

**Edge Computing & Smart Manufacturing** 

# Series IloT Edge Computing

A major HMI upgrade that not only retains features of the predecessors but also integrates OT with the IIoT.

#### HMI

- ► Retains all key features of the predecessors.
- Supports more than 300 major PLC drivers. / Excellent computation and communication capability.
- ► EasyAccess 2.0 provides remote HMI Management and pass-through capacities.
- Revamped Web interface allows for HMI screen access and log viewing with only a web browser, plus enhanced security with encrypted data transmission.
- ► The enhanced CPU/GPU power of the quad-core processor ensures smooth operation of HMI project without delay, even with CODESYS running at the same time.
- HMI Program+PLC communication and CODESYS+ I/O module control runs on independent cores of the multi-core CPU, a cutting-edge proprietary technology.

000+ Protocols Supported

pports Modbus, CANopen, EtherNet/IP and EtherCAI





Remote I/O

#### CODESYS

- ► CODESYS runs on an independent core (Optional).
- ▶ Supports Modbus, CANopen, EtherNet/IP and EtherCAT.
- ► Supports applications using I/O modules.

#### **Features**

- ▶ Built-in OPC UA Client / Server, certified by the OPC foundation.
- ▶ Modbus TCP/IP facilitates seamless integration with field devices.
- ▶ MQTT protocol, providing standard implementation as well as easy Cloud IoT tool integration with AWS IoT, Microsoft Azure, and Google Cloud.
- ▶ Database feature supports MySQL and MS SQL systems, making applications like centralized recipe management or ERP integration feasible.

Touch Gesture









- ► cMT3152X / cMT3161X / cMT3162X supports user-configurable touch gesture feature with its IPS, capacitive type multi-touch screen.
- ► cMT3162X supports vibration feedback for event alerts and touch operation.



## GTT G Series IIoT Edge Gateway

Outstanding data processing and communication ability facilitate integration of different brands of PLCs with protocol standards like OPC UA / MQTT / Modbus TCP/IP.

#### **Features**



#### Modbus

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communication protocol used in industria automation application.

#### MQT

MQTT, an built-in IoT protocol standard, features lightweight message transport and publish/subscribe mechanism

3 Major Industrial Communication Protocols

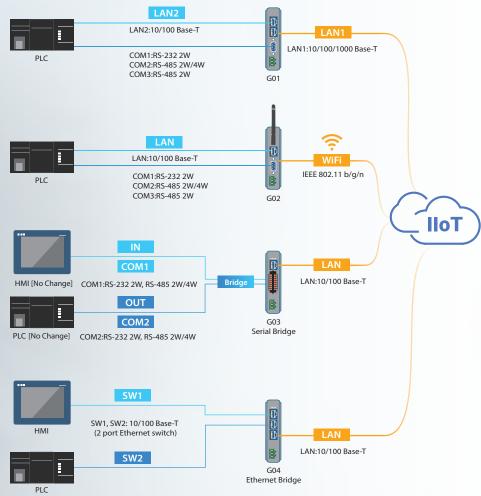


EPC UA

for compliance by the OPC Foundation.
OPC UA is the key industrial communication
protocol that is secure, open-source, and
platform-dependent.

The OPC Foundation compliance logos are the property of OPC Foundation and are used under license.

#### The Easier Bridge to IIoT





- ▶ Dual Ethernet ports and RS-232/485 serial ports with communication support more than 300 major PLC drivers.

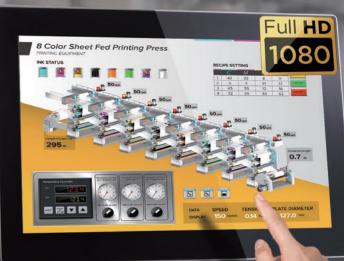
- ▶ OPC UA and MQTT, being widely accepted standards, enable data upload from on-site devices to lloT datacenter.
- ▶ Supports synchronization of sampled data and event log to SQL database.

### HMI with External Touch Monitor / TV of Your Own Choice

#### **Features**



- ▶ Built-in HDMI interface and adjustable resolution up to 1920x1080
- ▶ Supports customized resolution for 16:9 / 4:3 LCD monitor
- ► Support wide input voltage range 24±20%VDC
- ► Support IIoT Protocol: MQTT



HDMI, HDMI High-Definition Multimedia Interface, and the HDMI Logo are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

Without touchscreen and LCD, this HDMI-enabled unit can work with screens of any size, so that screen size is no longer limited by the HMIs provided on the market. It can also allow touch control via USB connection.

cMT-FHDX-220

cMT-iM21







#### **Database Integration**

HMIs can access data, records, or recipes from a database server directly. HMIs send SQL (Structured Query Language) queries to read or write database records. Built-in data samplings and event logs can also be synchronized automatically to database servers.

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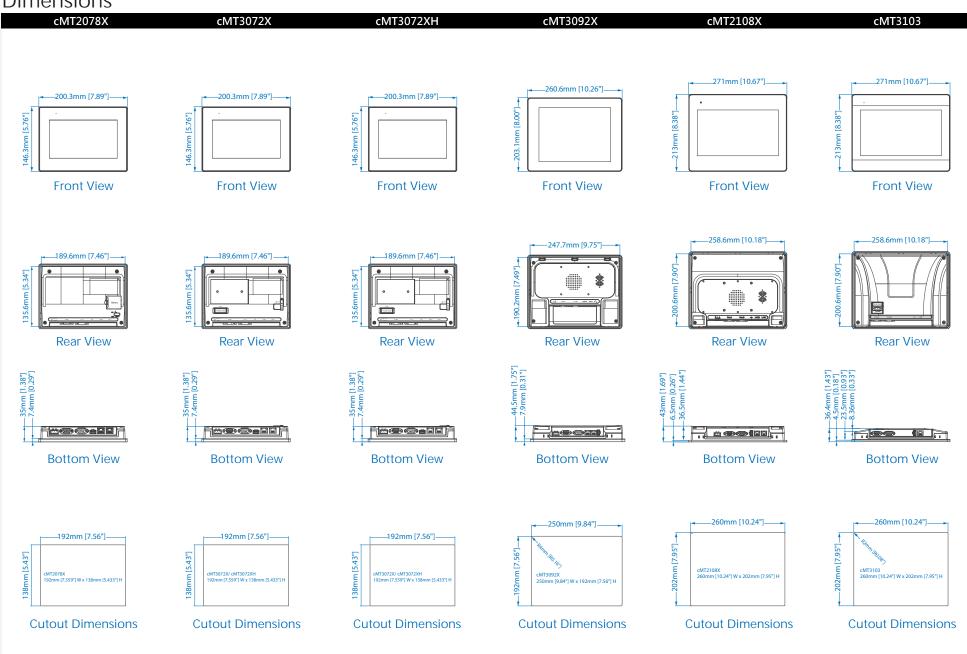






	Model	cMT2078X	cMT3072X	cMT3072XH	cMT3092X	cMT2108X	cMT3103
Display	Display	7" TFT	7" TFT	7" IPS	9.7" TFT	10.1" TFT	10.1" TFT
	Resolution	800 x 480	800 x 480	1024 x 600	1024 x 768	1024 x 600	1024 x 600
	Brightness (cd/ m² )	400	400	450	350	350	350
	Contrast Ratio	800: 1	800: 1	800: 1	500:1	500:1	500:1
	Backlight Type	LED	LED	LED	LED	LED	LED
	Backlight Life Time	>30,000 hrs.	>30,000 hrs.	>25,000 hrs.	>30,000 hrs.	>50,000 hrs.	>50,000 hrs.
	Colors	16.7M	16.7M	16.7M	262K	16.7M	16.7M
	LCD Viewing Angle (T/B/L/R)	60/80/80/80	60/80/80/80	85/85/85/85	60/70/70/70	70/70/80/80	70/70/80/80
	Pixel Pitch (mm)	0.1926(H) x 0.179(V)	0.1926(H) x 0.179(V)	0.1506(H) x 0.1432(V)	0.192(H) x 0.192(V)	0.2175 (H) x 0.2088 (V)	0.2175(H) x 0.2088(V)
uch Panel	Туре	4-wire Resistive Type	4-wire Resistive Type	4-wire Resistive Type	4-wire Resistive Type	4-wire Resistive Type	4-wire Resistive Type
	Accuracy	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%
Memory	Flash	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
	RAM	1 GB	1 GB	1 GB	1 GB	1 GB	1 GB
rocessor		Quad-core 64-bit RISC 1.5GHz	Quad-core 64-bit RISC 1.5GHz	Quad-core 64-bit RISC 1.5GHz	Quad-core 32-bit RISC 1.6GHz	Quad-core 32-bit RISC 1.6GHz	32-bit RISC 1GHz
I/O Port	USB Host	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1
	Ethernet	LAN 1: 10/100 Base-T x 1 LAN 2: 10/100 Base-T x 1	LAN 1: 10/100 Base-T x 1 LAN 2: 10/100 Base-T x 1	LAN 1: 10/100 Base-T x 1 LAN 2: 10/100 Base-T x 1	LAN 1: 10/100/1000 Base-T x 1 LAN 2: 10/100 Base-T x 1	LAN 1: 10/100/1000 Base-T x 1 LAN 2: 10/100 Base-T x 1	10/100 Base-T x 1
	Wi-Fi	N/A	N/A	N/A	N/A	N/A	IEEE 802.11 b/g/n 802.11b: max 19.25 dBm 802.11g: max 13.74 dBm 802.11n: max 15.01 dBm
	COM Port	Con.A: COM2 RS-485 2W/4W, COM3 RS-485 2W Con.B: COM1 RS-232 4W, COM3 RS-232 2W* MPI is not supported.	Con.A: COM2 RS-485 2W/4W, COM3 RS-485 2W, CAN Bus Con.B: COM1 RS-232 4W, COM3 RS-232 2W* MPI is not supported.	Con.A: COM2 RS-485 2W/4W, COM3 RS-485 2W, CAN Bus Con.B: COM1 RS-232 4W, COM3 RS-232 2W*	Con.A: COM2 RS-485 2W/4W, COM3 RS-485 2W, CAN Bus Con.B: COM1 RS-232 4W, COM3 RS-232 2W*	Con.A: COM2 RS-485 2W/4W, COM3 RS-485 2W Con.B: COM1 RS-232 4W, COM3 RS-232 2W* MPI is not supported.	Con.A: COM2 RS-485 2W/4W, COM3 RS-485 2W, CAN Bus Con.B: COM1/COM3 RS-232*
	CAN Bus	N/A	Yes	Yes	Yes	N/A	Yes
	Audio Output	N/A	N/A	N/A	Built-in Mono Speaker	N/A	N/A
RTC		Built-in	Built-in	Built-in	Built-in	Built-in	Built-in
Power	Input Power	24±20%VDC	24±20%VDC	24±20%VDC	24±20%VDC	24±20%VDC	10.5~28VDC
	Power Isolation	Built-in	Built-in	Built-in	Built-in	Built-in	Built-in
	Power Consumption	820mA@24VDC	850mA@24VDC	850mA@24VDC	1A@24VDC	1A@24VDC	2A@12VDC; 1A@24VDC
	Voltage Resistance	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)
	Isolation Resistance	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minut
ecification	PCB Coating	Yes	Yes	Yes	Yes	Yes	Yes
	Enclosure	Plastic	Plastic	Plastic	Plastic	Plastic	Plastic
	Dimensions WxHxD	200.3 x 146.3 x 35.0 mm	200.3 x 146.3 x 35.0 mm	200.3 x 146.3 x 35.0 mm	260.6 x 203.1 x 44.5 mm	271 x 213 x 43 mm	271 x 213 x 36.4 mm
	Panel Cutout	192 x 138 mm	192 x 138 mm	192 x 138 mm	250 x 192 mm	260 x 202 mm	260 x 202 mm
	Weight	Approx. 0.6 kg	Approx. 0.6 kg	Approx. 0.6 kg	Approx. 1 kg	Approx. 1.2 kg	Approx. 1.07 kg
	Mount	Panel mount	Panel mount	Panel mount	Panel mount, VESA mount 75 x 75 mm	Panel mount, VESA mount 75 x 75 mm	Panel mount
vironment	Protection Structure	NEMA4 / IP66 Compliant Front Panel	UL Type 4X (indoor use only) / NEMA4 / IP66 Compliant Front Panel	UL Type 4X (indoor use only) / NEMA4 / IP66 Compliant Front Panel	UL Type 4X (indoor use only) / NEMA4 / IP66 Compliant Front Panel	NEMA4 / IP66 Compliant Front Panel	UL Type 4X (indoor use only) NEMA4 / IP66 Compliant Front Panel
	Storage Temperature	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)	0° ~ 55° C (32° ~ 131° F)	0° ~ 55° C (32° ~ 131° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)
	Relative Humidity	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing
ertificate	CE	CE marked	CE marked	CE marked	CE marked	CE marked	CE marked
	UL		cULus Listed	cULus Listed	cULus Listed		cULus Listed
Software		EasyBuilder Pro EasyAccess 2.0 (Optional) CODESYS (Optional)	EasyBuilder Pro EasyAccess 2.0 (Optional) CODESYS (Optional)	EasyBuilder Pro EasyAccess 2.0 (Optional) CODESYS (Optional)	EasyBuilder Pro Built-in EasyAccess 2.0 CODESYS (Optional)	EasyBuilder Pro EasyAccess 2.0 (Optional) CODESYS (Optional)	EasyBuilder Pro Built-in EasyAccess 2.0

<sup>\*</sup>cMT2078X/ cMT3072X/ cMT3072XH/ cMT3092X/ cMT2108X/ cMT3103: Only Tx & Rx (no RTS/CTS) may be used for COM1 RS-232 when COM3 RS-232 is also used.





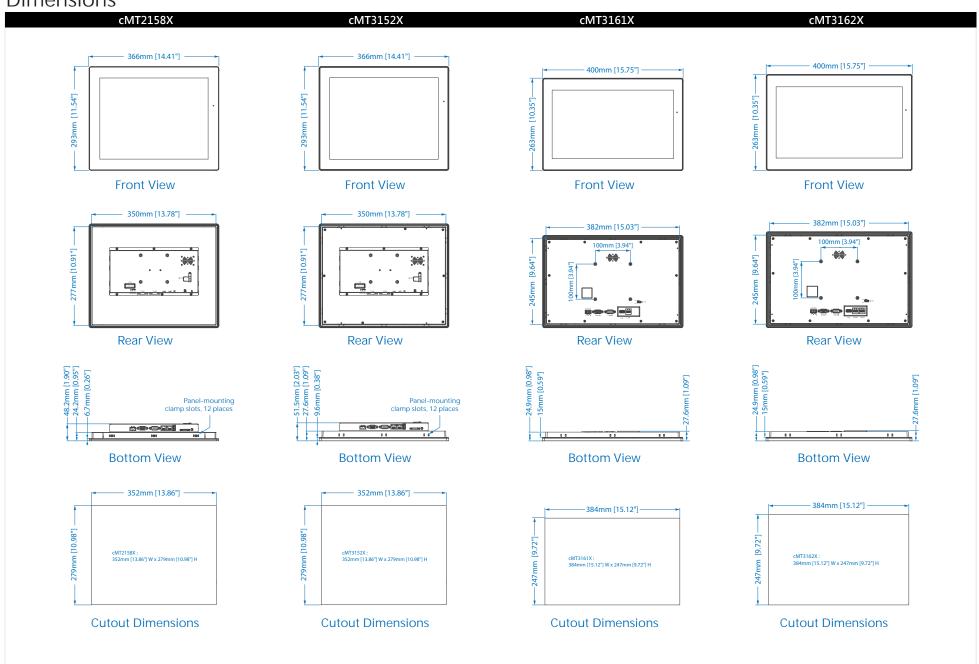




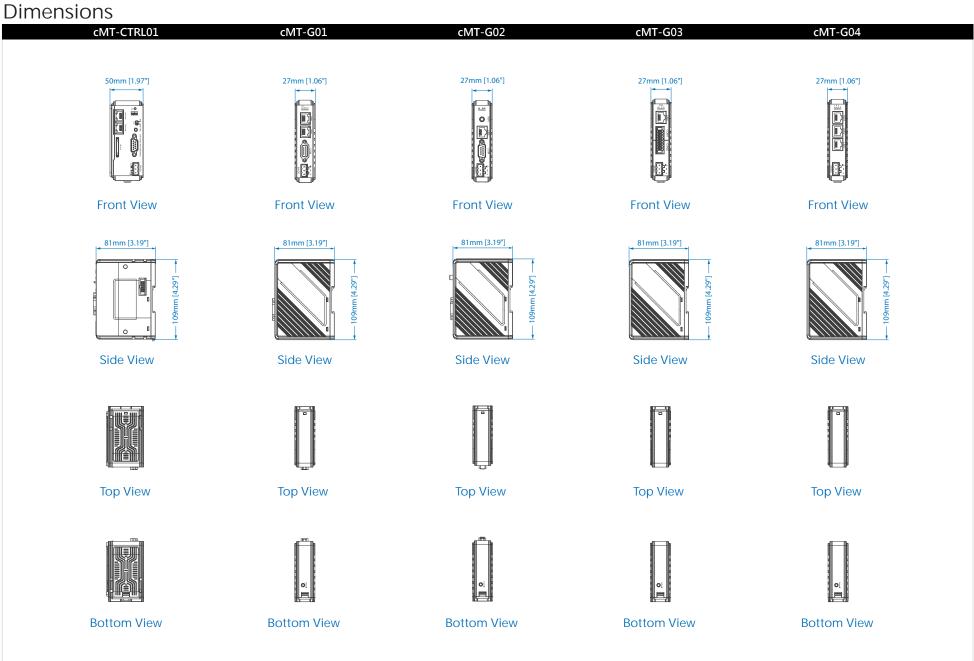


	Model	cMT2158X	cMT3152X	cMT3161X	cMT3162X
Display	Display	15" IPS	15" IPS	15.6" IPS	15.6" IPS
	Resolution	1024 x 768	1024 x 768	1920 x 1080	1920 x 1080
	Brightness (cd/ m² )	400	400	300	300
	Contrast Ratio	1000: 1	1000: 1	800: 1	800: 1
	Backlight Type	LED	LED	LED	LED
	Backlight Life Time	>50,000 hrs.	>50,000 hrs.	>30,000 hrs.	>30,000 hrs.
	Colors	16.2M	16.2M	16.2M	16.2M
	LCD Viewing Angle (T/B/L/R)	89/89/89/89	89/89/89/89	89/89/89/89	89/89/89/89
	Pixel Pitch (mm)	0.297(H) x 0.297(V)	0.297(H) x 0.297(V)	0.17925(H) x 0.17925(V)	0.17925(H) x 0.17925(V)
ouch Panel	Туре	4-wire Resistive Type	Tempered Glass, Capacitive Type* Hardness Scale 7H	Tempered Glass, Capacitive Type* Hardness Scale 7H	Tempered Glass, Capacitive Type* Hardness Scale 7H
	Accuracy	Active Area Length(X)±2%, Width(Y)±2%	N/A	N/A	N/A
Memory	Flash	4 GB	4 GB	4 GB	4 GB
	RAM	1 GB	1 GB	1 GB	1 GB
rocessor		Quad-core 32-bit RISC 1.6GHz	Quad-core 32-bit RISC 1.6GHz	Quad-core 32-bit RISC 1.6GHz	Quad-core 32-bit RISC 1.6GHz
I/O Port	SD Card Slot	SD/SDHC	SD/SDHC	N/A	N/A
•	USB Host	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1
	Ethernet	LAN 1: 10/100/1000 Base-T x 1 LAN 2: 10/100 Base-T x 1	LAN 1: 10/100/1000 Base-T x 1 LAN 2: 10/100 Base-T x 1	10/100 Base-T x 1	LAN 1: 10/100/1000 Base-T x 1 LAN 2: 10/100 Base-T x 1
	Wi-Fi	N/A	N/A	N/A	N/A
	COM Port	Con.A: COM1 RS-485 2W/4W, COM3 RS-485 2W Con.B: COM1 RS-232 4W, COM3 RS-232 2W* MPI is not supported.	Con.A: COM1 RS-485 2W/4W, COM3 RS-485 2W, CAN Bus Con.B: COM1 RS-232 4W, COM3 RS-232 2W*	Con.A: COM1 RS-485 2W/4W, COM3 RS-485 2W Con.B: COM1 RS-232 4W, COM3 RS-232 2W* MPI is not supported.	Con.A: COM1 RS-485 2W/4W, COM3 RS-485 2W, CAN Bus Con.B: COM1 RS-232 4W, COM3 RS-232 2W*
	RS-485 Dual Isolation	Yes	Yes	N/A	N/A
	CAN Bus	N/A	Yes	N/A	Yes
	Audio Output	Built-in Mono Speaker Audio Line Out - 3.5 mm jack x 1	Built-in Mono Speaker Audio Line Out - 3.5 mm jack x 1	Built-in Mono Speaker	Built-in Mono Speaker
RTC		Built-in	Built-in	Built-in	Built-in
Power	Input Power	24±20%VDC	24±20%VDC	24±20%VDC	24±20%VDC
	Power Isolation	Built-in	Built-in	Built-in	Built-in
	Power Consumption	1.3A@24VDC	1.3A@24VDC	1.3A@24VDC	1.3A@24VDC
	Voltage Resistance	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)
	Isolation Resistance	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)
ecification	PCB Coating	Yes	Yes	Yes	Yes
	Enclosure	Aluminum	Front bezel: Plastic, Rear Enclosure: Aluminum	Front bezel: Plastic, Rear Enclosure: Aluminum	Front bezel: Plastic, Rear Enclosure: Aluminun
	Dimensions WxHxD	366 x 293 x 48.2mm	366 x 293 x 51.5 mm	400 x 263 x 27.6 mm	400 x 263 x 27.6 mm
	Panel Cutout	352 x 279 mm	352 x 279 mm	384 x 247 mm	384 x 247 mm
	Weight	Approx. 2.6 kg	Approx. 2.75 kg	Approx. 1.6 kg	Approx. 1.6 kg
	Mount	Panel mount, VESA mount 75 x 75 mm	Panel mount, VESA mount 75 x 75 mm	Panel mount, VESA mount 100 x 100 mm	Panel mount, VESA mount 100 x 100 mm
vironment	Protection Structure	NEMA4 / IP66 Compliant Front Panel	NEMA4 / IP66 Compliant Front Panel	NEMA4 / IP66 Compliant Front Panel	NEMA4 / IP66 Compliant Front Panel
	Storage Temperature	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)
	Operating Temperature	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)
	Relative Humidity	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)
ertificate	CE	CE marked	CE marked	CE marked	CE marked
	UL		cULus Listed		cULus Listed
Software		EasyBuilder Pro EasyAccess 2.0 (Optional) CODESYS (Optional)	EasyBuilder Pro Built-in EasyAccess 2.0 CODESYS (Optional)	EasyBuilder Pro EasyAccess 2.0 (Optional)	EasyBuilder Pro EasyAccess 2.0 (Optional) CODESYS (Optional)

<sup>\*</sup>cMT2158X/ cMT3152X/ cMT3161X/ cMT3162X: Only Tx & Rx (no RTS/CTS) may be used for COM1 RS-232 when COM3 RS-232 is also used. \*cMT3152X/ cMT3161X/ cMT3162X: Supports multi-touch gestures. \*cMT3162X: Supports vibrational feedback.



<i>-</i>	cation					
	Model	cMT-CTRL01	cMT-G01	cMT-G02	cMT-G03	cMT-G04
Memory	Flash	4 GB	256 MB	256 MB	256 MB	256 MB
	RAM	512 MB	256 MB	256 MB	256 MB	256 MB
	Data, Memory, Code	3 MB	N/A	N/A	N/A	N/A
	Retain area	16 KB (every minute) (Kept after reboots)	N/A	N/A	N/A	N/A
	Persistent area	16 KB (every minute) (Kept after downloads)	N/A	N/A	N/A	N/A
	File system	8MB	N/A	N/A	N/A	N/A
Processor		Dual-Core 32 bits RISC 1GHz	32-bit RISC 600MHz	32-bit RISC 600MHz	32-bit RISC 528MHz	32-bit RISC 528MHz
I/O Port	SD Card Slot	SD/SDHC	N/A	N/A	N/A	N/A
	Ethernet	Ethernet 1: 10/100/1000 Base-T x 1 Ethernet 2: 10/100 Base-T x 1	LAN 1: 10/100/1000 Base-T x 1 LAN 2: 10/100 Base-T x 1	10/100 Base-T x 1	10/100 Base-T x 1	LAN: 10/100 Base-T x 1 SW1, SW2: 10/100 Base-T x 1 (2 port Ethernet switch)
	Wi-Fi	N/A	N/A	IEEE 802.11 b/g/n 802.11b: max 15.88 dBm 802.11g: max 11.92 dBm 802.11n: max 11.28 dBm	N/A	N/A
	COM Port	COM1: RS-232 2W COM2: RS-485 2W/4W COM3: RS-485 2W	COM1: RS-232 2W COM2: RS-485 2W/4W COM3: RS-485 2W	COM1: RS-232 2W COM2: RS-485 2W/4W COM3: RS-485 2W	COM1: RS-232 2W, RS-485 2W/4W COM2: RS-232 2W, RS-485 2W/4W	N/A
	Local bus	iBus	N/A	N/A	N/A	N/A
CODESYS	Protocol	Modbus TCP/IP Master, EtherCAT Master	N/A	N/A	N/A	N/A
RTC		Built-in	Built-in	Built-in	Built-in	Built-in
Power	Input Power	24±20%VDC	24±20%VDC	10.5~28VDC	10.5~28VDC	10.5~28VDC
	Power Isolation	Built-in	Built-in	Built-in	Built-in	Built-in
	Current for Internal Bus	Max 2A@5VDC	N/A	N/A	N/A	N/A
	Current Consumption	550mA@5VDC	N/A	N/A	N/A	N/A
	Power Consumption	Nominal 310mA@24VDC	230mA@24VDC	230mA@12VDC; 115mA@24VDC	300mA@12VDC; 150mA@24VDC	270mA@12VDC; 150mA@24VDC
	Voltage Resistance	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)
	Isolation Resistance	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)
pecification	PCB Coating	Yes	Yes	Yes	Yes	Yes
	Enclosure	Plastic	Plastic	Plastic	Plastic	Plastic
	Dimensions WxHxD	50 x 109 x 81 mm	27 x 109 x 81 mm	27 x 109 x 81 mm	27 x 109 x 81 mm	27 x 109 x 81 mm
	Weight	Approx. 0.24 kg	Approx. 0.14 kg	Approx. 0.14 kg	Approx. 0.14 kg	Approx. 0.14 kg
	Mount	35 mm DIN rail mounting	35 mm DIN rail mounting	35 mm DIN rail mounting	35 mm DIN rail mounting	35 mm DIN rail mounting
nvironment	Protection Structure	IP20	IP20	IP20	IP20	IP20
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)
	Operating Temperature	-10° ~ 50° C (14° ~122° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)
	Relative Humidity	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)
Certificate	CE	CE marked	CE marked	CE marked	CE marked	CE marked
	UL	cULus Listed	cULus Listed	cULus Listed	cULus Listed	cULus Listed
Software		EasyBuilder Pro EasyAccess 2.0 (Optional) Built-in CODESYS	EasyBuilder Pro EasyAccess 2.0 (Optional)	EasyBuilder Pro EasyAccess 2.0 (Optional)	EasyBuilder Pro EasyAccess 2.0 (Optional)	EasyBuilder Pro EasyAccess 2.0 (Optional)



	Model	cMT-SVR-100 cMT-SVR-102	cMT-SVR-200 cMT-SVR-202	cMT-FHDX-220	cMT-iM21	
Display	Display	N/A	N/A	N/A	21.5" IPS	
	Resolution	N/A	N/A	N/A	Full HD 1920 x 1080	
	Brightness (cd/ m²)	N/A	N/A	N/A	250	
	Contrast Ratio	N/A	N/A	N/A	1000: 1	
	Backlight Type	N/A	N/A	N/A	LED	
	Backlight Life Time	N/A	N/A	N/A	>50,000 hrs.	
	Colors	N/A	N/A	N/A	16.7M	
	LCD Viewing Angle (T/B/L/R)	N/A	N/A	N/A	89/89/89	
	Pixel Pitch (mm)	N/A	N/A	N/A	0.2479 (H) x 0.2479 (V)	
Touch Panel	Туре	N/A	N/A	N/A	Tempered Glass, Capacitive Type (Supports 2-Finger Gestures) Hardness Scale 6H	
Memory	Flash	256 MB	256 MB	4 GB	N/A	
	RAM	256 MB	256 MB	1 GB	N/A	
Processor		32-bit RISC 600MHz	32-bit RISC 600MHz	Quad-core 32-bit RISC 1.6GHz	N/A	
I/O Port	SD Card Slot	SD/SDHC	SD/SDHC	N/A	N/A	
	USB Host	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	
	USB Client	N/A	N/A	N/A	USB 2.0 x 1 (Micro USB)	
	Ethernet	10/100/1000 Base-T x 2	10/100/1000 Base-T x 1	LAN 1: 10/100/1000 Base-T x 1 LAN 2: 10/100 Base-T x 1	N/A	
	Wi-Fi	N/A	IEEE 802.11 b/g/n 802.11b: max 18.01 dBm 802.11g: max 11.02 dBm 802.11n: max 12.20 dBm	N/A	N/A	
	COM Port	COM1: RS-232 COM2: RS-485 2W/4W COM3: RS-485 2W	COM1: RS-232 COM2: RS-485 2W/4W COM3: RS-485 2W	COM1: RS-232 COM2: RS-485 2W/4W COM3: RS-485 2W	N/A	
	HDMI	N/A	N/A	Customizable (max. resolution 1920 x 1080)	Yes ( Video Input )	
	Recommended Resolutions (Please use these recommended screen resolutions to avoid compatibility issues.)	N/A	N/A	720x480 720x576 800x600 1024x768 1280x720 1366x768 1920x1080	N/A	
	Audio Output	N/A	N/A	HDMI Audio Output	N/A	
RTC		Built-in	Built-in	Built-in	N/A	
Power	Input Power	24±20%VDC	10.5~28VDC	24±20%VDC	24±20%VDC	
	Power Isolation	Built-in	Built-in	Built-in	Built-in	
	Power Consumption	230mA@24VDC	1000mA@12VDC; 450mA@24VDC	850mA@24VDC	1.56A@24VDC	
	Voltage Resistance	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	
	Isolation Resistance	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	
pecification	PCB Coating	Yes	Yes	Yes	Yes	
	Enclosure	Plastic	Plastic	Plastic	Aluminum	
	Dimensions WxHxD	27 x 130 x 115 mm	27 x 130 x 115 mm	29.8 x 130 x 115 mm	546 x 354 x 56.2 mm	
	Panel Cutout	N/A	N/A	N/A	532 x 340 mm	
	Weight	Approx. 0.18 kg	Approx. 0.18 kg	Approx. 0.24 kg	Approx. 4.9 kg	
	Mount	35 mm DIN rail mounting	35 mm DIN rail mounting	35 mm DIN rail mounting	Panel mount, VESA mount 100 x 100 mm	
vironment	Protection Structure	IP20	IP20	IP20	NEMA4 / IP65 Compliant Front Panel*	
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)	-20° ~ 70° C (-4° ~ 158° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	
	Operating Temperature	-20° ~ 55° C (-4° ~ 131° F)	-10° ~ 55° C (14° ~ 131° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)	
	Relative Humidity	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	
Certificate	CE	CE marked	CE marked	CE marked	CE marked	
	UL	cULus Listed	cULus Listed	cULus Listed	cULus Listed	
Software	ÖL.	EasyBuilder Pro EasyAccess 2.0 (Optional) EasyBuilder Pro Built-in EasyAccess 2.0	EasyBuilder Pro EasyAccess 2.0 (Optional) EasyBuilder Pro Built-in EasyAccess 2.0	EasyBuilder Pro EasyAccess 2.0 (Optional) CODESYS (Optional)	N/A	

<sup>\*</sup>cMT-iM21: Protection Structure IP65 can be expected when waterproof gasket is properly installed.

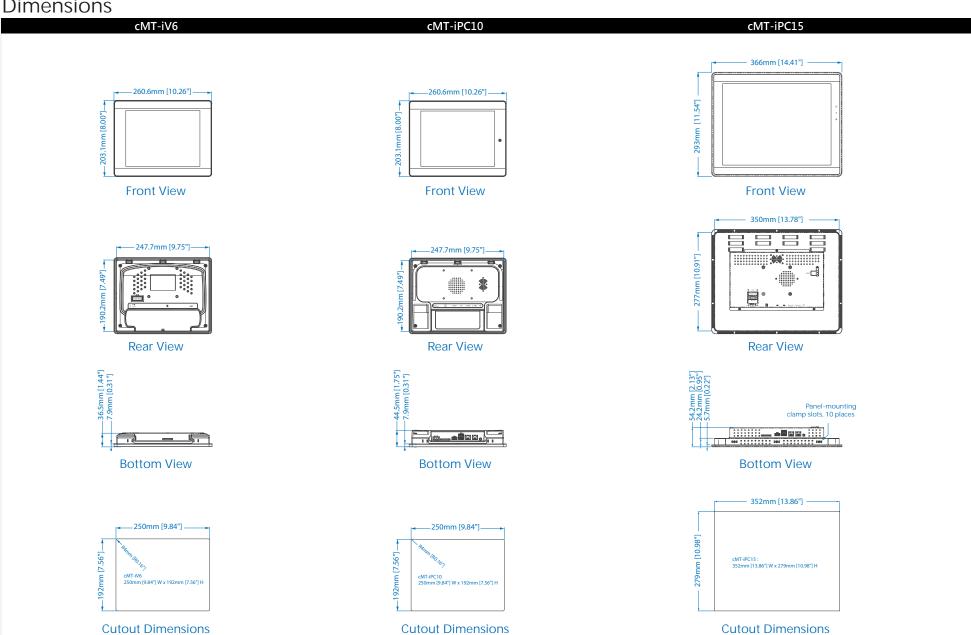






	Model	cMT-iV6	cMT-iPC10	cMT-iPC15	
Display	Display	9.7" TFT	9.7" TFT	15" IPS	
	Resolution	1024 x 768	1024 x 768	1024 x 768	
	Brightness (cd/ m² )	350	350	400	
	Contrast Ratio	500: 1	500: 1	1000: 1	
	Backlight Type	LED	LED	LED	
	Backlight Life Time	>30,000 hrs.	>30,000 hrs.	>50,000 hrs.	
	Colors	262K	262K	16.2M	
	LCD Viewing Angle (T/B/L/R)	60/70/70/70	60/70/70/70	89/89/89	
	Pixel Pitch (mm)	0.192 (H) x 0.192 (V)	0.129 (H) x 0.129 (V)	0.297(H) x 0.297(V)	
Touch Panel	Туре	4-wire Resistive Type	4-wire Resistive Type	4-wire Resistive Type	
	Accuracy	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%	
Memory	Flash	4 GB	64 GB (SSD)	64 GB (SSD)	
	RAM	1 GB	4 GB	4 GB	
Processor		32-bit RISC 1GHz	Intel Atom® E3827 processor	Intel Atom® E3827 processor	
I/O Port	SD Card Slot	SD/SDHC	SD/SDHC/SDXC	SD/SDHC/SDXC	
	USB Host	N/A	USB 2.0 x 2 / USB 3.0 x 1	USB 2.0 x 2 / USB 3.0 x 1	
	Ethernet	10/100/1000 Base-T x 1	10/100/1000 Base-T x 2	10/100/1000 Base-T x 2	
	Audio Output	Built-in Mono Speaker	Built-in Mono Speaker Audio Line Out - 3.5 mm Jack x 1	Built-in Mono Speaker Audio Line Out - 3.5 mm Jack x 1	
RTC		Built-in	Built-in	Built-in	
Power	Input Power	24±20%VDC	24±20%VDC	24±20%VDC	
	Power Isolation	Built-in	Built-in	Built-in	
	Power Consumption	900mA@24VDC	1.5A@24VDC	2A@24VDC	
	Voltage Resistance	500VAC (1 min.)	500VAC (1 min.)	500VAC (1 min.)	
	Isolation Resistance	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	Exceed 50MΩ @ 500VDC	
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	
Specification	PCB Coating	Yes	Yes	Yes	
	Enclosure	Plastic	Plastic	Aluminum	
	Dimensions WxHxD	260.6 x 203.1 x 36.5 mm	260.6 x 203.1 x 44.5 mm	366 x 293 x 54.2 mm	
	Panel Cutout	250 x 192 mm	250 x 192 mm	352 x 279 mm	
	Weight	Approx. 0.92 kg	Approx. 1.1 kg	Approx. 2.76 kg	
	Mount	Panel mount, VESA mount 75 x 75 mm	Panel mount, VESA mount 75 x 75 mm	Panel mount, VESA mount 75 x 75 mm	
Environment	Protection Structure	NEMA4 / IP65 Compliant Front Panel	UL Type 4X (indoor use only) / NEMA4 / IP65 Compliant Front Panel	UL Type 4X (indoor use only) / NEMA4 / IP65 Compliant Front Panel	
	Storage Temperature	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 60° C (-4° ~ 140° F)	-20° ~ 70° C (-4° ~ 158° F)	
	Operating Temperature	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)	0° ~ 50° C (32° ~ 122° F)	
	Relative Humidity	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	
Certificate	CE	CE marked	CE marked	CE marked	
	UL		cULus Listed	cULus Listed	
Software		cMT Viewer	*Windows® 7 / Windows® 8.1 / Windows® 10 IoT Enterprise (EasyLauncher + cMT Viewer)	*Windows® 7 / Windows® 8.1 / Windows® 10 IoT Enterprise (EasyLauncher + cMT Viewer)	

<sup>\*</sup>cMT-iPC10/ cMT-iPC15: License of Windows OS is excluded.
\*Intel Atom is a trademark of Intel Corporation or its subsidiaries in the U.S. and/or other countries.



### iRSeries







#### Communication Interface Specifications

	Model	iR-ETN	iR-COP	iR-ECAT
Expansion I/O module	Number of Bus Terminals	Depends on Power Consumption	Depends on Power Consumption	Depends on Power Consumption
	Digital Input Point	Max. 256	Max. 256	Max. 256
	Digital Output Point	Max. 128	Max. 128	Max. 128
	Analog Input Channel	Max. 64	Max. 64	Max. 64
	Analog Output Channel	Max. 64	Max. 64	Max. 64
Data Transfer Rate		10/100 Mbps	50k~1 Mbps	100 Mbps
Max. Number of TCP/IP Connections		8 Connections	-	-
Protocol		Modbus TCP/IP Server, EtherNet/IP ™	CANopen Slave	EtherCAT® Slave
Power	Power Supply	24 VDC (-15%/+20%)	24 VDC (-15%/+20%)	24 VDC (-15%/+20%)
	Power Dissipation	Nominal 100mA@24VDC	Nominal 100mA@24VDC	Nominal 100mA @ 24VDC
	Current for Internal Bus	Max 2A@5VDC	Max 2A@5VDC	Max 2A@5VDC
	Current Consumption	220mA@5VDC	170mA@5VDC	270mA@5VDC
	Electrical Isolation	Network to Logic : Isolation Logic to Field power : Isolation	Isolated CANopen : Yes Isolated power : Yes	Network to Logic : Isolation Logic to Field power : Isolation
	Back-up Fuse	≤ 1.6A Self-recovery	≤ 1.6A Self-recovery	≤ 1.6A Self-recovery
Specification	PCB Coating	Yes	Yes	Yes
	Enclosure	Plastic	Plastic	Plastic
	Dimensions WxHxD	27 x 109 x 81 mm	27 x 109 x 81 mm	27 x 109 x 81 mm
	Weight	Approx. 0.15 kg	Approx. 0.15 kg	Approx. 0.15 kg
	Mount	35mm DIN rail mounting	35mm DIN rail mounting	35mm DIN rail mounting
Environment	Protection Structure	IP20	IP20	IP20
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)	-20° ~ 70° C (-4° ~ 158° F)	-20° ~ 70° C (-4° ~ 158° F)
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)	0° ~ 55° C (32° ~ 131° F)	0° ~ 55° C (32° ~ 131° F)
	Relative Humidity	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)	10% ~ 90% (non-condensing)
Certification	EMC Immunity	Conforms to EN 55032: 2012+AC: 2013, Class A EN 61000-6-4: 2007+A1:2011 EN 55024: 2010+A1: 2015 EN 61000-6-2:2005	Conforms to EN 55032: 2012+AC: 2013, Class A EN 61000-6-4: 2007+A1:2011 EN 55024: 2010+A1: 2015 EN 61000-6-2:2005	Conforms to EN 55032: 2012+AC: 2013, Class A EN 61000-6-4: 2007+A1:2011 EN 55024: 2010+A1: 2015 EN 61000-6-2:2005
	UL	cULus Listed	cULus Listed	cULus Listed

#### Digital Input/Output Specifications

J 1		_	_				_
	Model	iR-DI16-K	iR-DM16-P	iR-DM16-N	iR-DQ16-P	iR-DQ16-N	iR-DQ08-R
Input Logic		Sink or Source	Sink or Source	Sink or Source	N/A	N/A	N/A
Number of Inputs		16	8	8	0	0	0
Output Logic		N/A	Source	Sink	Source	Sink	Relay
Number of Outputs		0	8	8	16	16	8
<b>Current Consumption</b>		83mA@5VDC	130mA@5VDC	130mA@5VDC	196mA@5VDC	205mA@5VDC	220mA@5VDC
HIGH Level Input Voltage		15~28VDC	15~28VDC	15~28VDC	N/A	N/A	N/A
LOW Level Input Voltage		0~5 VDC	0~5 VDC	0~5 VDC	N/A	N/A	N/A
Output Voltage		N/A	11~28VDC	11~28VDC	11~28VDC	11~28VDC	250VAC/ 30VDC
Output Current		N/A	0.5A per channel (Max 4A)	0.5A per channel (Max 4A)	0.5A per channel (Max 4A)	0.5A per channel (Max 4A)	2A per channel (Max 8A)
Specification	Enclosure	Plastic					
	Dimensions WxHxD	27 x 109 x 81 mm					
	Weight	Approx. 0.12 kg					Approx. 0.13 kg
	Mount	35mm DIN rail mounting					
Environment	Protection Structure	IP20					
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)					
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)					
	Relative Humidity	10% ~ 90% (non-condensing	g)				
Connection	Cross-section	AWG 28-16					AWG 24-16
Certification	EMC Immunity	Conforms to EN 55032: 2012+AC: 2013, C	Class A; EN 61000-6-4: 2007+A1:2	2011; EN 55024: 2010+A1: 2015;	EN 61000-6-2:2005		
	UL	cULus Listed					



	Model	iR-AI04-VI	iR-AM06-VI	iR-AQ04-VI
Number of Analog Inputs		4 (±10V/ ±20mA)	4 (±10V/ ±20mA)	0
Number of Analog outputs		0	2 (±10V/ ±20mA)	4 (±10V/ ±20mA)
<b>Current Consumption</b>		70mA@5VDC	70mA@5VDC	65mA@5VDC
Analog Power Supply		24 VDC(20.4 VDC~28.8 VDC) (-15%~+20%)	24 VDC(20.4 VDC~28.8 VDC) (-15%~+20%)	24 VDC(20.4 VDC~28.8 VDC) (-15%~+20%)
Specification	PCB Coating	Yes		
	Enclosure	Plastic		
	Dimensions WxHxD	27 x 109 x 81 mm		
	Weight	Approx. 0.12 kg		
	Mount	35mm DIN rail mounting		
Environment	Protection Structure	IP20		
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)		
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)		
	Relative Humidity	10% ~ 90% (non-condensing)		
Connection	Cross-section	AWG 28-16		AWG 24-16
Certification	EMC Immunity	Conforms to EN 55032: 2012+AC: 2013, Class A; EN 61000-6-4: 2007+A1:	2011; EN 55024: 2010+A1: 2015; EN 61000-6-2:2005	
	UL	cULus Listed		

#### Temperature Specifications



	Model	iR-Al04-TR
Number of Input Channels		4 (RTD/ Thermocouple)
Current Consumption		65mA@5VDC
Analog Power Supply		24 VDC(20.4 VDC~28.8 VDC) (-15%~+20%)
Specification	PCB Coating	Yes
	Enclosure	Plastic
	Dimensions WxHxD	27 x 109 x 81 mm
	Weight	Approx. 0.12 kg
	Mount	35mm DIN rail mounting
Environment	Protection Structure	IP20
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)
	Relative Humidity	10% ~ 90% (non-condensing)
Connection	Cross-section	AWG 28-16
Certification	EMC Immunity	Conforms to EN 55032: 2012+AC: 2013, Class A; EN 61000-6-4: 2007+A1:2011; EN 55024: 2010+A1: 2015; EN 61000-6-2:2005
	UL	cULus Listed

#### Motion Control Specifications

	Model		iR-PU01-P
		Digital input/ output	Differential input/ output
Input Logic		Sink Input	Differential Input
Number of Inputs		4	3 (A/B/Z phase)
Output Logic		Source Output	Differential Output
Number of Outputs		4	2(A/B phase )
HIGH Level Input Voltage		15~28 VDC	·
LOW Level Input Voltage		0~5 VDC	·
Input current		24 VDC, 5 mA	Meets the Requirements of ANSI Standards TIA/EIA-485-A
Input Impedance		3 ΚΩ	·
System Indicators		Red LED Input State	
Output Voltage		24VDC	Meets the Requirements of ANSI Standards TIA/EIA-485-A
Output Current		50 mA	
Maximum input frequency		200KHz	2MHz
Maximum Output frequency		40KHz	2MHz
Specification	Number of Axis	1- Axis	
	PCB Coating	Yes	
	Enclosure	Plastic	
	Dimensions WxHxD	27 x 109 x 81 mm	
	Weight	Approx. 0.12 kg	
	Mount	35mm DIN rail mounting	
Environment	Protection Structure	IP20	
	Storage Temperature	-20° ~ 70° C (-4° ~ 158° F)	
	Operating Temperature	0° ~ 55° C (32° ~ 131° F)	
	Relative Humidity	10% ~ 90% (non-condensing)	
Connection	Cross-section	AWG 28-16	
Certification	EMC Immunity	Conforms to EN 55032: 2012+AC: 2013, Class A; EN	l 61000-6-4: 2007+A1:2011; EN 55024: 2010+A1: 2015; EN 61000-6-2:2005
	UL	cULus Listed	

Advanced Model

#### **Quick Feature Comparison**

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	cMT2078X	cMT3072X cMT3072XH	cMT3092X	cMT2108X	cMT2158X	cMT3152X	cMT3161X	cMT3162X	cMT-FHDX-220	cMT-SVR-100 cMT-SVR-200	Gateway cMT-G01 / cMT- cMT-G03 / cMT-	G02 cMT-CTRI G04
Audio Output			•		•	•	•	•	via HDMI			
Wi-Fi										cMT-SVR-200	cMT-G02	
CAN Bus		•	•			•		•				
Siemens MPI		cMT3072XH	•			•		•	•	•	•	•
Vibration Feedback								•				
Touch Gesture						•	•	•				
3G/4G Dongle	•	•	•	•	•	•	•	•	•	•		
cMT Viewer	•	•	•	•	•	•	•	•	•	•		
EasyWeb 2.0	•	•	•	•	•	•	•	•	•			
WebView	•	•	•	•	•	•	•	•	•			
VNC Server	•	•	•	•	•	•	•	•	•			
arcode Scanner (Android)		•	•			•		•	•	•		
Event Bar Chart		•	•			•		•	•	•		
IP Camera/Media Player	•	•	•	•	•	•	•	•	•			
Picture View File Browser PDF Reader	•	•	•	•	•	•	•	•	•			
PLC Web Browser		•	•			•		•				
Energy Demand		•	•			•		•	•	•		
MQTT	•	•	•	•	•	•	•	•	•	•	•	•
OPC UA Client	•	•	•	•	•	•	•	•	•	•	•	•
OPC UA Server		•	•			•		•	Optional	Optional	•	•
Database Server		•	•			•		•	•	•	•	•
SQL Query		•	•			•		•	•	•	• *	•
CODESYS	Optional	Optional	Optional	Optional	Optional	Optional		Optional	Optional			•
EasyAccoss 2.0	Ontional	Ontional	Built-in License	Ontional	Ontional	Built-in License	Ontional	Ontional	Optional	cMT-SVR-100 cMT-SVR-200 Optional	Ontional	Ontion
EasyAccess 2.0	Optional	Optional	Duiit-iii License	Optional	Optional	Duilt-iii License	Optional	Optional	Optional	cMT-SVR-102 cMT-SVR-202 Built-in License	Optional	Optio

<sup>\*</sup>Applicable software version: EasyBuilder Pro V6.05.02 or later.

Standard Model



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The company's missions are to provide its customers with quality products and superior service as well as to share the fruits of its good teamwork with all of its employees, by which we are able to achieve the goals of establishing a reputation as a leading brand in the industry and ensuring sustainability of the operation and development of enterprise.