CV-212C/P2102 Series

12.1" TFT WXGA 16:10 Slim Bezel Panel PC with Intel® Core Embedded Computer, Projected Capacitive Touch, and AG Coating



Slim · Modular · Durable

CV-200/P2000 Series — Modernized Industrial Panel PCs

Overview

CONTACT

The CV-200 / P2102 series is a high-performance slim-bezel modular industrial panel PC, powered by Intel® 8th Gen Core™ U-series processors for stable computing and flexible integration. Featuring ultra-slim bezels, rich I/O, 2× Mini PCIe and 1× M.2 Key E 2230 slots, and a SIM card slot for wireless expansion, it supports a wide range of industrial applications. With Cincoze's CDS technology, future upgrades are simple. Available in 10"–21.5" Full HD sizes with rugged industrial design, it's ideal for HMIs and production process visualization.

Key Features

- 12.1" WXGA LCD (1280 x 800) with 16:10 Aspect Ratio
- Projected Capacitive Touch with Anti-Glare Coating.
- Wide Viewing Angle of 178°/178°
- Onboard 8th Generation Intel® Core™ U Series Processor
- Supports Triple Independent Display
- Integrated USB 3.2 Gen 2 supports up to 10Gbps
- M.2 E Key Socket for Wireless Module or Intel CRF Module
- Front Panel IP66 Compliant

Certifications

IP66

Excellent Computing Performance

Equipped with Intel® 8th Gen Core™ U-series processors, delivering high computing performance at 15W low power consumption, meeting industrial demands for both performance and energy efficiency.

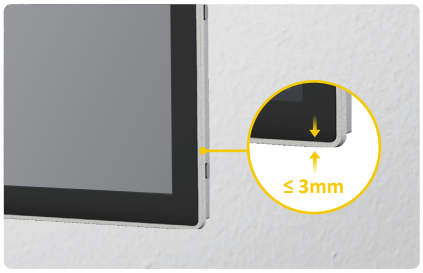


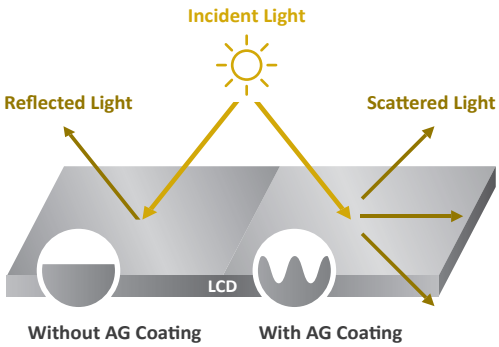
CDS Technology

Our exclusive CDS (Convertible Display System) technology enables easy maintenance in the field and simplifies future upgrades. Replacing the display or improving system performance only requires replacing a single component, significantly saving upgrade costs.

Ultra-Slim Bezel

With an ultra-slim bezel of ≤ 3 mm (varies by display size), the CV-200 minimizes physical constraints for compact installations. It's ideal for space-limited enclosures and applications requiring efficient integration with a streamlined appearance.





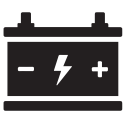
Reliable Touch Performance

All models support P-Cap touch, anti-glare (AG) coating, and wet tracking technology, ensuring stable operation and clear visibility even in humid environments or under bright indoor lighting.

Wide Temps, Safe, & More Reliable

To face harsh and rugged usage environments, the CV-200/P2102 series has a series of industrial-grade protections, including a wide operating temperature range, a wide range DC power input (9 to 48VDC), and a dustproof/water resistant IP66 front panel, which is beneficial for applications such as field-side HMI or production process visualization.





9 - 48VDC



IP66

CV-212C Specifications

Model Name	CV-212C
Display	
LCD Size	▪ 12.1" (16:10)
Max. Resolution	▪ 1280x800
Brightness (cd/m2)	▪ 400
Contrast Ratio	▪ 1000 : 1
LCD Color	▪ 16.2M
Pixel Pitch (mm)	▪ 0.204 (H) x 0.204 (V)
Viewing Angle (H-V)	▪ 178 / 178
Backlight LED Life Time	▪ 50,000 hrs (LED Backlight)
Touch Screen	
Touch Type	▪ Projected Capacitive
Anti-Glare	▪ V
Wet Touch Tracking	▪ V
Physical	
Dimension (W x D x H)	▪ 309.3 x 213.7 x 63.4 mm
Weight Information	▪ 2.13 kg
Mechanical Construction	▪ Die-Casting Flat Surface
Power	
Power Consumption	▪ 7.45 W (Typ.)
Environment	
Front Panel Protection	▪ IP 66 Compliant
Operating Temperature	▪ -20°C - 70°C (-4°F to 158°F) - With Industrial Grade peripherals; Ambient with air flow
Storage Temperature	▪ -30°C - 85°C (-22°F to 185°F)
Relative 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
Industrial Environment	▪ EMC: - EN/BS/IEC 61000-6-4: 2019 Class A - EN/BS/IEC 61000-6-2: 2019

Railway	▪ EMC: EN 50155: 2021 Clause 4.4.6, 13.4.9 (w/ M1101 only) - EN 50121-1 : 2017 - EN 50121-3-2: 2016 + A1: 2019

P2102 Series Specifications

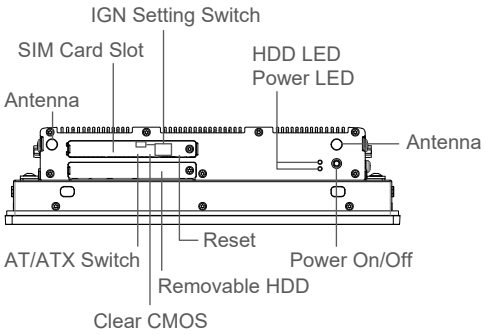
Model Name	P2102	P2102E
System		
Processor	▪ Onboard 8th Intel® Core™ U Processors (Whiskey Lake) - Intel® Core™ i5-8365UE Quad Core Processor (6M Cache, up to 4.10 GHz) - Intel® Core™ i3-8145UE Dual Core Processor (4M Cache, up to 3.90 GHz) - TDP: 15 W	
Memory	▪ 2x DDR4 2400 MHz 260-Pin SO-DIMM Socket ▪ Support Un-buffered and Non-ECC Type up to 64 GB	
Graphics		
Graphics Engine	▪ Integrated Intel® UHD Graphics 620	
Maximum Display Output	▪ Supports Triple Independent Display	
CDS	▪ 1x CDS Connector for Cincoze Display Module	
VGA	▪ 1x VGA Connector(1920 x 1200 @60Hz)	
DP	▪ 1x DisplayPort Connector (4096 x 2304 @ 60Hz, According to CPU Specifications) * Verified maximum resolution: 3840 x2160 @ 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 GbE LAN (Supports WoL, Teaming, Jumbo Frame & PXE), RJ45 - GbE1: Intel® I219LM - GbE2: Intel® I210	
USB	▪ 3x USB 3.2 Gen2 (Type A), 2x USB 2.0 (Type A)	
Serial Port	▪ 4x RS-232/422/485 with Auto Flow Control Support 5V/12V, DB9	
DIO	▪ 16x Isolated Digital I/O (8in/8out), 20-Pin Terminal Block	
Storage		
SSD/HDD	▪ 2x 2.5" HDD/SSD Drive Bay (SATA 3.0), Supports RAID 0/1	
Expansion		
Mini PCI Express	▪ 2x Full-size Mini-PCIe Sockets	
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
M.2 E Key Socket	▪ 1x M.2 2230 E Key Socket for Wireless Module, Supports Intel CRF Module	
SIM Socket	▪ 1x Front Accessible SIM Socket	
Universal Bracket		▪ 2x Universal I/O Bracket
CFM (Control Function Module) Interface	▪ 2x CFM Interface for optional IGN or PoE Module Expansion	
CDS (Convertible Display System) Technology	▪ 1x Convertible Display System (CDS) Interface	

Other Function		
Clear CMOS Switch	▪ 1 x Clear CMOS Switch	
Instant Reboot	▪ Support 0.2sec Instant Reboot technology	
Watchdog Timer	▪ Software Programmable Supports 256 Levels System Reset	
Internal Speaker	▪ AMP 2W + 2W	
OSD Function	▪ LCD On/Off, Brightness Up, Brightness Down	
Reset Button	▪ 1x Reset Button	
Power		
Power Button	▪ 1x ATX Power On/Off Switch	
Power Mode Switch	▪ 1x AT/ATX Mode Switch	
Power Input	▪ 1x 3-pin Terminal Block Connector with Power Input 9~48VDC	
Power Adapter (Optional)	▪1x Optional AC/DC 12V/5A, 60W or 24V/5A 120W	
Remote Power On/Off	▪ 1x Remote Power On/Off Connector, 2-pin Terminal Block	
Physical		
Dimension(W x D x H)	▪ 254.5 x 190 x 41.5mm	▪ 254.5 x 190 x 61 mm
Weight Information	▪ 2.2 kg	▪ 2.7 kg
Mechanical Construction	▪ Extruded Aluminum with Heavy Duty Metal	
Mounting	▪ Wall / VESA / CDS / DIN Rail	
Physical Design	▪ Fanless Design ▪ Jumper-less Design	
Reliability & Protection		
Reverse Power Input	▪ Yes	
Over Voltage 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	▪ 231,243 hours	
Operating System		
Microsoft® Windows®	▪ Windows®10	
Linux	▪ Supports by project	
Environment		
Operating Temperature	▪ Ambient with Air Flow: -40°C to 70°C (with Extended Temperature Peripherals)	
Storage Temperature	▪ -40°C to 70°C	
Relative humidity	▪ 95% RH @ 70°C (Non-condensing)	
Shock	▪ Operating, 50 Grms, Half-sine 11ms Duration (w/ SSD, according to IEC60068-2-27)	
Vibration	▪ Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)	▪ Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64) ▪ Operating, 1 Grms, 10-500 Hz, 3 Axes (w/ CV-W124 only, according to IEC60068-2-6)
EMC	▪ CE, UKCA, FCC, ICES-003 Class A	

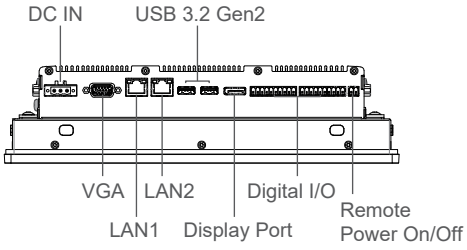
EMI	▪ CISPR 32 Conducted & Radiated: Class A ▪ EN/BS EN 55032 Conducted & Radiated: Class A ▪ EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A ▪ EN/BS EN61000-3-3 Voltage fluctuations & flicker ▪ FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A
EMS	▪ EN/IEC 61000-4-2 ESD: Contact: 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, EN62368-1
Fire Protection	▪ EN 45545-2

CV-212C/P2102 External Layout

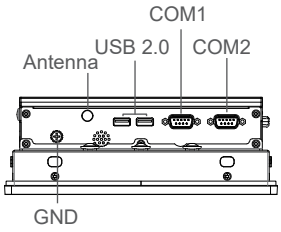
Front I/O



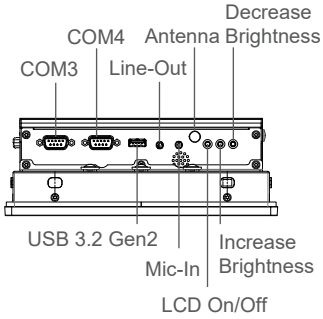
Rear I/O



Left I/O

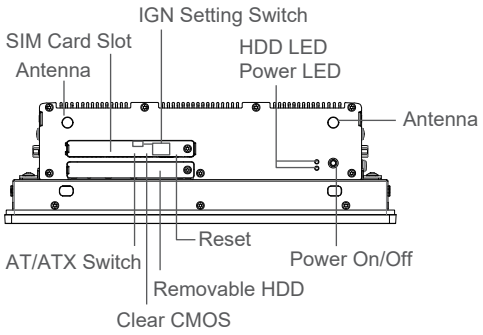


Right I/O

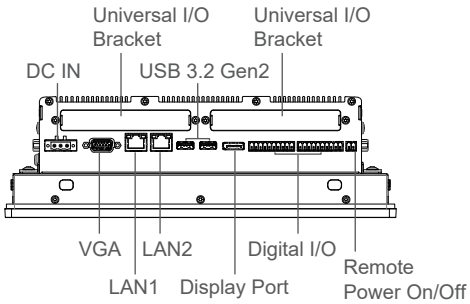


CV-212C/P2102E External Layout

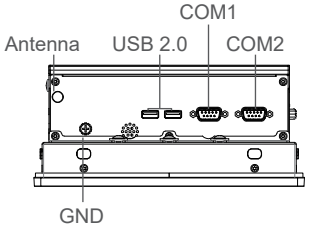
Front I/O



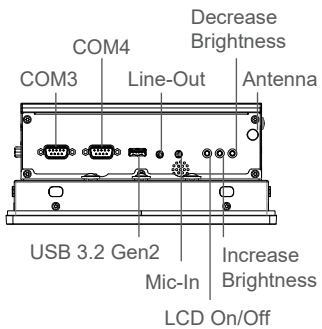
Rear I/O



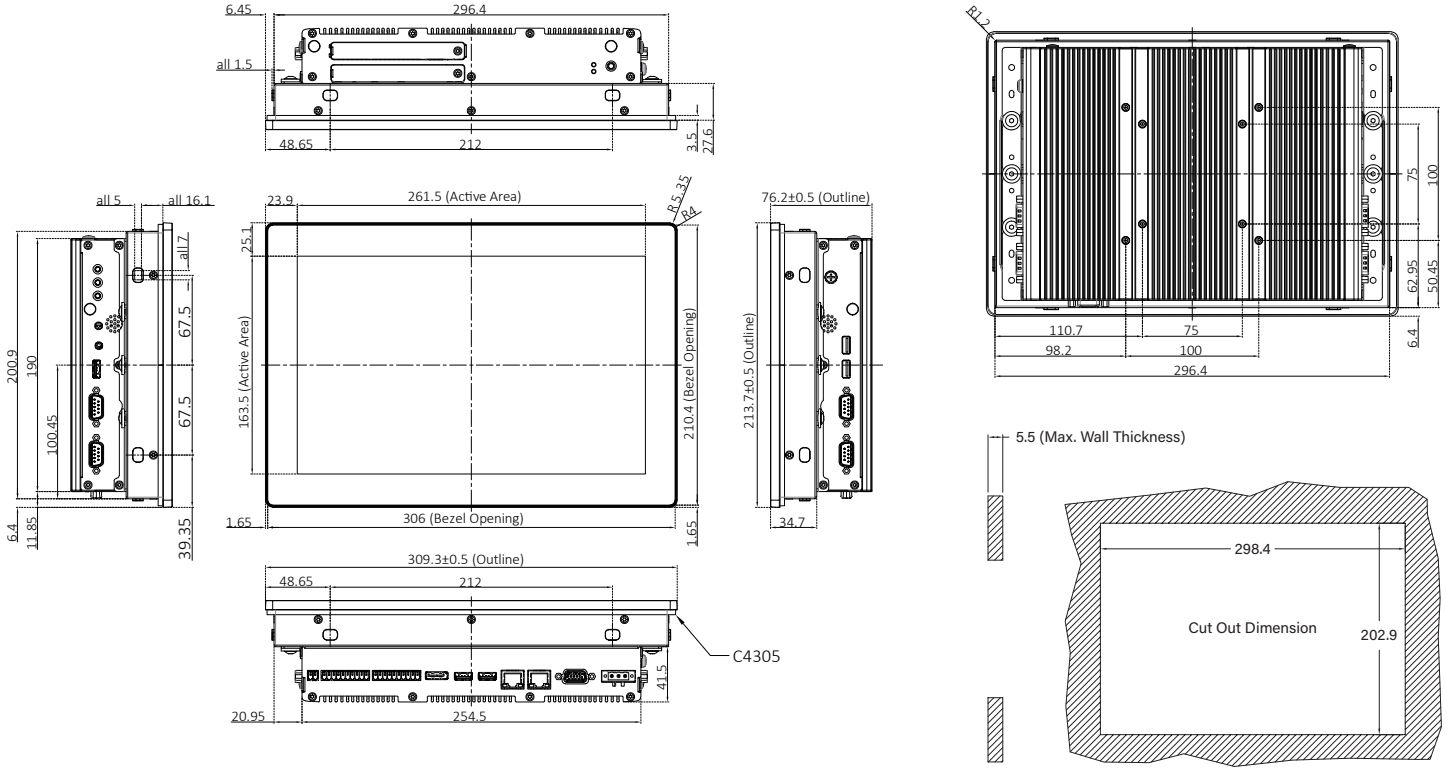
Left I/O



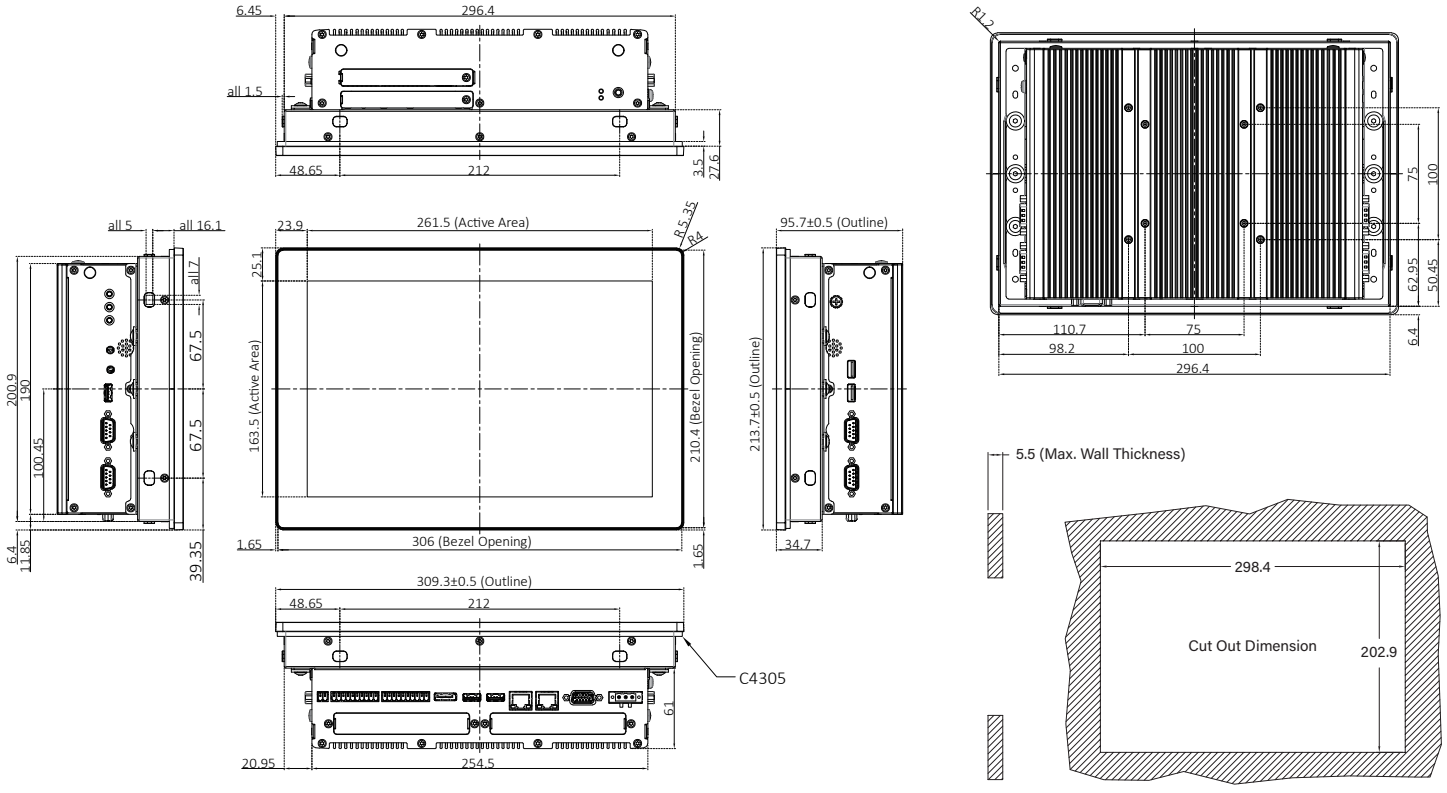
Right I/O



CV-212C/P2102 Dimensions



CV-212C/P2102E Dimensions



Unit: mm

Ordering Information

Available Models

Model No.	Description
CV-212C-R10/P2102-i5-R10	12.1" TFT WXGA 16:10 Slim Bezel Panel PC with Intel® Core i5-8365UE Quad-Core Embedded Computer, Projected Capacitive Touch, and AG Coating
CV-212C-R10/P2102E-i5-R10	12.1" TFT WXGA 16:10 Slim Bezel Panel PC with Intel® Core i5-8365UE Quad-Core Expandable Embedded Computer, Projected Capacitive Touch, and AG Coating
CV-212C-R10/P2102-i3-R10	12.1" TFT WXGA 16:10 Slim Bezel Panel PC with Intel® Core i3-8145UE Dual-Core Embedded Computer, Projected Capacitive Touch, and AG Coating
CV-212C-R10/P2102E-i3-R10	12.1" TFT WXGA 16:10 Slim Bezel Panel PC with Intel® Core i3-8145UE Dual-Core Expandable Embedded Computer, Projected Capacitive Touch, and AG Coating

Model Configuration

	CV-212C	P2102(i3/i5)	P2102E(i3/i5)
CV-212C/P2102	V	V	--
CV-212C/P2102E	V	--	V

V : Compatible

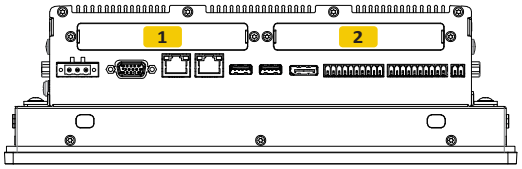
Package Checklist

▪ CV-212C/P2102 Series Panel PC x1	▪ Power Terminal Block Connector (Female) x 1
▪ Panel Mounting Kit x 10	▪ Screw Pack x 5
▪ Thermal Pad (for CPU Thermal Block) x 1	▪ Remote Power On/Off Terminal Block Connector x 1
▪ DIO Terminal Block Connector (Female) x 2	▪ PCI / PCIe Card Installation Kit x 1 (For P2102E only)

Optional Modules and Accessories

Model No.	Description
MEC-COM-M212-TDB9	Mini-PCIe Module with 2x RS-232 Serial Ports, 1x Standard DB9 Cable (For P2102E Only)
MEC-COM-M334-TDB9	Mini-PCIe Module with 4x RS-232/422/485 Serial Ports, 2x Thin DB9 Cable (For P2102E Only)
MEC-LAN-M102-30	Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable (For P2102E only)
MEC-USB-M102-30	Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x 30cm cable (For P2102E only)
CFM-IGN101	CFM Module with Power Ignition Sensing Control Function, 12V/24V Selectable (43 x 36 mm)
CFM-PoE04	CFM Module with PoE Control Function, Individual Port 25.5W (For P2102 only)
CFM-PoE05	CFM Module with PoE Control Function, Individual Port 25.5W (For P2102E only)
RC-E4-02	Riser Card with 1x PCIe x4 Slot (For P2102E only)
RC-PI-02	Riser Card with 1x PCI Slot (For P2102E only)
UB1203	Universal Bracket with 2x DB9 Cutout (For P2102E only)
UB1211	Universal Bracket with 2x RJ45 Cutout (For P2102E only)
UB1214	Universal Bracket with 2x USB Cutout (For P2102E only)
URM01	Universal 19" Rack Mount Kit for Industrial Panel PC & Industrial Monitor
GST60A12-CIN1	Adapter AC/DC 12V 5A 60W with 3pin Terminal Block Plug and Tubes, Level VI
GST120A24-CIN	Adapter AC/DC 24V 5A 120W with 3pin Terminal Block Plug and Tubes, Level VI
GST220A24-CIN	Adapter AC/DC 24V 9.2A 220W with 3pin Terminal Block Plug and Tubes, Level VI
GST360A24-CIN	Adapter AC/DC 24V 15A 360W with 3pin Terminal Block Plug 5.0mm Pitch, with TUBES, Level VI
SL2-SL3	US 2 heads power cord, US B type to IEC C13, SVT 18AWG/3C Black 1.8M SL-2+SL-3
SL6-SL3	EU 2 heads power cord, EU G type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M SL-6+SL-3
QP026-SL3	UK 2 heads power cord, UK I type to IEC C13, H05VV-F 0.75mm2/3G Black 1.8M QP026+SL-3

Optional Module Configuration (For P2102E 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: Nov. 13, 2026

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