], the Specified Effect or Action Is Executed When the Condition Is Met.

Offline / Online Virtual Operation

Offline Virtual Operation:
Allows Direct Project Testing in TDS Without TOP or Controller.
Online Virtual Operation:
Enables Simultaneous Project Testing in TDS While Running the Actual Program on a PC-Connected Controller. (2-Hour Limit)

Continuously Updated Image Library

Offers a Variety of 16M Full-Color Images, Including Vector Images That Maintain Sharp Quality Regardless of Size, and 3D Libraries with Enhanced Depth Perception.

Optimized Data Analysis

TDS Enables Efficient Data Searching and Monitoring in Tabular Format, and Supports Intuitive Data Analysis Through Various Graphs Such as Trend, Record, Bar, Meter, and Pie Charts.

JavaScript

JavaScript Programming Support

Utilize the Widely Used JavaScript to Efficiently Extend Projects in TDS. From Simple Commands to Conditional Statements, Loops, and Functions, Various Programming Constructs Can Be Easily Implemented with Provided Samples.

Project Interoperability Between HMI and SCADA

TDS Supports Both TOP (HMI) and TOP-VIEW (SCADA) Projects, Allowing Seamless Conversion Between the Two.

TOPRT40 SERIES

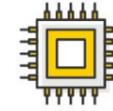Ex / Non-Ex Premium HMI

INTERFACE *Varies by Model.

Front ▫ CAMERA ▪ USB OTG ▪ USB HOST ▪ AUTO BRIGHTNESS SENSOR ▫ IrDA SENSOR ▪ PROXIMITY SENSOR
Rear ▪ SERIAL 3 PORTS ▪ ETHERNET 2 CHANNEL ▪ 3.0 USB HOST 2 PORTS ▫ SD CARD ▪ OPTION MODULE(CAM32)
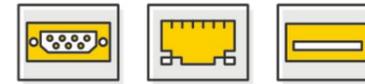
Ex

Non-Ex

FEATURES

Enhanced CPU

Supports Twice the Speed Compared to the TOPRT1210SD-Ex Model

Aluminum Frame

An Aluminum Frame Featuring Robust Durability and a Premium Design

Serial / Ethernet / USB Interfaces

Provides 3 Serial Ports: COM1 / COM2 / COM3
Supports Dual-Channel Ethernet Networks with Different IPs
Front 2.0 USB OTG and HOST Ports Available
Rear 3.0 USB HOST Ports x 2

T6 Temperature Class Explosion-Proof Certification

Certified for Explosion-Proof Standards:
KCs (Korea), ATEX (Europe), IECEx (International), Hazloc (North America)

Built-In IrDA (Infrared) Sensor (Optional)

Wireless Communication with Our Barcode Scanner
Automatic Recognition Within 0.5 Meters

Built-In Front Camera (Optional)

Adjustable Wide-Angle Camera Included

Proximity Sensor / Auto-Brightness Sensor

Built-In Proximity Sensor That Can Switch Modes Based on Working Distance
Built-In Auto-Brightness Sensor to Adjust Screen Brightness

Optional Camera, SD Card, IrDA Sensor

| Model		Camera	SD Card	IrDA Sensor
TOPRT1540(-Ex) TOPRT1240(-Ex) TOPRT1040(-Ex)	Blank	O	X	O
	01	X	X	O
	02	O	O	O
	03	X	O	O
	04	O	X	X
	05	X	X	X
	06	O	O	X
	07	X	O	X

TOPRT40 SPECIFICATIONS

|	Non-Ex Model Ex Model	TOPRT1540XD 0□ TOPRT1540XD-Ex 0□	TOPRT1240XD 0□ TOPRT1240XD-Ex 0□	TOPRT1040SD 0□ TOPRT1040SD-Ex 0□
Display	Display Type	15" TFT Color	12.1" TFT Color	10.4" TFT Color
	Color	16M Colors		
	Display Area(㎜)	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)		
	Backlignt Type	LED		
	Backlight Life	50,000 hours		
Touch	Touch Type	Analog Resistive Film		
	Resolution(Cell)	1024 x 768		800 x 600
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/IEEE802.3ab, 10BASE-T/100BASE-TX/1000BASE-T Connector: RJ-45 x 2		
	USB Host	USB 3.0 compatible, Output 5Vdc/0.5A, 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: Up20º, 10º, 0º, Down10º		USB UVC Max. Resolution: 640 x 480
	Proximity Sensor	YES		
	Illumination Sensor	YES		
	Printer	Roll Printer(EPSON protocol)		
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	20 ~ 28Vdc		
	Power Consumption	25W	18W	15W
	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: 10≤F < 25㎐(2G) X, Y, Z each Direction(for 30 Minutes)		
	Noise Immunity	1000Vp-p(Pulse Width 1㎲)		
	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	General Model: KC, CE, UL/cUL Explosion Proof Model: KC, CE, UL/cUL in Hazloc, KCs, CCC, IECEx, ATEX		
Structure	Panel Cut(㎜)	355 x 286	306 x 247	260 x 202
	External Dimension(㎜)	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		

* Front Camera, SD Card, and IrDA Sensor Options Available.

DRAWING

TOPRT1540XD 0□
TOPRT1540XD-Ex 0□
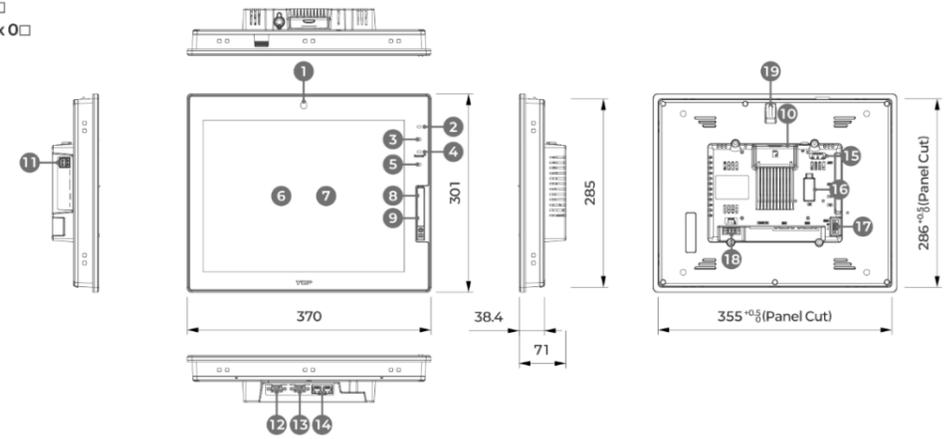
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TOPRT1240XD-Ex 0□
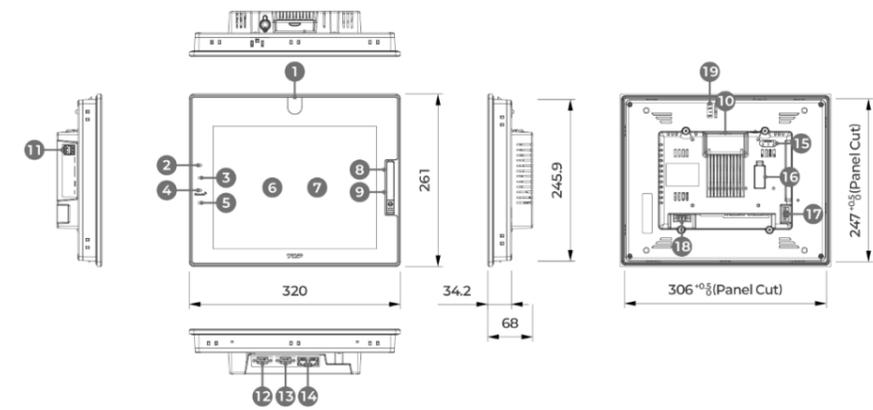
TOPRT1040SD 0□
TOPRT1040SD-Ex 0□
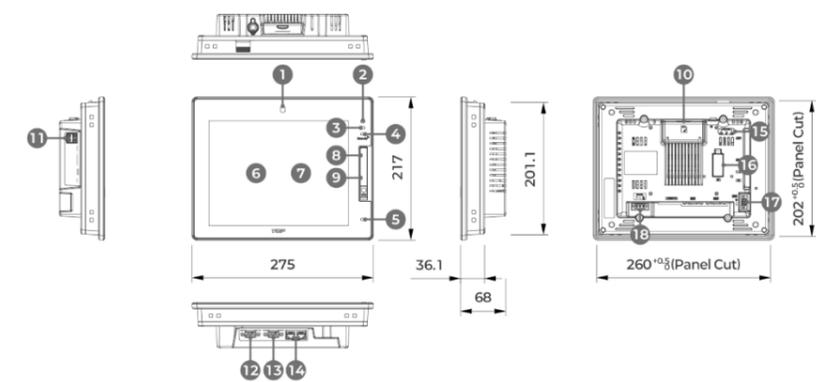
① Camera	⑥ LCD Panel	⑪ USB Host 2P	⑯ Expansion Module Connector
② Power LED	⑦ Touch Panel	⑫ Serial COM2	⑰ Serial COM3
③ Illumination Sensor	⑧ USB OTG	⑬ Serial COM1	⑱ Power Input
④ IrDA Sensor	⑨ USB Host	⑭ Ethernet 2Ch	⑲ Camera Angle Adjustment Lever
⑤ Proximity Sensor	⑩ SD Card Slot	⑮ Status LED	

TOPRT WIDE SERIES

Ex / Non-Ex Premium Wide HMI

INTERFACE

Front   ▪ USB OTG   ▪ USB HOST   ▪ CAMERA   ▪ PROXIMITY SENSOR   ▪ IrDA SENSOR
Rear   ▪ SERIAL 3 PORTS   ▪ ETHERNET 2 CHANNEL   ▪ 3.0 USB HOST 2 PORTS   ▫ Wi-Fi   ▫ Bluetooth
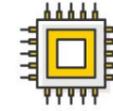   ▪ HDMI   ▪ AUDIO   ▪ SD CARD   ▪ OPTION MODULE(CAM32)
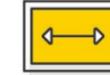
Ex

Non-Ex

FEATURES

Enhanced CPU

Supports Twice the Speed Compared to the
TOPRT1210SD-Ex Model

Equipped with a Clear Capacitive Touch Sensor

16:9 Wide 1366 x 768 High-Resolution
Display
IK07-Rated Tempered Glass for Enhanced
Impact Resistance

Front Aluminum Frame

Front Aluminum Frame with Robust Durability
Sleek Design with Minimal Bezel

T6 Temperature Rating Explosion-Proof Certification

Safety Ensured with ATEX, IECEx, and Hazloc
Explosion-Proof Certifications

IrDA (Infrared) Sensor / Bluetooth

Supports Wireless Communication with Our
Barcode Scanners via IrDA / Bluetooth

Front Camera Built-In

Built-In Wide-Angle Camera with Adjustable
Angle
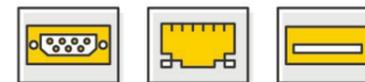
Serial / Ethernet / USB Interfaces

Provides 3 Serial Ports: COM1 / COM2 / COM3
Supports Dual-Channel Ethernet Networks
with Different IPs
Front 2.0 USB OTG and HOST Ports Available
Rear 3.0 USB HOST Ports x 2

Wi-Fi and Bluetooth Options Available

Model	Wi-Fi	Bluetooth
Blank	O	O
TOPRT1950WD(-Ex) TOPRT1550WD(-Ex)		
01	X	X

TOPRT WIDE SPECIFICATIONS

	Non-Ex Model Ex Model	TOPRT1950WD 0☐ TOPRT1950WD-Ex 0☐	TOPRT1550WD 0☐ TOPRT1550WD-Ex 0☐
Display	Display Type	18.5" TFT Color	15.6" TFT Color
	Color	16M Colors	
	Display Area(㎜)	409.8 x 230.4	344.2 x 193.5
	Resolution(dot)	1366 x 768	
	Brightness Level	10 Levels(by software)	
	Backlight Type	LED	
	Backlight Life	50,000 hours	
Touch	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, 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	
	*Wi-Fi	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)	
	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 20º, 10º, 0º, Down 10º, 20º	
	Proximity Sensor	YES	
	Printer	Roll printer(EPSON protocol)	
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	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: 10≤F < 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	General Model: KC, CE, UL/cUL Explosion Proof Model: KC, CE, UL/cUL in Hazloc, KCs, IECEx, ATEX	
Structure	Panel Cut(㎜)	463 x 314	392 x 272
	External Dimension(㎜)	477.4 x 328.4 x 63.5	406.4 x 286.4 x 63.5
	Weight(㎏)	5.30	4.10
	Cooling System	Natural air circulation	
	Case Material	Aluminum + Plastic	

* Wi-Fi and Bluetooth Options Available.

DRAWING

TOPRT1950WD 0☐
TOPRT1950WD-Ex 0☐
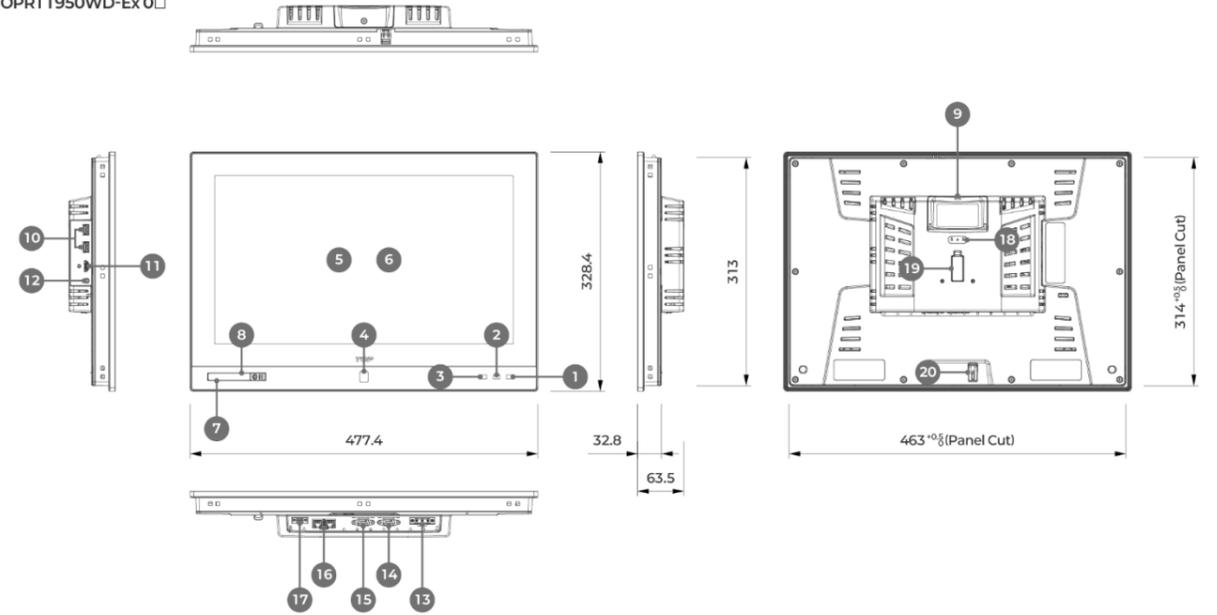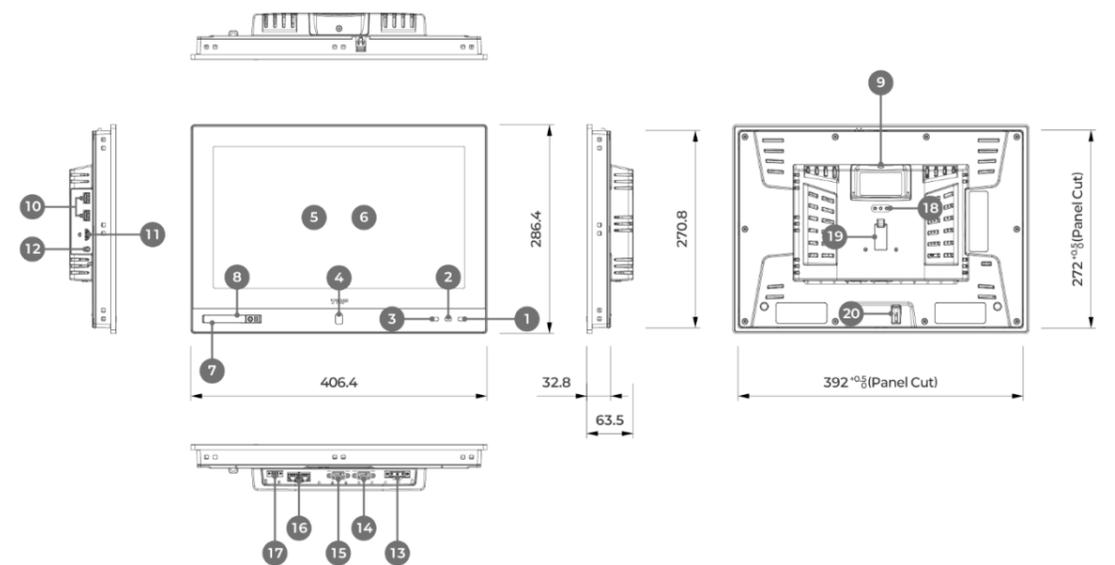
TOPRT1550WD 0☐
TOPRT1550WD-Ex 0☐

|							
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

Ex / Non-Ex Standard Wide HMI

INTERFACE

Front   ▪ USB OTG   ▪ USB HOST   ▪ IrDA SENSOR
Rear   ▪ SERIAL 3 PORTS   ▪ ETHERNET 2 CHANNEL   ▪ USB HOST 2 PORTS   ▫ Wi-Fi   ▫ Bluetooth   ▪ SD CARD
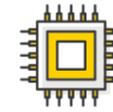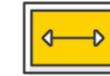
Ex

Non-Ex

FEATURES

Enhanced CPU

Supports Twice the Speed Compared to the
TOPRT1210SD-Ex Model

Equipped with a Clear Capacitive Touch Sensor

16:9 Wide 1366 x 768 High-Resolution
Display
IK07-Rated Tempered Glass for Enhanced
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Rear Aluminum Frame

Rear Aluminum Frame with Robust Durability
Sleek Design with Minimal Bezel
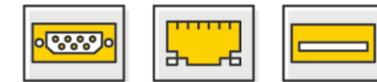
Serial / Ethernet / USB Interfaces

Provides COM1 / COM2 / COM3 Serial Ports
Supports 2-Channel Ethernet Network with
Different IPs
Front USB OTG and HOST Port Provided
Rear USB HOST – 2 Ports Provided

IrDA (Infrared) Sensor / Bluetooth

Supports Wireless Communication with Our
Barcode Scanners via IrDA / Bluetooth

Wi-Fi and Bluetooth Options Available

Model		Wi-Fi	Bluetooth
TOPRC1900WD(-Ex) TOPRC1500WD(-Ex) TOPRC1200WD(-Ex)	Blank	O	O
	01	X	X

TOP RC WIDE

TOPRC WIDE SPECIFICATIONS

|	Non-Ex Model Ex Model	TOPRC1900WD 0☐ TOPRC1900WD-Ex 0☐	TOPRC1500WD 0☐ TOPRC1500WD-Ex 0☐	TOPRC1200WD 0☐ TOPRC1200WD-Ex 0☐
Display	Display Type	18.5" TFT Color	15.6" TFT Color	12.1" TFT Color
	Color		16M Colors	
	Display Area(㎜)	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, 10Base-T/100Base-TX/1000Base-T 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	
	*Wi-Fi		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)	
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		40W	
	Voltage Sag		24Vdc, Within 10ms	
	Insulation Resistance		500Vdc, 10㏀	
Environment	Operation Temperature(℃)		-10 ~ +50	
	Storage Temperature(℃)		-20 ~ +60	
	Operation Humidity(%RH)		0 ~ 90(No dew)	
	Atmosphere		No corrosive gas	
	Vibration Endurance		Amplitude: 10≤F < 25㎐(2G) X, Y, Z each direction(for 30 minutes)	
	Noise Immunity		1000Vp-p(Pulse width 1㎲)	
	Electrostatic Discharge		Connective discharge from EN61000-4-2: ±4㎸	
	Shock Endurance		10G X, Y, Z each direction(for 3 times)	
	Ground Connection		Class 3(100Ω or less)	
	Protection Classification		IP65(Front)	
	Certification		General Model: KC, CE, UL/cUL Explosion Proof Model: KC, CE, UL/cUL in Hazloc, KCs, CCC, IECEx, ATEX	
Structure	Panel Cut(㎜)	463 x 314	392 x 272	310 x 240
	External Dimension(㎜)	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(㎏)	4.2	3.12	2.3
	Cooling System		Natural air circulation	
	Case Material		Aluminium + Plastic	

* Wi-Fi and Bluetooth Options Available.

DRAWING

TOPRC1900WD 0☐
TOPRC1900WD-Ex 0☐
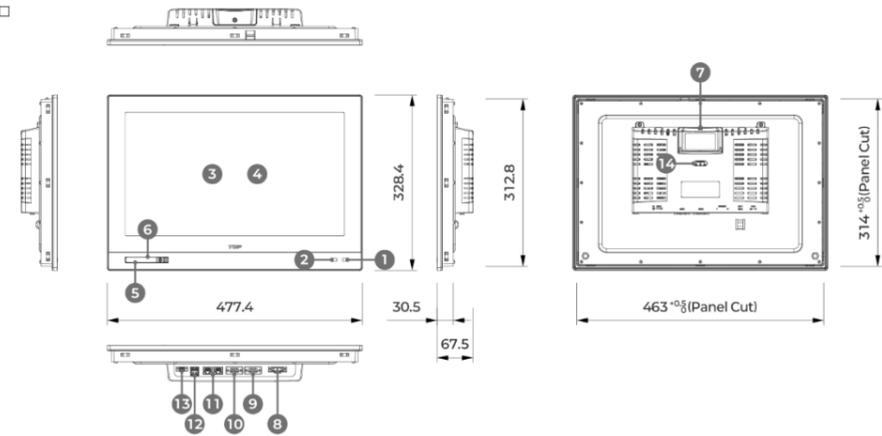
TOPRC1500WD 0☐
TOPRC1500WD-Ex 0☐
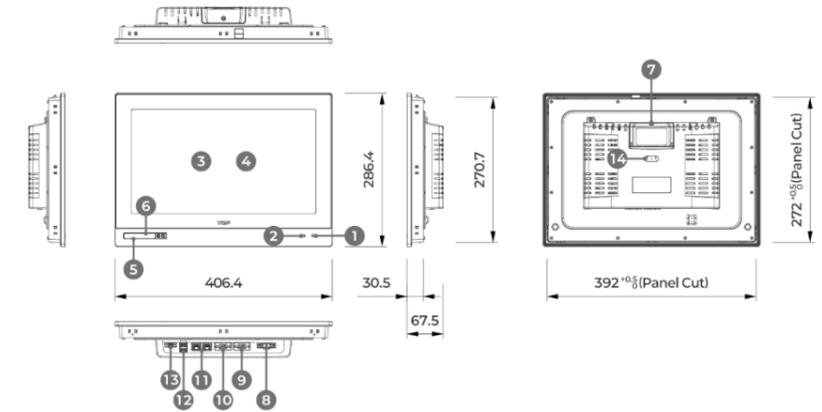
TOPRC1200WD 0☐
TOPRC1200WD-Ex 0☐
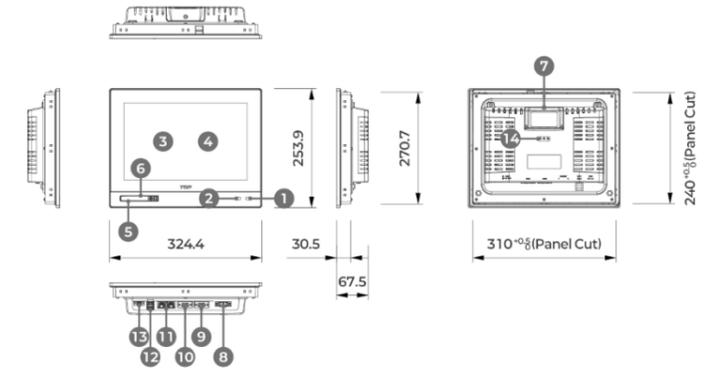
①	Power LED	⑤	USB OTG	⑨	Serial COM1	⑬	Serial COM3
②	IrDA Sensor	⑥	USB Host	⑩	Serial COM2	⑭	Status LED
③	LCD Panel	⑦	SD Card Slot	⑪	Ethernet 2Ch		
④	Touch Panel	⑧	Power Input	⑫	USB Host 2P		

TOPRW-IO SERIES

HMI with Integrated I/O

INTERFACE * Varies by Model.

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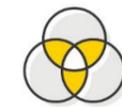- ETHERNET 1 CHANNEL
- USB HOST
- USB OTG
- SD CARD

FEATURES

Flexible I/O Support

DIGITAL INPUT 16ch
DIGITAL OUTPUT SINK 16ch
* ANALOG INPUT (Voltage 2ch, Current 2ch)
* ANALOG OUTPUT (Voltage 2ch, Current 2ch)
* RTD 2ch
(* For TOPRW0700WD-IO Model Only)

Quad Core CPU

Equipped with a Quad-Core CPU to Support High-Speed Processing

16M Full Color

Bright and Vivid Full-Color Display, Supporting Vector and 3D Libraries
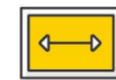
Supports 800 x 480 High Resolution

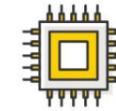7" Wide Screen Ratio for a Larger Workspace

Front OTG USB Port

Supports Convenient Program Transfer in Transfer Mode and Allows Connection of USB Devices (Memory, Barcode Scanner, Camera, etc.) in HOST Mode
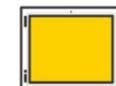
Sleek Integrated Body Design

Premium Integrated Body Offering Elegance and Lightweight Usability

Touch Drag Function

Allows Drawing on the Screen to Leave Memos or Drag Down Top Menus Interactively
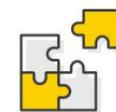
Compatibility with XTOP WIDE Series

Provides the Same Panel Cut as Discontinued XTOP WIDE Models (7")
Easily Replaces Existing XTOP WIDE Products

TOP RW I/O

TOPRW-IO SPECIFICATIONS

	Functional	TOPRW0700WD-IO	TOPRW0710WD-IO
Display	Display Type	7" TFT Color	
	Color	16M Colors	
	Display Area(㎜)	154 x 86	
	Resolution(dot)	800 x 480	
	Brightness Level	10 Levels(by software)	
	Backlight Type	LED	
	Backlight Life	50,000 hours	
Touch	Touch Type	Analog resistive film	
	Resolution(Cell)	800 x 480	
	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 AUTO MDIX 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)	
IO	IO Function	Digital Input 16ch, Digital Output 16ch, Analog Input(Voltage 2ch, Current 2ch), Analog Output(Voltage 2ch, Current 2ch), RTD 2ch	Digital Input 16ch, Digital Output 16ch
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	15W	
	Voltage Sag	24Vdc, Within 10ms	
	Insulation Resistance	500Vdc, 10㏁	
Environment	Operation Temperature(℃)	-10 ~ +50	
	Storage Temperature(℃)	-20 ~ +60	
	Operation Humidity(%RH)	0 ~ 90(No dew)	
	Atmosphere	No corrosive gas	
	Vibration Endurance	Amplitude: 10≤F<25㎐(2G) X,Y,Z each direction(for 30 minutes)	
	Noise Immunity	1000Vp-p(Pulse width 1㎲)	
	Static Electricity Discharge	Connective discharge from EN61000-4-2: ±4㎸	
	Shock Endurance	10G X,Y,Z each direction(for 3 times)	
	Ground Connection	Class 3(100Ω under)	
	Protection Classification	IP65(Front)	
	Certification	KC, CE	
Structure	Panel Cut(㎜)	197 x 127	
	External Dimension(㎜)	212 x 145 x 62.5	
	Weight(kg)	0.81	
	Cooling System	Natural air circulation	
	Case Material	Plastic	

MuLiN Creator

01 Create Ladder Programs Based on IEC 61131-3 Standard

02 Transfer Programs to the TOPRW-IO Series to Execute Ladder Logic

Ethernet → TOP RW IO ← 연결 → Fan, Sensor Motor, Lamp Robot, Servo

Execute Ladder Programs

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. 11.0Vdc ~ Max. 28.8Vdc, Off-State Max. 5Vdc	24Vdc typ. Min. 11.0Vdc ~ Max. 28.8Vdc, On-State Voltage Drop: Max. 0.3Vdc@25℃ Off-State Leakage Current: Max. 50uA
	System Power Dissipation	Max. 70mA	Max. 120mA
	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
Interface	Max. On-State Voltage Drop	N/A	Max. 0.3Vdc@25℃
	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
	Input Filter(Digital)	0.5ms	N/A
	Isolation	I/O to Logic: Photocoupler isolation	
	Field Power	Typ. 24Vdc(11.0Vdc ~ 28.8Vdc)	
Other	Wiring	AWG 26 to 20	
	Pin No.	Removable Terminal Block 20P	

* Analog I/O Is Available on the TOPRW0700WD-IO Model.

	Functional	Temperature Input(RTD)	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
	Sensor Type and Input/Ouput Range	PT100 * -200.0 to +850.0℃	0 ~ 5 Vdc	0 ~ 20mA	0 ~ 5 Vdc	0 ~ 20mA
Power	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			
	Resolution	0.0312℃/1bit	16bits, 0.076mV/1bit	16bits, 0.3uA/Bit	16bits, 0.076mV/1bit	16bits, 0.3uA/Bit
Characteristic	Conversion Time	Approx. 70ms, All Channel@50Hz	4ms/All Channel			
	Module Error	±0.1% Full Scale@+25℃, ±0.3% Full Scale@0℃, +60℃				
	Isolation	Capacitive isolation				
	Common Type	2COM (1 Common/1 Channel)	2 COM(Single Common)			
Other	Wiring	AWG 26 to 20				
	Pin No.	Removable Terminal Block 10P(3.5mm pitch)				

DRAWING

TOPRW0700WD-IO
TOPRW0710WD-IO

145
212
6
62.5
197 +0.3/0 (Panel Cut)
127 +0.3/0 (Panel Cut)
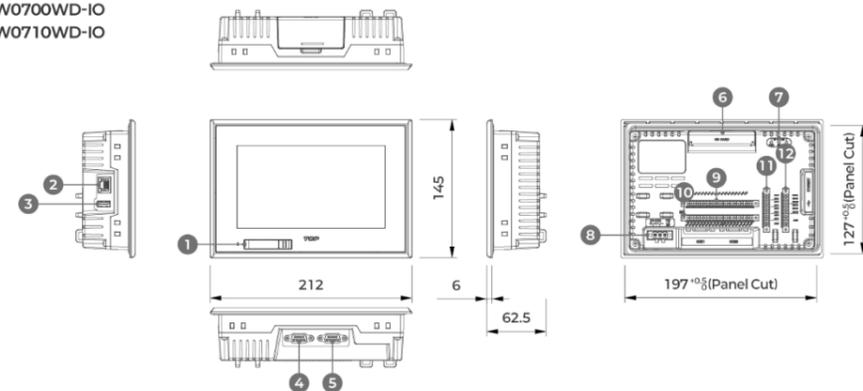
1. USB OTG(Mini 5Pin B-Type)
2. Ethernet 1Ch
3. USB Host 1P
4. Serial COM2
5. Serial COM1
6. SD Card Slot
7. Status LED
8. Power Input
9. Digital Input Terminal
10. Digital Output Terminal
11. Analog I/O Terminal
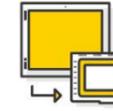12. RTD Input Terminal

TOPRP SERIES

Box Type HMI

INTERFACE

- SERIAL 2 PORTS
- ETHERNET 2 PORTS
- USB HOST 2 PORTS
- USB OTG
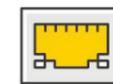- SD CARD
- HDMI OUT

FEATURES

Compact Chassis Frame

Small Size Allows Easy Installation Even in Limited Spaces

Standard DIN Rail / VESA Mounting

Easily Installable Anywhere with Standard DIN Rail
Quickly Attachable to Monitors Using Standard VESA Bracket (* Optional)

HDMI Output

Conveniently Connect to Various Monitors via HDMI
Compatible with M2I Dedicated Touch Monitors (MDP)

Compatibility with TOP Products

Supports Fast Processing Speeds with Quad-Core CPU
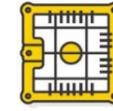Provides the Same Menus and Operation as TOP

Provides 2 Ethernet Channels

Supports Heterogeneous Networks with Different IPs
Supports VNC (Remote Monitoring / Control) Function

Provides 2 Serial Ports

COM1 / COM2 with DSUB 9-Pin
Supports RS-232C and RS-422/485 Communication

Provides 2 USB Host Ports

Ports for Connecting External Devices Such as Mouse, Keyboard, USB Memory, and Barcode Scanners
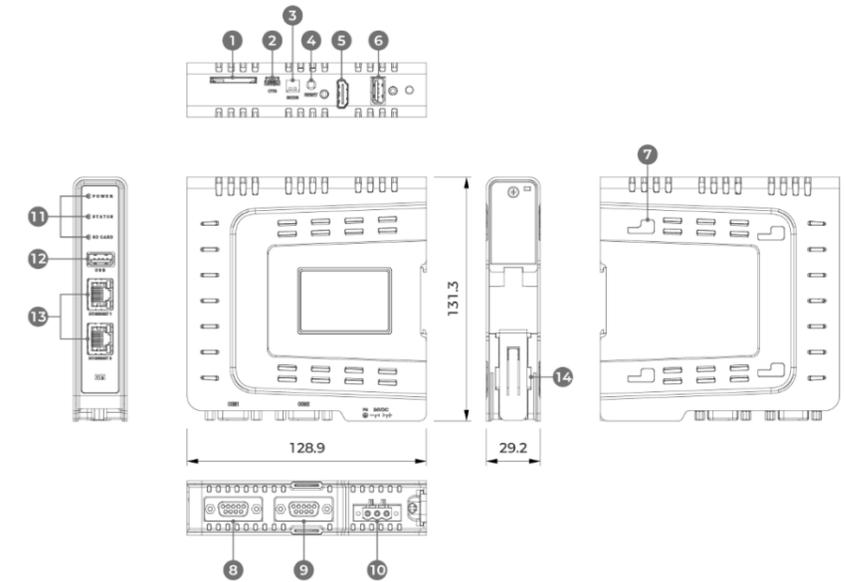
OTG USB Port

Supports Convenient Program Transfer in Transfer Mode and Allows Connection of USB Devices (Memory, Barcode Scanner, Camera, etc.) in HOST Mode

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	IEEE802.3i/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 Mini-B 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)
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, SD Card) Built in
Power	Input Voltage	24Vdc(20~28Vdc)
	Power Consumption	10W
	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: 10≤F<25㎐(2G) X,Y,Z each direction(for 30 minutes)
	Noise Immunity	1000Vp-p(Pulse width 1μs)
	Electrostatic Discharge	Connective discharge from EN61000-4-2: ±4㎸
	Shock Endurance	10G X,Y,Z each direction(for 3 times)
	Ground Connection	Class 3(100Ω or less)
	Protection Classification	IP20
	Certification	KC, CE, UL/cUL
Structure	External Dimension(㎜)	128.9x131.2x29.2
	Weight(kg)	0.23
	Installation Method	Standard DIN Rail(35mm), VESA
	Cooling System	Natural air circulation
	Case Material	Plastic

DRAWING

TOPRP1000D

1 SD Card Socket	4 Reset Switch	7 Vesa Bracket	10 Power Input	13 Ethernet Port
2 USB OTG	5 HDMI	8 Serial COM1	11 Status LED	14 DIN Rail
3 Mode Switch	6 USB Host #1	9 Serial COM2	12 USB Host #2	

VESA Braket(* Option)
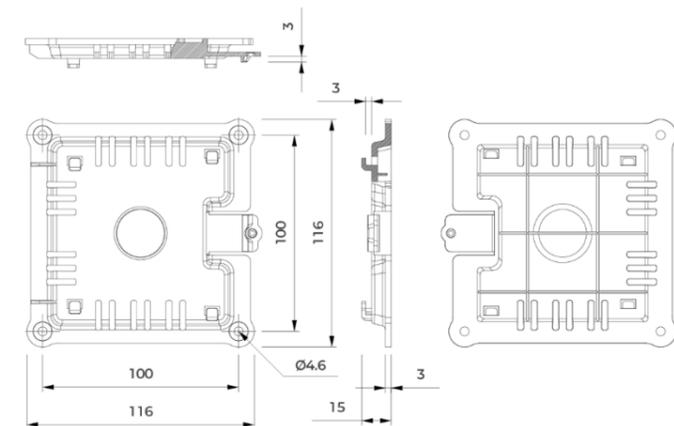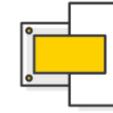
TOPRN SERIES

Open Frame HMI

INTERFACE * Varies by Model.

■ SERIAL 3(2) PORTS   ■ ETHERNET 2(1) CHANNEL   ■ USB HOST   ■ USB DEVICE

FEATURES

Open Frame Design Allows Flexible External Design Implementation

Supports Clean Embedded Installation Without Exposed Frames Choice of Standard Mount or Flat Mount Options
Mounting Holes Provided for Easy and Quick Assembly and Installation
Supports Both Landscape and Portrait Screen Orientations


Provides Compact and Flexible Sizes

Slim Design Suitable for Confined Spaces Customizable Sizes Tailored to Industry-Specific Equipment Specifications


Flat Operation Surface for a Convenient User Environment

Maintains Cleanliness by Preventing Accumulation of Dust or Foreign Materials Front Sheet Attachment Ensures Water- and Dust-Resistance
Stable Operation Even in Wet Environments
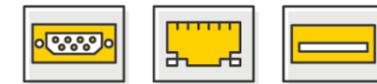
Optimized Interface Configuration

Provides Sufficient Connectivity and Scalability Even in Complex Industrial Environments
Equipped with Serial Ports, Ethernet Channels, and USB
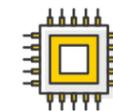
High-Performance Hardware Specifications

Equipped with a Quad-Core CPU for Fast Processing Speeds
Supports 16M Full-Color Display and Vector Image Library
Provides Intuitive UI Operation with Touch-Drag and Memo Functions

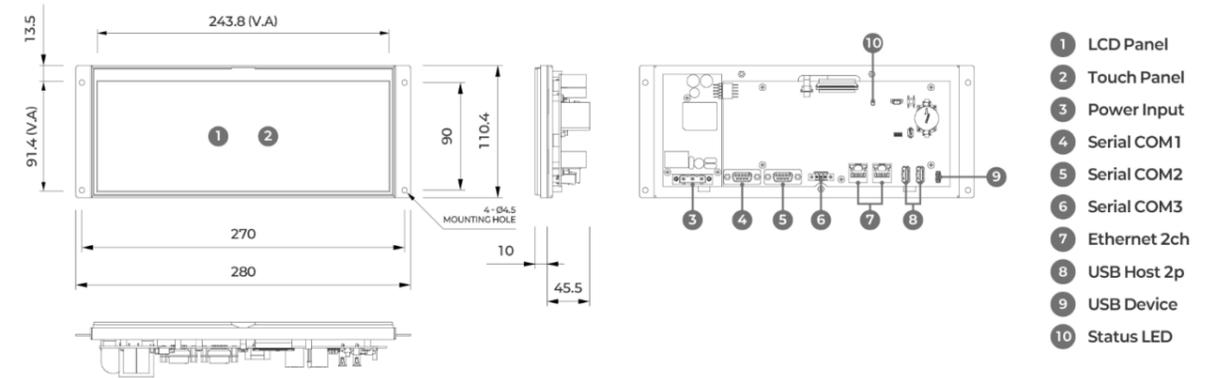### Largest Collection of Industrial Communication Protocols

Provides Extensive Compatibility with Over 400 Controllers
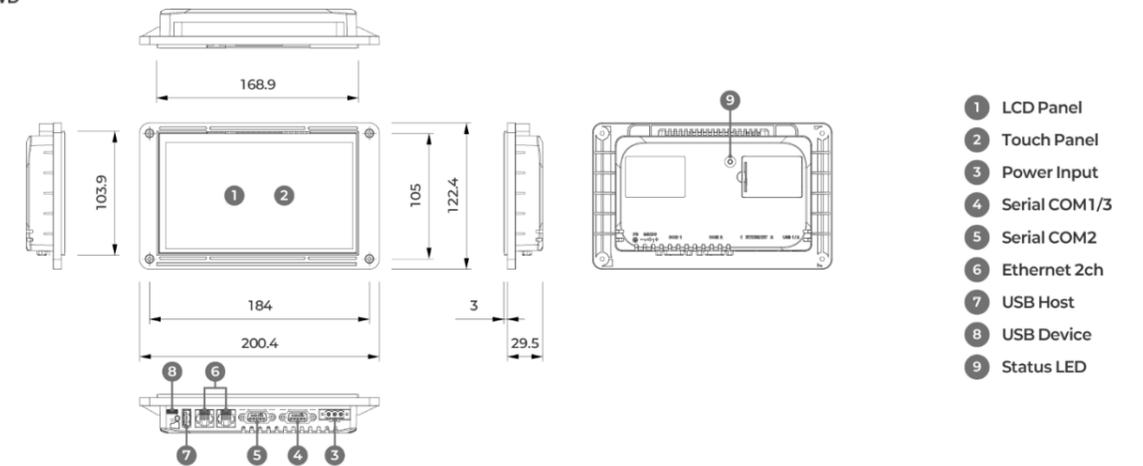Supports Latest Industrial Networks Such as Modbus and EtherNet/IP

TOP RN

TOPRN SPECIFICATIONS

	Functional	TOPRN1000UD	TOPRN0700WD	TOPRN0400WD
Display	Display Type	10.25" TFT Color	7" TFT Color	4.3" TFT Color
	Color	16M Colors		
	Display Area(㎜)	243.84 x 91.44	154.08 x 85.92	95.04 x 53.86
	Resolution(dot)	1280 x 480	800 x 480	480 x 272
	Brightness Level	10 Levels(by software)		
	Backlight Type	LED		
	Backlight Life	50,000 hours		
Touch	Touch Type	Analog resistive film		
	Resolution(Cell)	1280 x 480	800 x 480	480 x 272
	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: DSUB 9pin x 1		RS-232C Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: 12pin Connector
	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		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: 12pin Connector
	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	RS-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	RS-485 Asynchronous Data bit: 7/8 bits, Stop bit: 1/2 bits, Parity bit: None/Odd/Even Baud rate: 2400~115.2kbps Connector: 12pin Connector
	Ethernet	IEEE802.3i/IEEE802.3u, 10BASE-T/100BASE-TX		
		Connector: RJ-45 x 2		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 2		Connector: USB Type A x 1
	USB Device	USB 2.0 Compatible, Max 5m Connector: USB-C x 1		
	Printer	Roll printer(EPSON protocol)		
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	1 LED(Operation) Built in		
Power	Input Voltage	24Vdc(20 ~ 28Vdc)		
	Power Consumption	15W		
	Voltage Sag	24Vdc, Within 10ms		
	Insulation Resistance	500Vdc, 10㏁		
Environment	Operation Temperature(℃)	-10 ~ +50		
	Storage Temperature(℃)	-20 ~ +60		
	Operation Humidity(%RH)	0 ~ 90(No dew)		
	Atmosphere	No corrosive gas		
	Vibration Endurance	Amplitude: 10≤F < 25㎐(2G) X, Y, Z each direction(for 30 minutes)		
	Noise Immunity	1000Vp-p(Pulse width 1μs)		
	Electrostatic Discharge	Connective discharge from EN61000-4-2: ±4㎸		
	Shock Endurance	10G X, Y, Z each direction(for 3 times)		
	Ground Connection	Class 3(100Ω or less)		
	Certification	KC, CE, UL/cUL		
Structure	Panel Cut(㎜)	TBD	155 x 87	97.5 x 56
	External Dimension(㎜)	TBD	200.4 x 122.4 x 32.5	131 x 81 x 19.8
	Weight(kg)	TBD	0.5	0.3
	Cooling System	Natural air circulation		
	Case Material	Plastic		

DRAWING

TOPRN1000UD

1. LCD Panel
2. Touch Panel
3. Power Input
4. Serial COM1
5. Serial COM2
6. Serial COM3
7. Ethernet 2ch
8. USB Host 2p
9. USB Device
10. Status LED

TOPRN0700WD

1. LCD Panel
2. Touch Panel
3. Power Input
4. Serial COM1/3
5. Serial COM2
6. Ethernet 2ch
7. USB Host
8. USB Device
9. Status LED

TOPRN0400WD

1. LCD Panel
2. Touch Panel
3. Power Input
4. Serial COM1/2/3
5. Ethernet
6. USB Device
7. USB Host
8. Status LED
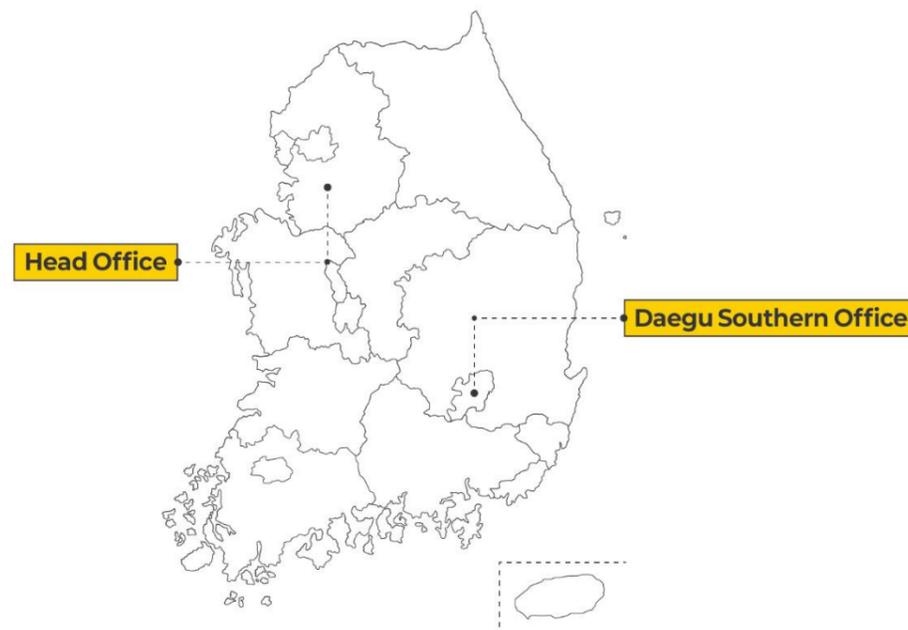
* Detailed Information on Panel Fabrication Can Be Found in the Hardware Manual.

GLOBAL BUSINESS NETWORK

China

More than 20 Overseas Partners

China, the United States, Vietnam, Japan, South Africa, Türkiye, Singapore, Russia, Greece, France, Jordan, Honduras, Nigeria, Indonesia, India, Israel, Iran, Thailand, Malaysia, and more.

Head Office

Daegu Southern Office

More than 40 Domestic Partners

Seoul, Gyeonggi, Daejeon, Daegu, Gwangju, Ulsan, Changwon, Busan, and more.

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KakaoTalk Technical Support

Quickly and Efficiently Resolve Technical Issues
by Sending Real-Time Photos and Videos, Even in Noisy Industrial Environments

On-Site Inspection Service (B/S, Field Visit)

From Checking Aging Products to Consulting for New Replacements,
Experience It All Directly at Your Site Now

Commitment to Our Customers

Dialogue with Customers – Putting Customers First and Creating Value Together
Sustainable Growth – Achieving Reliability and Productivity Through Continuous R&D
Embracing New Changes – A Total Smart Factory Solution Platform Company Based on AX·DX