CIMON XPANEL

HUMAN MACHINE INTERFACE

4.3".7".10.4".12.1".15" HMI | HYBRID | XPANEL DESIGNER

DURABLE
HIGH SPEED
INTUITIVE

CIMON Xpanel takes your HMI experience to the next level. Our products offer proven reliability for any industrial environment and our intuitive design software enables rapid project development.

PRODUCT PERFORMANCE

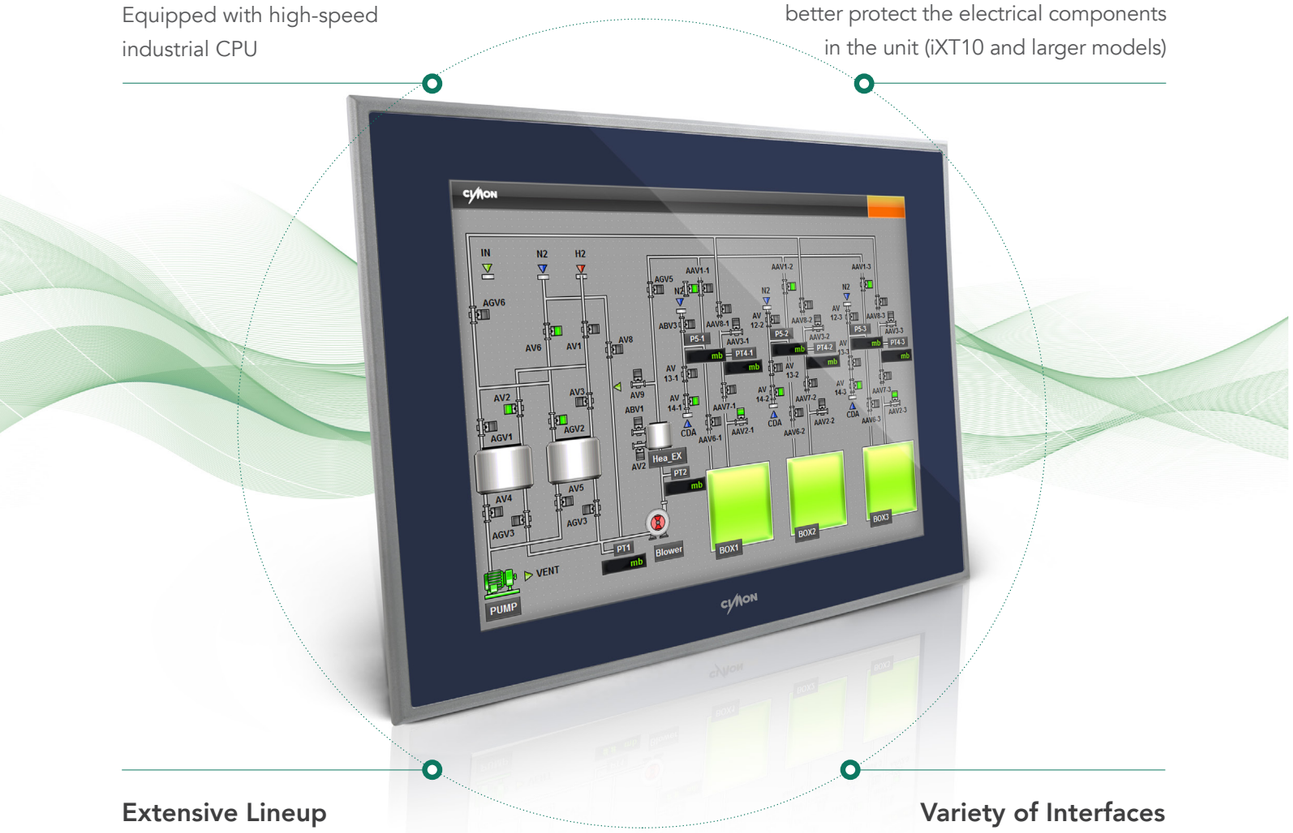
HARDWARE PERFORMANCE

High-speed CPU processor

Equipped with high-speed industrial CPU

Aluminum Die-Casted Front Bezel

Improved heat and shock resistance better protect the electrical components in the unit (iXT10 and larger models)



Extensive Lineup

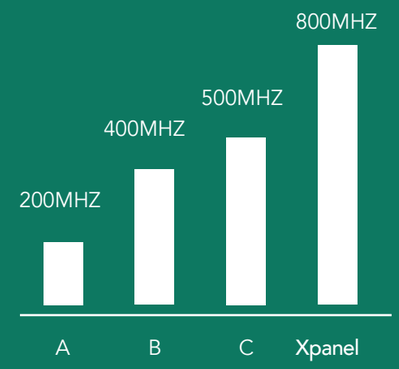
Available in a wide range of display size, from 4.3” to 15”

Variety of Interfaces

Includes Ethernet, Serial (RS232/485), USB, and SD card slot options

Ultrafast CPU Processor

Equipped with a high-speed industrial grade CPU which handles complex scripts and graphics processing with ease, adding stability to the system.



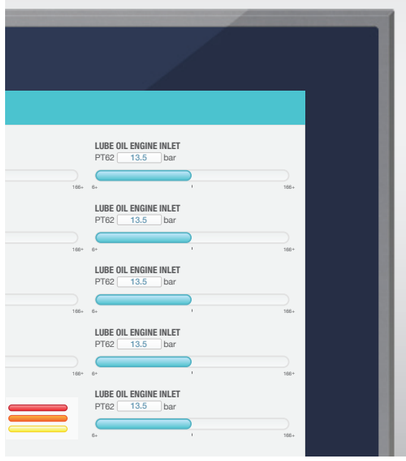
Operating Temperature of 0°~ 60°C

Reliable operation even in extreme conditions allows users to monitor and control their facilities in harsh environments.

0°C ~ 60°C
(32° ~ 140°F)

High-Definition Display

A maximum of 16.7M color XGA display allows the expression of intricate details. The industrial grade LCD panel generates low power and heat while ensuring full brightness and vividness.



Extreme Durability

All models are IP65 certified, and the touch screen is fortified to add scratch resistance.

PRODUCT PERFORMANCE

SOFTWARE PERFORMANCE

Recipe

A recipe is a collection of data that can be easily changed with the user's pre-defined values. For example, in a cookie production factory that produces different types of cookies, the operator can easily modify the ingredient data values to change between different cookie flavor profiles. The recipe settings can be simply created, modified, or deleted during production. Also, recipe data can be imported and exported during runtime.

Data Logging

Raw or internal data can be recorded when a certain criterion is met. The data is internally collected in the memory, which the operator can convert into a CSV format. A USB drive or SD card can also be connected to the Xpanel allowing the user to save as much data as the storage unit allows.

Script

Engineers can easily build a program using a script similar to the C language. Scripts allow you to operate various actions, such as opening a page or changing device settings. Scripts can be triggered and executed in different ways: automatically, manually, periodically, or upon opening/closing of a page.

Schedule Tasks

Schedule allows users to schedule programs to be run at specific times. Scheduled events can be set to execute daily, weekly, monthly, or yearly, allowing for easier management of the facility.

Alarm

Alarms are used to monitor data values and inform users about specific operating conditions. Alarm information and history can be checked on the display. A large number of alarms can be created and categorized into a maximum of 10 groups. Depending on the alarm group, specific scripts can be run to take appropriate actions when an alarm is triggered. The alarm history can also be exported as a CSV file and read with MS Excel. Alarm messages can appear at the bottom of the currently active screen, making both the alarm message and current screen visible to the operator the same time.

Multilingual Feature

Xpanel supports virtually any language to be displayed on the screen. All fonts provided by Windows can be used.

***Note:** Cimon is not liable for the download and/or use of illegally downloaded fonts that may be subject to legal action.

Remote Diagnostic Service

Our technicians can connect to your Xpanel through Ethernet and provide technical support. This allows for a quick remediation due to the status of the Xpanel unit being analyzed without a site visit.

Screen Capture

Screenshots of the current screen can be taken during runtime. The image is saved as a bitmap file and can be used when creating a report for management.

Simulator

The operator can virtually simulate the project by using the 'Simulator'. This feature can be used when there are no physical devices (Xpanel and PLC) and there is a need to test a project. The simulator includes a remote control feature which can change the PLC address for a more realistic simulation.

Distribution Management

Supports RFID reader to manage the logistics of the distribution system more efficiently. (Compatible with Omron, Sick, and LS products)

Compatible with the bar-code readers in serial or USB type, with the capability for the operator to display the barcode on the screen. ('Code 39' function)

Data Bridge

Xpanel can act as a bridge that allows for the exchange of data between other devices. Even devices that are connected to different Serial ports, or Serial and Ethernet ports can exchange data.

Security

To give our customers protection for both their system and employees, Xpanel comes with built-in security settings that prevents unauthorized access or unskilled manipulation. With up to 10 security levels, an administrator has the ability to assign different functions to up to 10 different operators.

VNC

Xpanel provides a solution for monitoring and controlling the system from anywhere. With Ethernet connection. The system can be monitored and controlled with a PC or a smartphone.

Fully Tested and Certified

All Xpanel models are thoroughly tested and certified to meet all international compliance standards for the FCC, CE, ICC, and UL. Verifying the absolute highest standards of health, compliance, and safety for the consumer and workplace even in the most extreme of environments.

PRODUCT PERFORMANCE

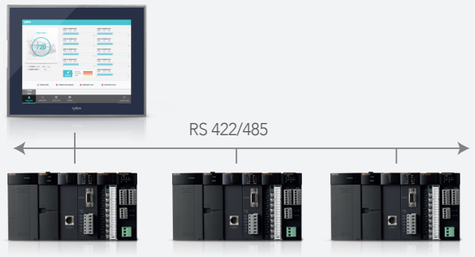
NETWORK PERFORMANCE

CIMON Xpanel easily connects to other devices through a plethora of communication drivers we offer, making it possible to provide powerful flexibility for building your control system.

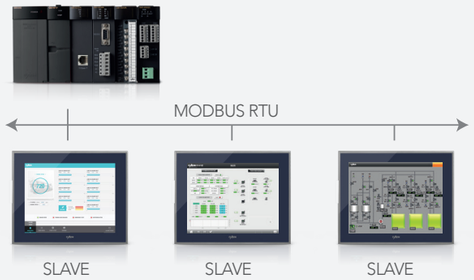
SERIAL NETWORK

1 : 1

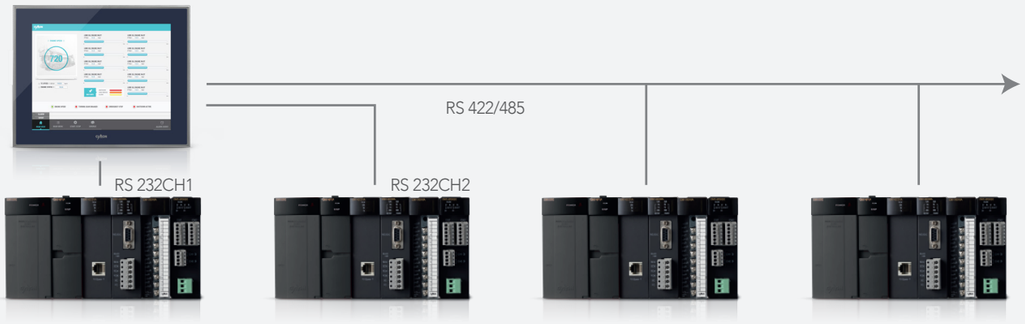
N : 1



1 : N

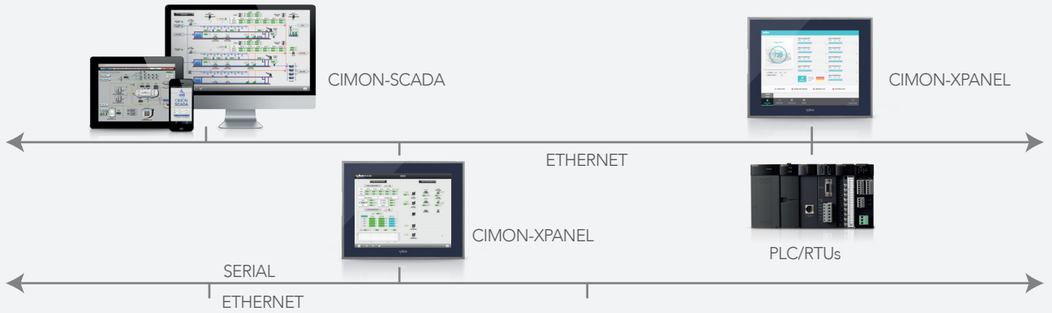


MODBUS MASTER / SLAVE

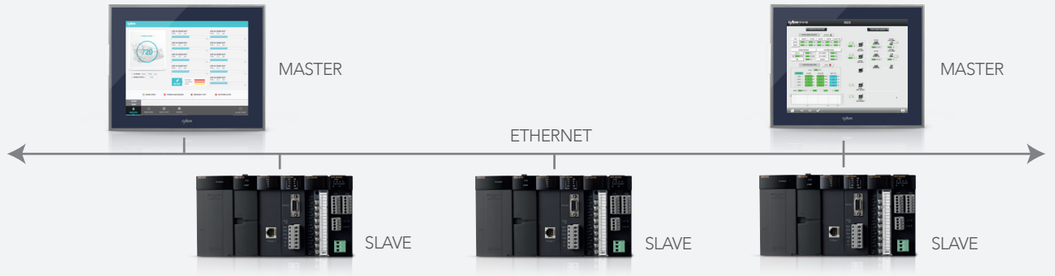


SERIAL MULTI NETWORK

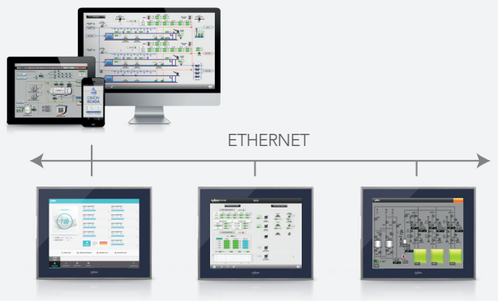
CIMON NETWORK



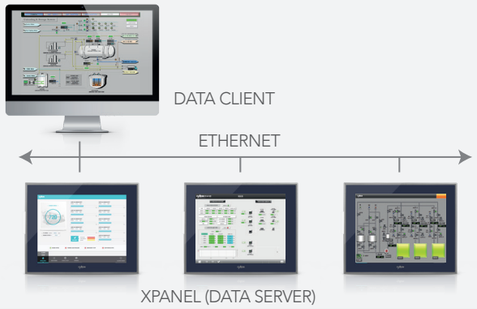
ETHERNET NETWORK



CIMON ETHERNET



VNC



ETHERNET MULTI NETWORK

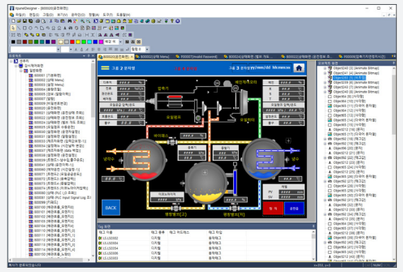
PRODUCT PERFORMANCE

Xpanel Designer can make your facility smarter and more powerful.

SOFTWARE

User-Friendly Development Software

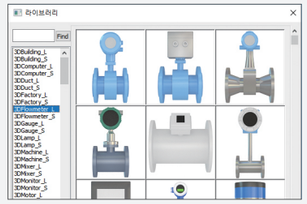
Xpanel Designer



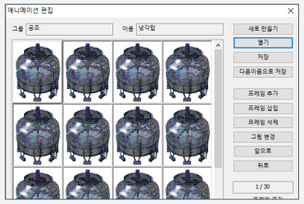
•Drag-and-Drop function
Just drag and drop images. It's that easy!

Smart HMI and Software

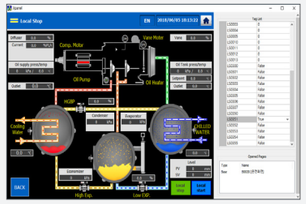
You can design your system with library images.



↗ Xpanel Designer provides various graphical objects to allow rapid project development.

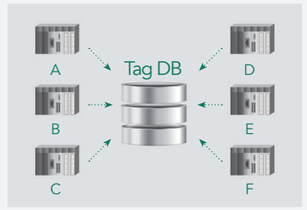


↗ You can create your own animated objects.



↗ You can preview the project on a PC with the simulator.

Convenient and Reliable HMI



↗ All the PLC address data can be identified and modified in the database.

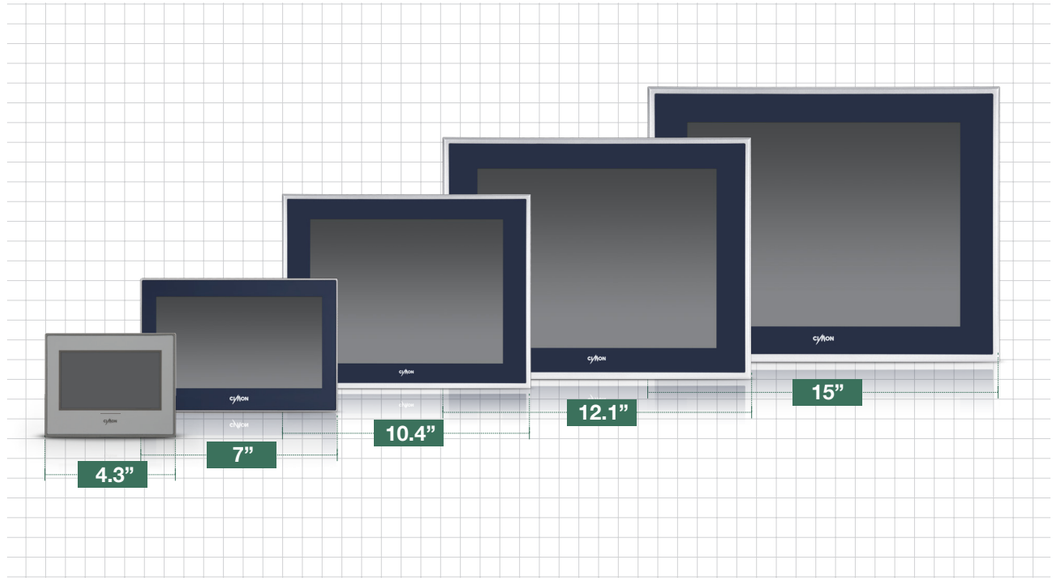
↗ You can create pages from numerous language choices.

↗ Front Aluminum die-casted bezel increases the durability of Xpanel.

CIMON-XPANEL SPECIFICATION

Xpanel comes in sizes that are suitable for small to large scale facilities. Also, its proven reliability and performance ensure that maximum value is provided in every industrial environment.

PRODUCT SPECIFICATION



Item	Specification
General Voltage	DC24V or AC100-240V
Operating Temperature	0°~ 60°
Non-operating Temperature	-20°~ 60°
Operating Humidity	Relative Humidity 10% ~ 85%, (Below 29° C, no condensation)
Non-operating Humidity	Relative Humidity 10% ~ 85%, (Below 39° C, no condensation)
Environment Condition	800hPa ~ 1114hPa (Below 2000m)
Dust	≥ 0.1mg/m^3
Pollution Degree	Pollution Degree 2
Air Condition	Avoid corrosive gas and excessive dust
Vibration Resistance	SSD storage type 9.8m/S2, 10Hz~25Hz in X,Y,Z (80min)
Noise Immunity (Impulse Noise)	Impulse, EFT/Burst, Surge, ±2KV, 1uS
Electrostatic Discharge Immunity	4kV (IEC61000-4-2 LEVEL 3), 8kV (Air discharge)

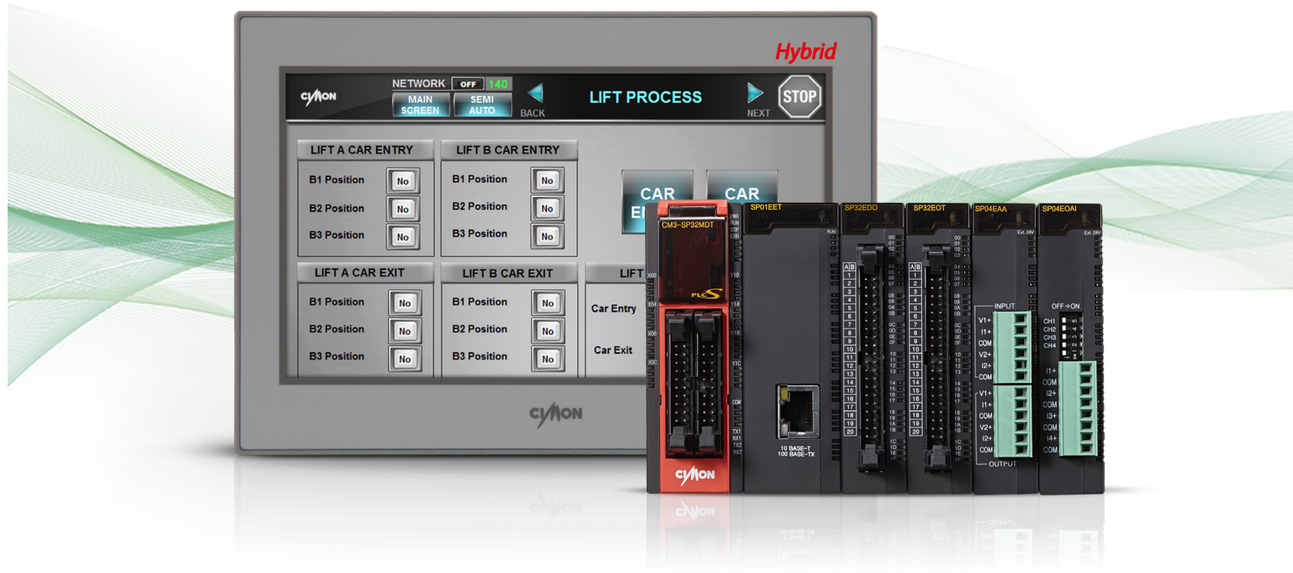
CIMON-XPANEL SPECIFICATION

PRODUCT SPECIFICATION

Type		XT04CD-DE	XT07CD-DE	iXT10CD-D	iXT12CD-A	iXT15CD-A
Panel Size		4.3"	7"	10.4"	12.1"	15"
Resolution		480 x 272	800 x 480	800 x 600		1024 x 768
LCD		Color TFT				
Color		65K Colors		262K Colors		16.7M Colors
Luminance		400 cd/m²			450 cd/m²	400 cd/m²
LCD Lifetime		20,000 Hrs		100,000 Hrs		
Memory		128MByte DDR2 SDRAM		256MByte DDR2 SDRAM		
Storage		128MByte SLC NAND Flash				
Operating System		Windows CE 6.0		Windows Embedded Compact 7		
Programming Tool (HMI)		Xpanel Designer				
Audio		None	1 Port	None		
Interface	Ethernet	10/100 BaseT	10/100 BaseT			
	Serial (COM1)	RS232C		RS422/485		
	Serial (COM2)	RS422/485		RS232C		
	Serial (COM3)	None		RS232C		
	USB Host	1 Port				
	Tool Port	1 Port				
	SD Card Slot	None	1 Slot			
Input Power		DC24V	DC24V	DC24V	AC100-240V	
Dimension (mm)		128 X 102 X 50	185 X 127 X 50	280 X 220 X 47	330 X 250 X 83	395 X 310 X 89
Panel Cut (mm)		120 X 94	177 X 119	267 X 207	319 X 239	382 X 297
Enclosure		Plastic		Aluminum		
Power Consumption		4W	6W	19W	20W	22W
Item Wieght		.31kg (.62lbs)	.57kg (1.14lbs)	2kg (4lbs)	2.9kg (5.8lbs)	4.2kg (8.4lbs)

CIMON HYBRID XPANEL

Two devices, HMI and PLC, are combined into one product for your convenience.



Available in VESA Wall Mount

The VESA mount configuration provides a clean and safe installation by mounting to articulating arms

PLC-S Expansion

It is possible to add up to 2 PLC-S modules after mounting an option module

Separated Terminal

The product can be easily connected with other devices. The USB host allows the use of both Xpanel Designer and CICON software

PLC-S Embedded

The product is fully compatible with PLC-S expansion modules

Providing High Reliability

The product shares reliability standards with CIMON PLC (internal test standard)

OPC UA Connectivity

Hybrid Xpanel supports OPC UA, which is a widely used communication protocol. It can securely connect to devices and the cloud

- Device-level can be set from 1 to 15
- Allows an administrator to add, modify, and delete ID and password for the OPC UA security program

HYBRID XPANEL SPECIFICATION

PRODUCT SPECIFICATION

General Specification

Items	Specification						Standards
Operating Temperature	0° ~ 55°C						-
Non-Operating Temperature	-25°C ~ 70°C						-
Operating Humidity	Relative Humidity 10 ~ 95%, No condensation						-
Non-Operating Humidity	Relative Humidity 10 ~ 95%, No condensation						-
Vibration Resistance	Frequency(pps)	Continuous Vibration		Intermittent Vibration		Count	IEC 61131-2
		Acceleration (m/s^2)	Amplitude (mm)	Acceleration (m/s^2)	Amplitude (mm)		
	5 ≤ f < 9, 9 ≤ f ≤150pps	-	1.75	-	3.5	10 times for each direction X, Y, Z	
	9 ≤ f ≤150pps	4.9 {0.5G}	-	9.8 {1G}	-		
Shock Endurance	▪ Maximum shock acceleration: 147□ (15G) ▪ Duration time: 11ms ▪ Pulse wave: a sine half-wave pulse (3 times for each direction ±X, ±Y, ±Z, total on 3 times)						IEC 61131-2
Noise Immunity	Square Wave Impulse Noise	±2kV, For 10 consecutive minutes					CIMON Internal Test Standard
	Electrostatic Discharge Immunity	Voltage: ±4kV (Discharge by contact), ±8kV (Air Discharge)					IEC 61131-2 IEC 61000-4-2
	Radiated EMF Noise	80~1,000 MHz, 10V/m					IEC 61131-2 IEC 61000-4-3
	FAST Transient Burst Noise	Power Supply				±2kV	IEC 61131-2 IEC 61000-4-4
		Digital / Analog input output (AC)				±2kV	
		Digital / Analog input output (DC)				±1kV	
Ambient Conditions	Avoid corrosive gas and excessive dust						
Operating Altitude	≤ 2000m						IEC61131-2
Pollution Level	≤ 2						IEC61131-2
Cooling System	Air natural cooling						

HMI Part (Xpanel)

Model	HP07CD-DER	HP07CD-DES
LCD Size	7 inches	
LCD Type	TFT Color	
Color	65,536 colors	
Resolution	WVGA 800x480	
Backlight	LCD	
Luminance	400cd/m2	
Touch Panel	Resistive 4 wire	
Memory	128MByte DDR2	
Storage Space	128MByte SLC NAND Flash	
SD Card	1 SD Slot	
COM1(HMI)	RS232C/RS422/RS485	
COM2(HMI)	RS232C (Internal)	
COM1(PLC)	RS232C	RS485
COM2(PLC)	RS232C (Internal)	
Ethernet	10/100 BaseT	
USB Host	1 port	
Tool Port	1 USB device	
Audio	1 port	
Voltage	-D: DC24V	
Power Consumption	9.6W	
Operating System	Windows CE 6.0	
Dimension(mm)	185 x 127 x 80.5	
Panel Cut(mm)	177 x 119	
Item Wieght	0.85kg (1.87 lbs)	

Hybrid Xpanel Product Line-Up

Model	Standard
CM-HP07CD-DER	Xpanel (XT07) + PLC (CPU, RS232C), DC24V, Relay DI 8/DO 8/USB Loader, Ethernet, SD card slot
CM-HP07CD-DES	Xpanel (XT07) + PLC (CPU, RS485), DC24V, Relay DI 8/DO 8/USB Loader, Ethernet, SD card slot

Option

Model	Specification
CM-HP-DM	HP07 DUMMY, for expansion of PLC-S modules
CM-HP-EAA	Analog module for HP07 (AI 2 channels, AO 2 Channels) (0 - 5V, 1 - 5V, 0 - 10V, -10 -10V, 0-20mA, 4 - 20mA)
CM-HP-EDR	Digital module for HP07 (DI 7 points, DO 5 points – Relay type)

PLC-S Part

Items		Descriptions
Power		DC 12 - 24V / 10W (Expanded by fully in 2 modules)
Program Control		Repetitive Operation, Time Driven Interrupt, Stored Program
Method for Controlling Input Output		Indirect method, Direct method by Instruction
Program Language		LD (Ladder Diagram), IL (Instruction List), SFC (Sequential Function Chart), FBD (Function Block Diagram), ST (Structured Text)
Data Processing		32bit
Number of Instruction	Number of sequence	55
	Number of Application instruction	389
Execution Processing Speed (Basic Instruction)		200 ns/Step
Program Memory		10K Step
Number of I/O Points		384 Points
Operating modes		Run, Stop, Remote Run, Remote Stop
Data preservation against power failure		Setting data and conservation (Latch) in K device
Count of Program Block		127
Blocks of Program (max 127)	Scan	4 types of scan programs including standard scan program (Subroutine, Hot / Cold initialization, Periodic interrupts)
	Periodic Interrupts	Able to register for scan program form up to 16 (Minimum period: 10ms)
	Special Configuration	4 types of special programs including PID program (High-speed Counter, Positioning control, Input module filtering, etc.)
	Comm.	4 types of programs including User protocol program (MODBUS/RTU Master, High PLC Link, etc.)
	Etc.	SFC Program, FBD (Function Block Diagram)
Auto diagnoses		Monitoring delay of processing, problems of memory, I/O, Battery, Power error
Restarting		Hot Restart, Reboot
Expansion		CM-HP-EAA/CM-HP-EDR/CM-HP-DM module + 2 PLC-S modules
Data Memory	X	1024 points (X0000 – X063F)
	Y	1024 points (Y0000 – Y063F)
	M	8192 points (M0000 - M511F)
	L	4096 points (L0000 - L255F)
	K	4096 points (K0000 - K255F)
	F	2048 points (F0000 - F127F)
	T	512 points (T0000 – T0511)
	C	512 points (C0000 – C0511)
	S	100 states x 100 set (00.00 - 99.99)
	D	10000 words (D0000 - D9999)
	Z	1024 words (Call Stack : Z0000 - Z0063, Z1000 - Z1063)
	R	16 points (Index)
High-speed Counter		Maximum count speed 16kpps, (Maximum 4kpps when using 2 phase 2 channels)
PID		32 channels, Auto-tuning
Real Time Clock		Operated by internal battery (CR2032 Backup)
Communication Channel		USB (CICON programming)
		Option: RS232C 1 channel or RS485 1 channel
2 Axis		Floating point arithmetic, Modification in Run status, etc.

Expansion Modules (PLC-S)

Digital I/O

Model	Type	Standard
CM3-SP32EDO	DI-32	DI 32 pts, DC 24V
CM3-SP32EOT	DO-32	DO 32 pts. DC 24V TR (Sink)
CM3-SP32EOC	DO-32	DO 32 pts. DC 24V TR (Source)
CM3-SP16EOR	DO-16	DO 16 pts, Relay Output
CM3-SP32EDT	DI-16 / DO-16	DI 16 pts, DO 16 pts, TR (Sink)

Analog I/O & Temp. Measuring

Model	Type	Specification
CM3-SP04EAO	AI-4	AI 4 channels (0 - 5V, 1 - 5V, 0 - 10V, -10 -10V, 0 - 20mA, 4 - 20mA)
CM3-SP04EAA	AIO-4	AI 2 channels / AO 2 channels (0 - 5V, 1 - 5V, 0 - 10V, -10 -10V, 0-20mA, 4 - 20mA)
CM3-SP04EOAI	AO-4	AO 4 channels current output (4-20mA)
CM3-SP04EOAV		AO 4 channels voltage output (-10 -10V, 0 - 10V)
CM3-SP04ERO	Temperature measuring	4 points RTD (PT100, JPT100, PT1000, NI1000)
CM3-SP04ETO		4 points TC (K, J, E, T, B, R, S, N)

Communication

Model	Type	Protocol
CM3-SP02ERS	RS232C 1 channel, RS422/RS485 1 channel	CICON, CIMON HMI, MODBUS/RTU Slave & Master, Protocol program
CM3-SP02ERR	RS232C 2 channels	CICON, CIMON HMI, MODBUS/RTU Slave & Master, Protocol program
CM3-SP01EET	Ethernet (10BaseT, 100BaseTX)	CICON, CIMON HMI, MODBUS/RTU Slave & Master, Protocol program, DHCP

Accessories

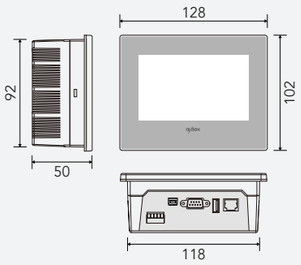
Model	Classification	Note
CM0-TB32M	Terminal block	Can be used with following modules: CM3-SP32EDO
CM0-SCB15E	1.5M cable	

* For more information about specification, please refer to the PLC-S catalog.

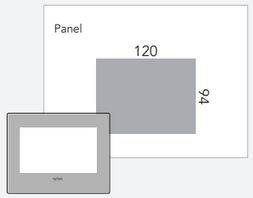
Dimensions of CIMON-XPANEL

Unit : mm

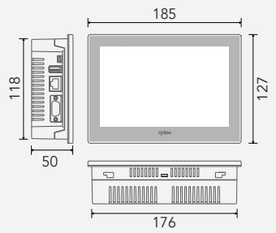
XT04CD



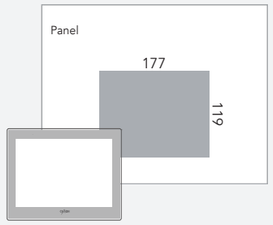
Panel cut



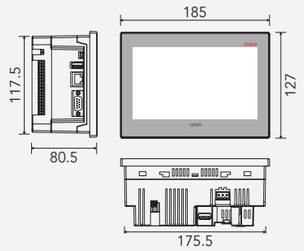
XT07CD



Panel cut



HP07CD



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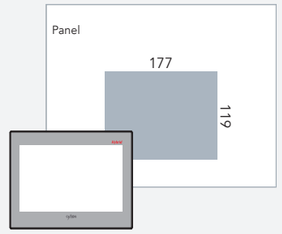

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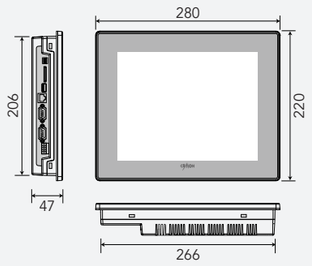

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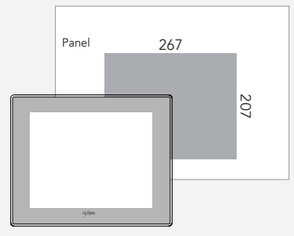

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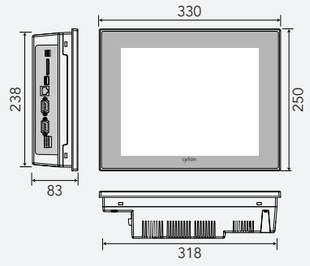

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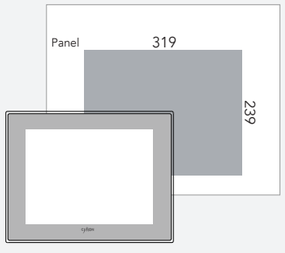

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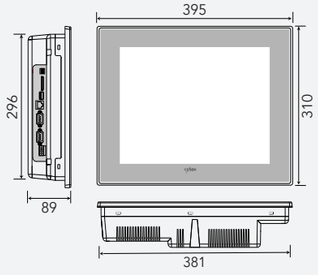

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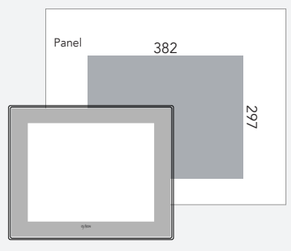

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