CO-W121C/P2202 Series

21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular / Expandable Panel PC with 12th Gen. Intel® Core™ i5 / i3 Processor & Projected Capacitive Touch



ALL-NEW OPEN FRAME PANEL PC

| CO-100/P2000 Series Fits Any Machine Perfectly |

Overview

CONTACT

Cincoze open-frame high-performance industrial panel PC (CO-100/P2202) is equipped with an Intel® Core™ U-series (Alder Lake-P) processor, rich I/O interfaces (1 GbE LAN, USB 3.2 Gen 2x1, COM, DIO, etc.), and flexible expansion. The biggest highlight is its adjustable mounting bracket design (Patent No.: D224544, D224545, I802427) that allows flexible adjustment and multi-stage locking to greatly improve the convenience of installation, effectively reducing the degree of customization required when integrating with equipment. It is purpose-built for equipment manufacturers.

Key Features

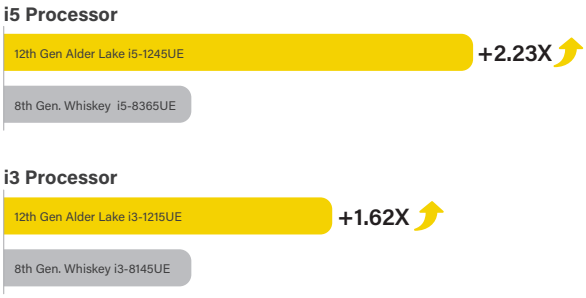
- 21.5" TFT-LCD with Projected Capacitive Touch
- Onboard Intel® Alder Lake-P U-Series Core™ Processor
- 2x DDR5 SO-DIMM Socket, Supports up to 4800MHz 64GB Memory
- Designed with Adjustable Mounting Bracket
- Quad Independent Display (CDS / HDMI® / DP / VGA)
- 1x M.2 Key E Type 2230 Socket for Storage/Wireless/Bluetooth/Intel CNVi Module Expansion
- Front Panel IP65 Compliant

Certifications

IP65 EN 61000-6 FC CE CDS CFM TECHNOLOGY

Excellent Computing Performance

The CO-100/P2202 series is equipped with the 12th Gen Intel® Core™ i5/i3 U-series (Alder Lake-P) processor based on the Intel® 7 process. The U-series has a low power consumption of only 15W, boasts excellent performance with up to 10 cores (2P+8E), and includes the built-in Intel® Iris Xe graphics to easily handle image classification inference performance in AI deep learning.





CDS Patented Technology

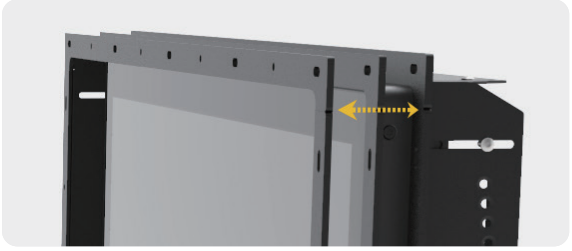
Cincoze Convertible Display System (CDS) patented technology makes field-side maintenance and future upgrades easier. Replacing a display or improving system performance only requires replacing a single component, which significantly cuts upgrade costs.

Patent No. M482908

Easy to Install

The exclusive adjustable mounting bracket (Patent No.: I802427) has thickness adjustment options and supports multiple locking methods (panel and boss types), providing a simpler and more convenient integration for industrial machines using flat mount and standard mount.

Patent No. I802427, D224544, D224545



Integrated Structure

The flexible and reliable design of the open-frame architecture enables deployment in equipment machines, and after removing the mounting bracket can be installed directly using the VESA mount for standalone use, or installed in a 19" rack for display function.





Rugged, Safe, Reliable

The CO-100/P2202 series features a series of industrial-grade protections, such as a fanless design, wide operating temperature range, wide range DC power input (9 to 48VDC), and IP65 dustproof/water resistant front panel for field-side HMI applications in harsh industrial environments.

CO-W121C Specifications

Model Name	CO-W121C
Display	
LCD Size	▪ 21.5" (16:9)
Resolution	▪ 1920 x 1080
Brightness	▪ 300 cd/m2
Contrast Ratio	▪ 5000 : 1
LCD Color	▪ 16.7M
Pixel Pitch	▪ 0.24825 (H) x 0.24825 (V) mm
Viewing Angle	▪ 178 (H) / 178 (V)
Backlight LED Life Time	▪ 50,000 hrs
Touch Screen	
Touchscreen Type	▪ Projected Capacitive Touch
Wet Touch Tracking	v
Physical	
Dimension (W x D x H)	▪ 550 x 343.7 x 63.3
Weight	▪ 7.16 kg
Construction	▪ One-piece and Slim Bezel Design
Mounting Type	▪ Flat / Standard / VESA / Rack Mount
Mounting Bracket	▪ Pre-installed Mounting Bracket with Adjustable Design (Support 11 different stages of adjustment)
Power	
Power Consumption	▪ 24.8W (Max.)
Protection	
Ingress Protection	▪ Front Panel IP65 Compliant * According to IEC60529
Environment	
Operating Temperature	▪ 0°C to 60°C (32°F to 140°F) (With Industrial Grade Peripherals; Ambient with air flow)
Storage Temperature	▪ -20°C to 60°C (-4°F to 140°F)
Humidity	▪ 90% RH @ 40°C (Non-condensing)
EMC	▪ CE, UKCA, FCC, ICES-003 Class A
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 55032 Conducted & Radiated: Class A ▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A ▪ EN/BS EN61000-3-3 Voltage fluctuations & flicker ▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A
EMS	▪ EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV ▪ EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m ▪ EN/IEC 61000-4-4 EFT: AC Power: 1 kV; DC Power: 0.5 kV; Signal: 0.5 kV ▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV ▪ EN/IEC 61000-4-6 CS: 3V ▪ EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m ▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 0.5 cycles at 50 Hz
Safety	▪ UL, cUL, CB, IEC, EN 62368-1

P2202 Specifications

Model Name	P2202	P2202E
System		
Processor	▪ Onboard 12th Generation Intel® Alder Lake-P U-Series CPU: - Intel® Core™ i5-1245UE 10 Cores Up to 4.40 GHz, TDP 15W - Intel® Core™ i3-1215UE 6 Cores Up to 4.40 GHz, TDP 15W	
Memory	▪ 2x DDR5 4800MHz SO-DIMM Socket Supports Un-buffered and non-ECC Type, Up to 64GB	
BIOS	▪ AMI BIOS	
Graphics		
Graphics Engine	▪ Integrated Intel® Iris® Xe Graphics: Core™ i5-1245UE ▪ Integrated Intel® UHD Graphics: Core™ i3-1215UE	
Maximum Display Output	▪ Supports Quad Independent Display	
CDS	▪ 1x CDS Connector (1920 x 1080 @60Hz)	
DP	▪ 1x DisplayPort Connector (4096 x 2304 @60Hz) * Verified maximum resolution: 3840 x 2160 @ 60Hz	
HDMI®	▪ 1x HDMI® Connector (3840 x 2160 @30Hz)	
VGA	▪ 1x VGA Connector (1920 x 1200 @60Hz)	
Audio		
Audio Codec	Realtek® ALC888, High Definition Audio	
Line-out	▪ 1x Line-out, Phone Jack 3.5mm	
Mic-in	▪ 1x Mic-in, Phone Jack 3.5mm	
I/O		
LAN	▪ 2x 1GbE LAN, RJ45 - GbE1: Intel® I219 - GbE2: Intel® I210	
COM	▪ 4x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9	
USB	▪ 3 x USB 3.2 Gen2x1 (10Gbps), Type A ▪ 1 x USB 2.0 (480Mbps), Type A	
DIO	▪ 16x Isolated Digital I/O (8in/8out), 20-Pin Terminal Block	
Storage		
SSD/HDD	▪ 2x 2.5" SATA HDD/SSD Bay (SATA3.0)	
RAID	▪ Support RAID 0/1	
Expansion		
Mini PCI Express	▪ 2x Full-size Mini-PCIe Socket	
PCI Express		▪ 1x PCI or 1x PCIe x4 Expansion slot (with Optional Riser Card) * Supports maximum dimensions of add-on card (H x L) : 111 x 169mm
SIM Socket	▪ 1x SIM Socket	
M.2	▪ 1x M.2 Key E Type 2230 Socket (PCIe Gen 3x2 / USB2.0), Support Storage/Wireless/Bluetooth/Intel CNVi Module Expansion	
CFM (Control Function Module) Interface	▪ 1x CFM Interface for optional IGN Module Expansion ▪ 1x CFM Interface for optional PoE Module Expansion	

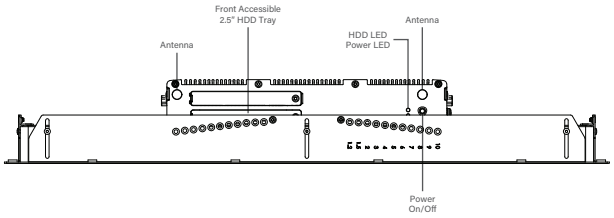
CDS (Convertible Display System) Interface	▪ 1x CDS Interface for Convertible Display Module	
Other Function		
Clear CMOS Switch	▪ 1x Clear CMOS Switch	
Reset Button	▪ 1x Reset Button	
Watchdog Timer	▪ Software Programmable Supports 256 Levels System Reset	
OSD Button	▪ LCD On/Off, Brightness Up, Brightness Down	
Internal Speaker	▪ AMP 2W + 2W	
Status LED Indicator	▪ Power LED, HDD LED	
Power		
Power Button	▪ 1x ATX Power On/Off Button	
Power Mode Switch	▪ 1x AT/ATX Mode Switch	
Power Input	▪ 9 - 48VDC, 3-pin Terminal Block	
Remote Power On/Off	▪ 1x Remote Power On/Off, 2-pin Terminal Block	
Max. Power Consumption	▪ i5-1245UE CPU: 95.06W - Test conducted with CPU, 1x RAM, and 1x storage - 100% load during burn-in testing	
Inrush Current (Peak)	▪ i5-1245UE CPU: 5.381 A@24V	
Operating System		
Windows	▪ Windows®11, Windows®10	
Linux	▪ Ubuntu Desktop 22.04 LTS	
Physical		
Dimension(W x D x H)	▪ 254.5 x 190 x 41.5 mm	▪ 254.5 x 190 x 61 mm
Weight Information	▪ 2.22 kg	▪ 2.74 kg
Mechanical Construction	▪ Extruded Aluminum with Heavy Duty Metal	
Mounting	▪ Wall / VESA / CDS / DIN Rail	
Physical Design	▪ Fanless Design ▪ Jumper-less Design	
Reliability & Protection		
Reliability & Protection	▪ Yes	
Reverse Power Input Protection	▪ Protection Range: 51~58V ▪ Protection Type: shut down operating voltage, re-power on at the preset level to recover	
Over Current Protection	▪ 15A	
CMOS Battery Backup	▪ SuperCap Integrated for CMOS Battery Maintenance-free Operation	
MTBF	▪ 216,747 Hours - Database: Telcordia SR-332 Issue3, Method 1, Case 3	
Environment		
Operating Temperature	▪ i3-1215UE : -40°C to 70°C ▪ i5-1245UE : -20°C to 70°C * With extended temperature peripherals; Ambient with air flow * According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14	
Storage Temperature	▪ -40°C to 85°C (-40°F to 185°F)	
Relative Humidity	▪ 95%RH @ 70°C (non-Condensing)	

Shock	▪ Operating, 50 Grms (w/ SSD, according to IEC60068-2-27)
Vibration	▪ Operating, 1 Grms, 10-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-6) ▪ Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
EMC	▪ CE, UKCA, FCC, ICES-003 Class A ▪ EN IEC 61000-6-4, EN IEC 61000-6-2(24VDC Input Only)
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 55032 Conducted & Radiated: Class A ▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A ▪ EN/BS EN61000-3-3 Voltage fluctuations & flicker ▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A
EMS	▪ EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV ▪ EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 10 V/m ▪ EN/IEC 61000-4-4 EFT: AC Power: 2 kV; DC Power: 1 kV; Signal: 1 kV ▪ EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV ▪ EN/IEC 61000-4-6 CS: 10V ▪ EN/IEC 61000-4-8 PFMF: 50 Hz, 30A/m ▪ EN/IEC 61000-4-11 Voltage Dips & Voltage Interruptions: 1 cycles at 60 Hz
Safety	▪ UL, cUL, CB, IEC/EN 62368-1

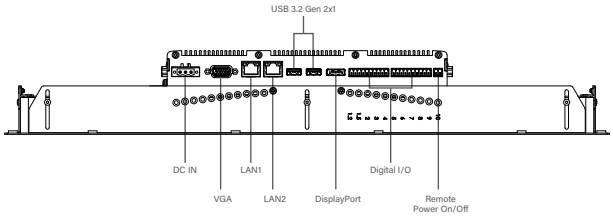
The terms HDMI, HDMI High-Definition Multimedia Interface, HDMI Trade dress and the HDMI Logos are trademarks or registered trademarks of HDMI Licensing Administrator, Inc.

CO-W121C/P2202 External Layout

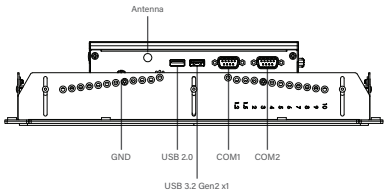
Front I/O



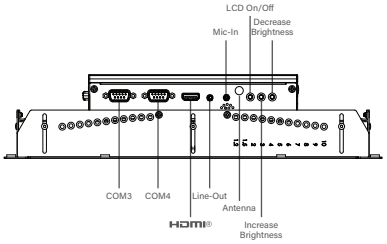
Rear I/O



Left I/O

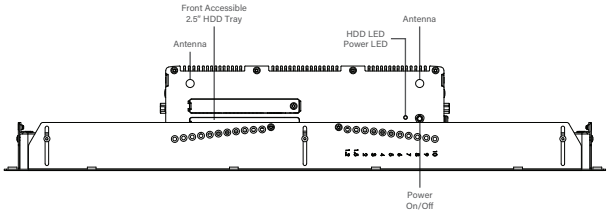


Right I/O

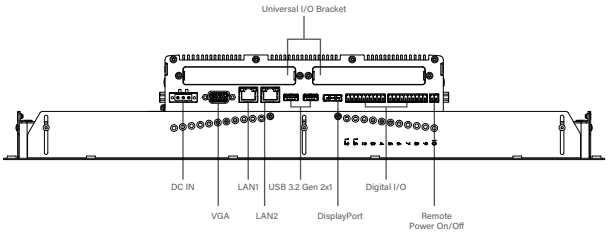


CO-W121C/P2202E External Layout

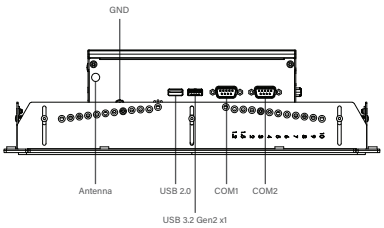
Front I/O



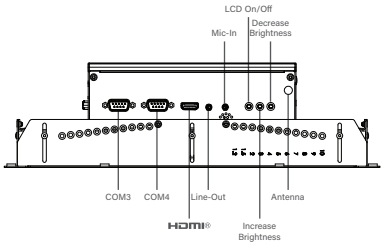
Rear I/O



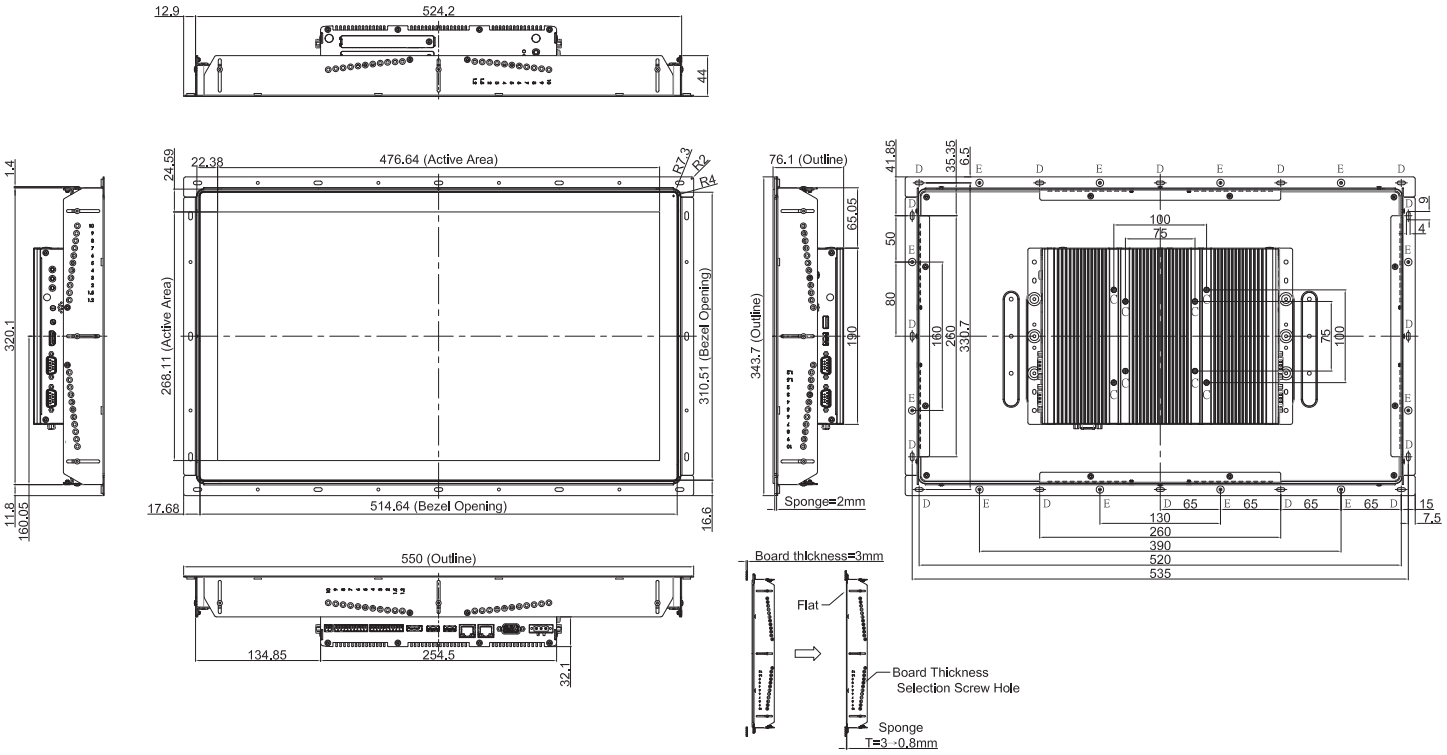
Left I/O



Right I/O

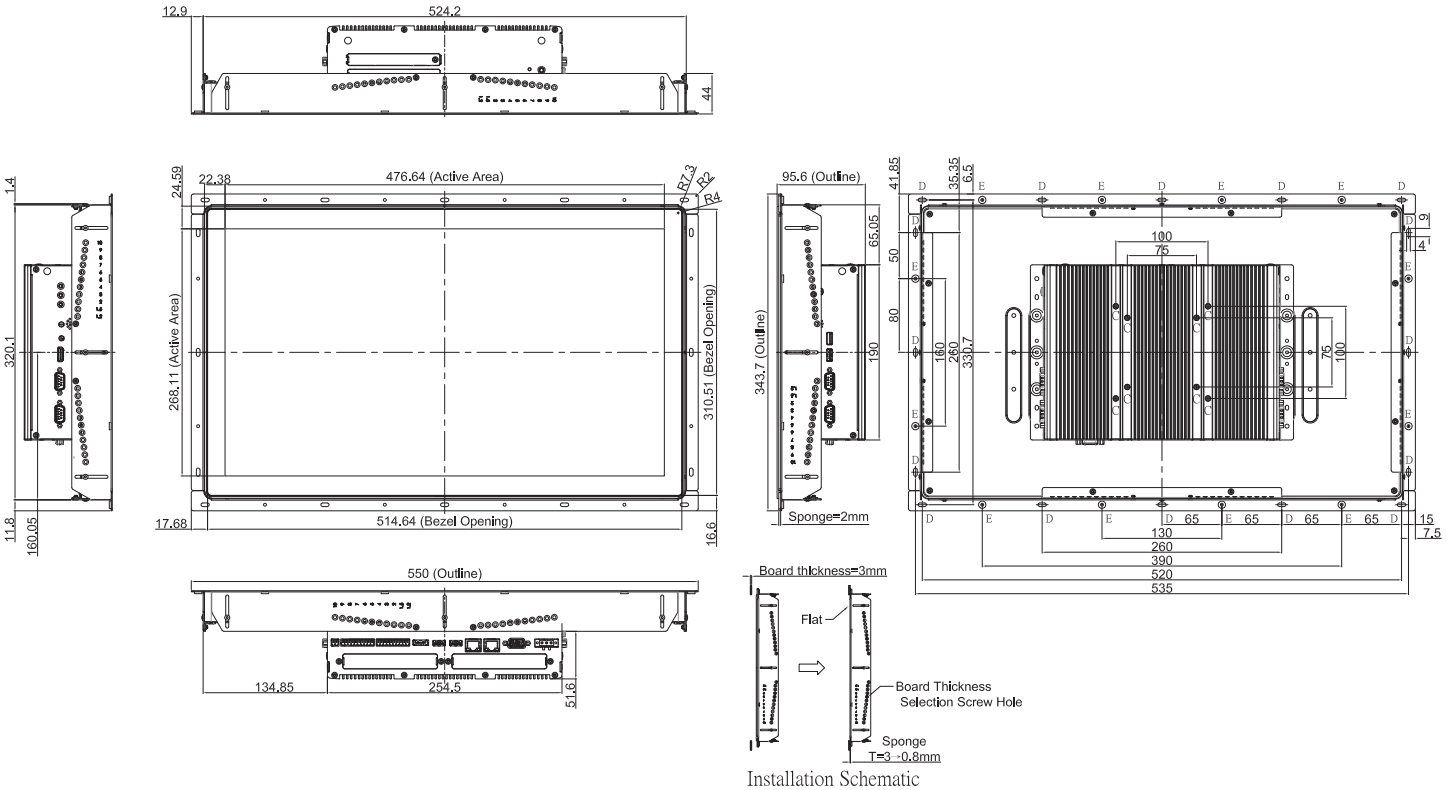


CO-W121C/P2202 Dimensions



Installation Schematic

CO-W121C/P2202E Dimensions



Installation Schematic

Unit: mm

Ordering Information

Available Models

Model No.	Description
CO-W121C-R10/P2202-i5-R11	21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular Panel PC with 12th Gen. Intel® Core™ i5-1245UE Processor and Projected Capacitive Touch
CO-W121C-R10/P2202E-i5-R11	21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular and Expandable Panel PC with 12th Gen. Intel® Core™ i5-1245UE Processor and Projected Capacitive Touch
CO-W121C-R10/P2202-i3-R10	21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular Panel PC with 12th Gen. Intel® Core™ i3-1215UE Processor and Projected Capacitive Touch
CO-W121C-R10/P2202E-i3-R10	21.5" TFT-LCD Full HD 16:9 Open Frame Display Modular and Expandable Panel PC with 12th Gen. Intel® Core™ i3-1215UE Processor and Projected Capacitive Touch

Model Configuration

	CO-W121C	P2202(i3/i5)	P2202E(i3/i5)
CO-W121C/P2202	V	V	--
CO-W121C/P2202E	V	--	V

V : Compatible

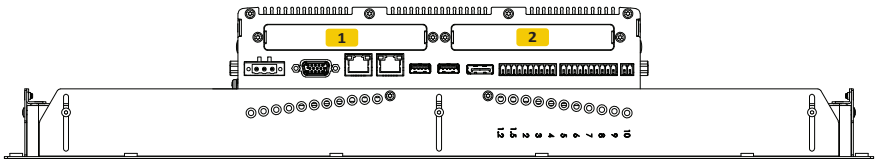
Package Checklist

▪ CO-W121C/P2202 Series Panel PC x1	▪ Thermal Pad x1
▪ Power Terminal Block x1	▪ Screw Pack x5
▪ Remote Power On/Off Terminal Block Connector x1	▪ PCI / PCIe Card Installation Kit x1 (For P2202E Only)
▪ DIO Terminal Block Connector x2	▪ DIN Rail Mounting Kit x1

Optional Modules and Accessories

Model No.	Description
CFM-IGN101	CFM Module with Power Ignition Sensing Control Function, 12V/24V Voltage Detection Selectable
CFM-PoE04	CFM Module with PoE Control Function, Individual Port 25.5W (For P2202 Only)
CFM-PoE05	CFM Module with PoE Control Function, Individual Port 25.5W (For P2202E Only)
RC-E4-02	Riser Card with 1x PCIe x4 Slot (For P2202E Only)
RC-PI-02	Riser Card with 1x PCI Slot (For P2202E Only)
MEC-COM-M212-TDB9	Mini-PCIe Module with 2x RS-232 Ports, 1x Thin DB9 Cable (For P2202E Only)
MEC-COM-M334-TDB9	Mini-PCIe Module with 4x RS-232/422/485 Ports, 2x Thin DB9 Cable (For P2202E Only)
MEC-USB-M102-30	Mini-PCIe Module with 2x USB 3.0 Ports, 1x 30cm cable (For P2202E Only)
MEC-LAN-M102-30	Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable (For P2202E Only)
UB1203	1x Universal Bracket with 2x DB9 Cutout (For P2202E Only)
UB1211	1x Universal Bracket with 2x RJ45 Cutout (For P2202E Only)
UB1214	1x Universal Bracket with 2x USB Cutout (For P2202E Only)
URM01	Universal 19" Rack Mount Kit for Industrial Panel PC & Industrial Monitor
GST220A24-CIN	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug 5.0mm Pitch, with TUBES, level VI
GST360A24-CIN	Adapter AC/DC 24V 15A 360W with 3pin Terminal Block Plug 5.0mm Pitch, with TUBES, Level VI

Optional Module Configuration (For P2202E only)



Model No.	Description	1	2
MEC-COM-M212-TDB9/UB1203 	Mini-PCIe Module with 2x RS-232 Ports, 1x Thin DB9 Cable / 1x Universal Bracket with 2x DB9 Cutout	V	V
MEC-COM-M334-TDB9/UB1203 	Mini-PCIe Module with 4x RS-232/422/485 Serial Ports/ 2x Universal Bracket each with 2x DB9 Cutout	V	V
MEC-LAN-M102-30/UB1211 	Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable / 1x Universal Bracket with 2x RJ45 Cutout	V	V
MEC-USB-M102-30/UB1214 	Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x 30cm cable / 1x Universal Bracket with 2x USB Cutout	V	V

V : Compatible

Updated: Sep. 30, 2026.

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