

CS-115/P2202 Series

15" TFT-LCD XGA 4:3 Sunlight Readable Modular /
Expandable Panel PC with 12th Gen. Intel® Core™ i5
/ i3 Processor & Projected Capacitive Touch



HIGH-PERFORMANCE SUNLIGHT READABLE PANEL PC

| CS-100/P2000 Series |

Overview

 CONTACT

The CS-100/P2202 series is a sunlight-readable high-performance panel PC that provides ultra-high brightness of up to 1,800 nits. It is equipped with an Intel® Core™ U-series (Alder Lake-P) processor that provides a complete selection of screen sizes, ratios, and brightnesses. Rich I/O, flexible expansion, rugged, easy on-site maintenance, and other features make the CS-100/P2202 series the best choice for outdoor kiosk or HMI applications.

Key Features

- 15" 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
- Ultra High Brightness up to 1,800 nits
- Quad Independent Display (CDS / HDMI / DP / VGA)
- 1x M.2 Key E Type 2230 Socket for Intel CNVi / Wireless Module
- Designed with Aluminum Die-cast Front Bezel
- Front Panel IP65 Compliant

Certifications



Excellent Computing Performance

The CS-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.

i5 Processor



i3 Processor



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

Complete Range of Sizes

The CS-100/P2202 series offers a variety of display options, with screen sizes from 12 to 24 inches, support for up to full HD resolution, high brightness up to 1,800 nits, and multi-point P-Cap touchscreen, which can be selected according to application needs.



Wide Temps, Safe, Reliable

In order to overcome the harsh outdoor environment and unpredictable climate, the CS-100/P2202 series has a series of industrial-grade protections, including a wide operating temperature range that beats the industry standard and an IP65 dustproof/water resistant front panel to ensure a high degree of product safety.

CS-115 Specifications

| Model Name | CS-115 |
|---------------------------------|---|
| Display | |
| LCD Size | • 15" (4:3) |
| Max. Resolution | • 1024 x 768 (XGA) |
| Brightness (cd/m ²) | • 1800 |
| Contrast Ratio | • 800 : 1 |
| LCD Color | • 16.2M |
| Pixel Pitch (mm) | • 0.297 (H) x 0.297 (V) |
| Viewing Angle (H-V) | • 160 / 150 |
| Backlight LED Life Time | • 50,000 hrs (LED Backlight) |
| Touch Screen | |
| Touch Type | • Projected Capacitive |
| Physical | |
| Dimension (W x D x H) | • 408 x 312.4 x 59.2 mm |
| Weight Information | • 4.36kg |
| Mechanical Construction | • Flat Rugged Aluminum Die-casting Bezel |
| Power | |
| Power Consumption | • 27.26W (Max.) |
| Environment | |
| Front Panel Protection | • IP 65 Compliant |
| Operating Temperature | • -20°C to 70°C (With Industrial Grade Peripherals; Ambient with air flow) |
| Storage Temperature | • -30°C to 70°C |
| Relative Humidity | • 90% RH @ 40°C (Non-condensing) |
| EMC | • CE, UKCA, FCC, ICES-003 Class A |
| EMI | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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

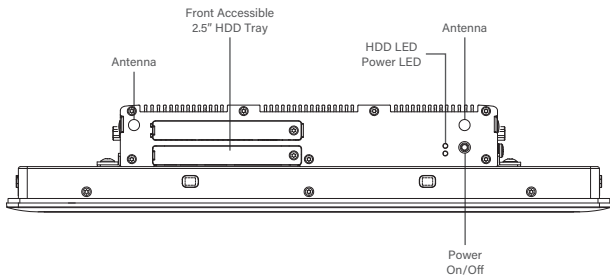
| Model Name | P2202 | P2202E |
|---|--|--|
| System | | |
| Processor | <ul style="list-style-type: none"> Onboard 12th Generation Intel® Alder Lake-P U-Series CPU: <ul style="list-style-type: none"> Intel® Core™ i5-1245UE 10 Cores Up to 4.40 GHz, TDP 15W Intel® Core™ i3-1215UE 6 Cores Up to 4.40 GHz, TDP 15W | |
| Memory | <ul style="list-style-type: none"> 2x DDR5 4800MHz SO-DIMM Socket Supports Un-buffered and non-ECC Type, Up to 64GB | |
| BIOS | <ul style="list-style-type: none"> AMI BIOS | |
| Graphics | | |
| Graphics Engine | <ul style="list-style-type: none"> Integrated Intel® Iris® Xe Graphics: Core™ i5-1245UE Integrated Intel® UHD Graphics: Core™ i3-1215UE | |
| Maximum Display Output | <ul style="list-style-type: none"> Supports Quad Independent Display | |
| CDS | <ul style="list-style-type: none"> 1x CDS Connector (1920 x 1080 @60Hz) | |
| DP | <ul style="list-style-type: none"> 1x DisplayPort Connector (4096 x 2304 @60Hz) * Verified maximum resolution: 3840 x 2160 @ 60Hz | |
| HDMI | <ul style="list-style-type: none"> 1x HDMI Connector (3840 x 2160 @30Hz) | |
| VGA | <ul style="list-style-type: none"> 1x VGA Connector (1920 x 1200 @60Hz) | |
| Audio | | |
| Audio Codec | Realtek® ALC888, High Definition Audio | |
| Line-out | <ul style="list-style-type: none"> 1x Line-out, Phone Jack 3.5mm | |
| Mic-in | <ul style="list-style-type: none"> 1x Mic-in, Phone Jack 3.5mm | |
| I/O | | |
| LAN | <ul style="list-style-type: none"> 2x 1GbE LAN, RJ45 - GbE1: Intel® I219 - GbE2: Intel® I210 | |
| COM | <ul style="list-style-type: none"> 4x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9 | |
| USB | <ul style="list-style-type: none"> 3 x USB 3.2 Gen2x1 (10Gbps), Type A 1 x USB 2.0 (480Mbps), Type A | |
| DIO | <ul style="list-style-type: none"> 16x Isolated Digital I/O (8in/8out), 20-Pin Terminal Block | |
| Storage | | |
| SSD/HDD | <ul style="list-style-type: none"> 2x 2.5" SATA HDD/SSD Bay (SATA3.0) | |
| RAID | <ul style="list-style-type: none"> Support RAID 0/1 | |
| Expansion | | |
| Mini PCI Express | <ul style="list-style-type: none"> 2x Full-size Mini-PCIe Socket | |
| PCI Express | | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 1x SIM Socket | |
| M.2 | <ul style="list-style-type: none"> 1x M.2 Key E Type 2230 Socket, Support Intel CNVi/Wireless Module | |
| CFM (Control Function Module) Interface | <ul style="list-style-type: none"> 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 | |
| Instant Reboot | • Support 0.2sec Instant Reboot Technology | |
| 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 | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • Fanless Design • Jumper-less Design | |
| Reliability & Protection | | |
| Reliability & Protection | • Yes | |
| Reverse Power Input Protection | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • -40°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 70°C | |
| Relative Humidity | • 95%RH @ 70°C (non-Condensing) | |

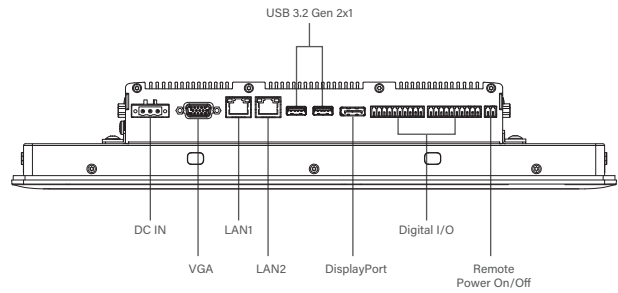
| | |
|-----------|--|
| Shock | <ul style="list-style-type: none"> • Operating, 50 Grms (w/ SSD, according to IEC60068-2-27) |
| Vibration | <ul style="list-style-type: none"> • Operating, 1 Grms, 10-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-6) • Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64) |
| EMC | <ul style="list-style-type: none"> • CE, UKCA, FCC, ICES-003 Class A • EN IEC 61000-6-4, EN IEC 61000-6-2(24VDC Input Only) |
| EMI | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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 style="list-style-type: none"> • UL, cUL, CB, IEC/EN 62368-1 |

CS-115/P2202 External Layout

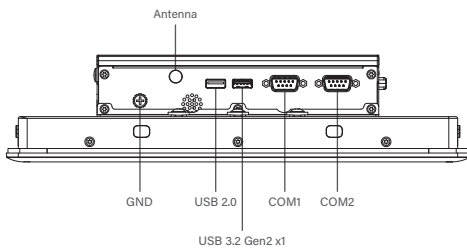
Front I/O



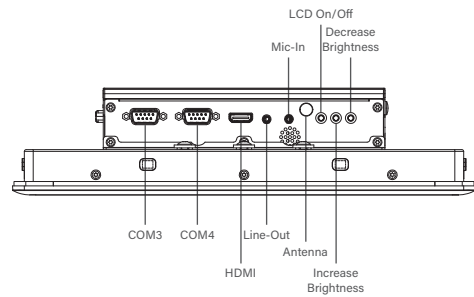
Rear I/O



Left I/O

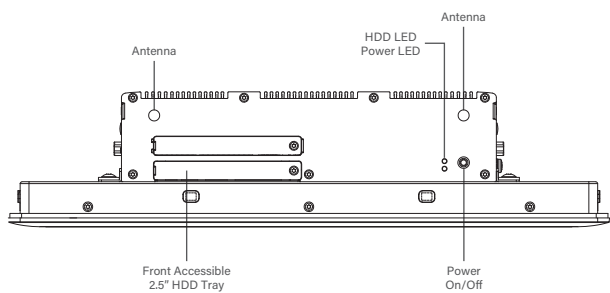


Right I/O

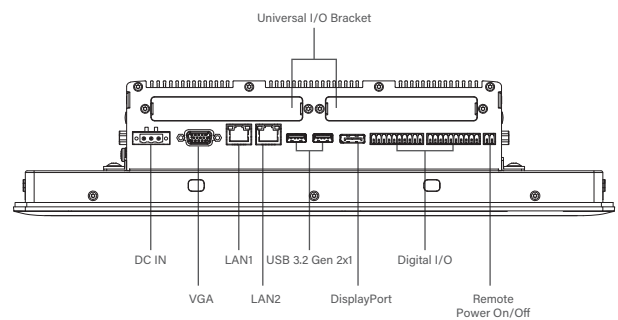


CS-115/P2202E External Layout

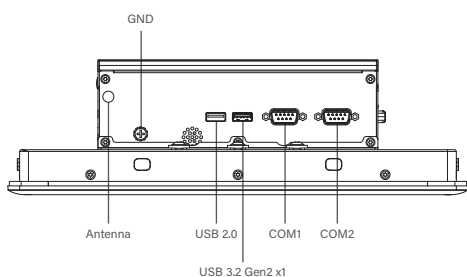
Front I/O



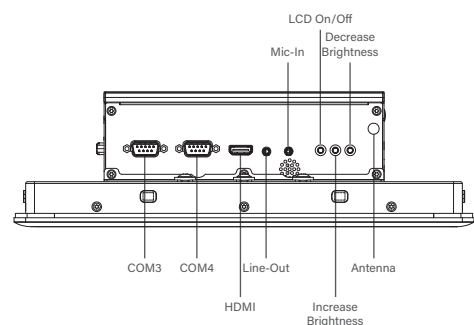
Rear I/O



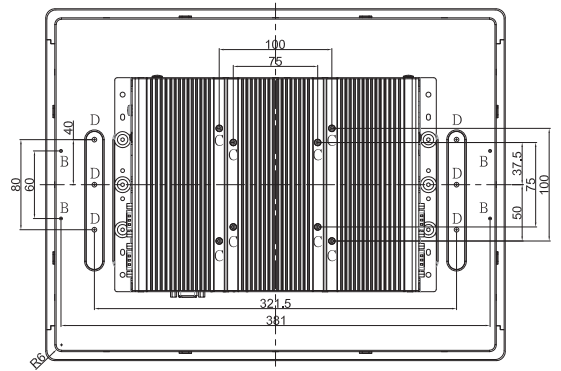
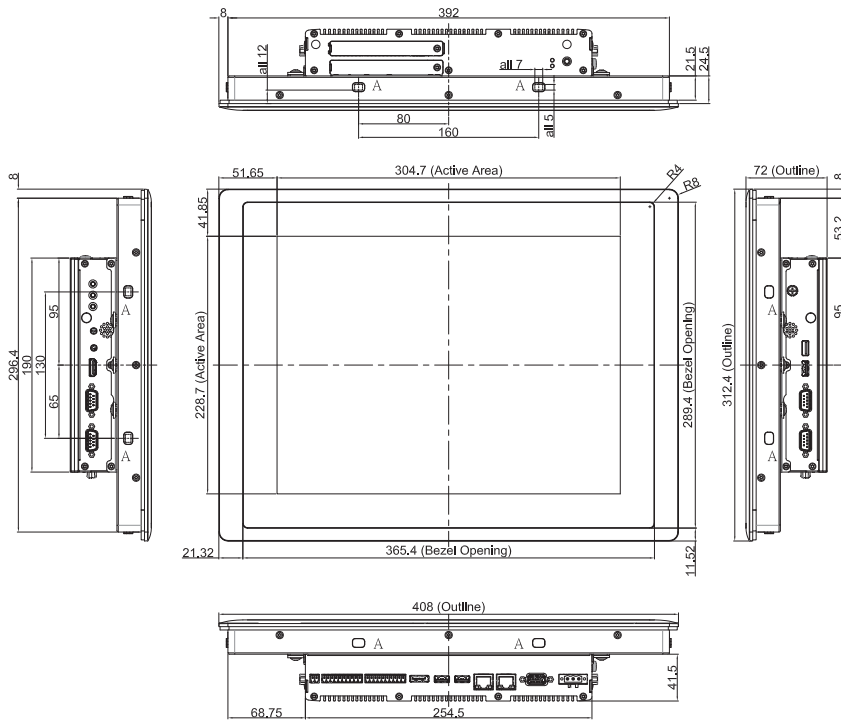
Left I/O



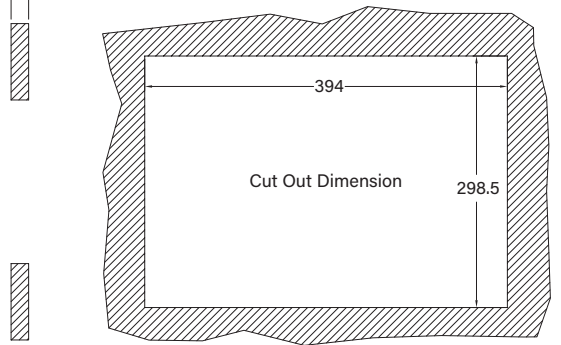
Right I/O



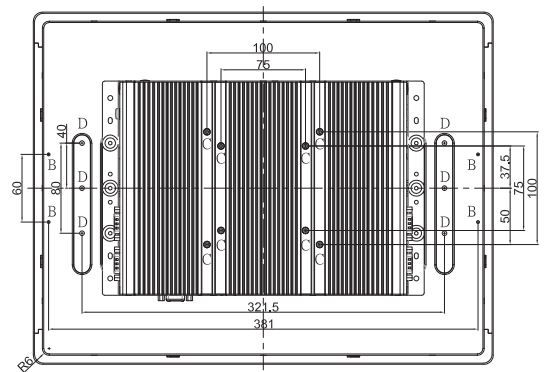
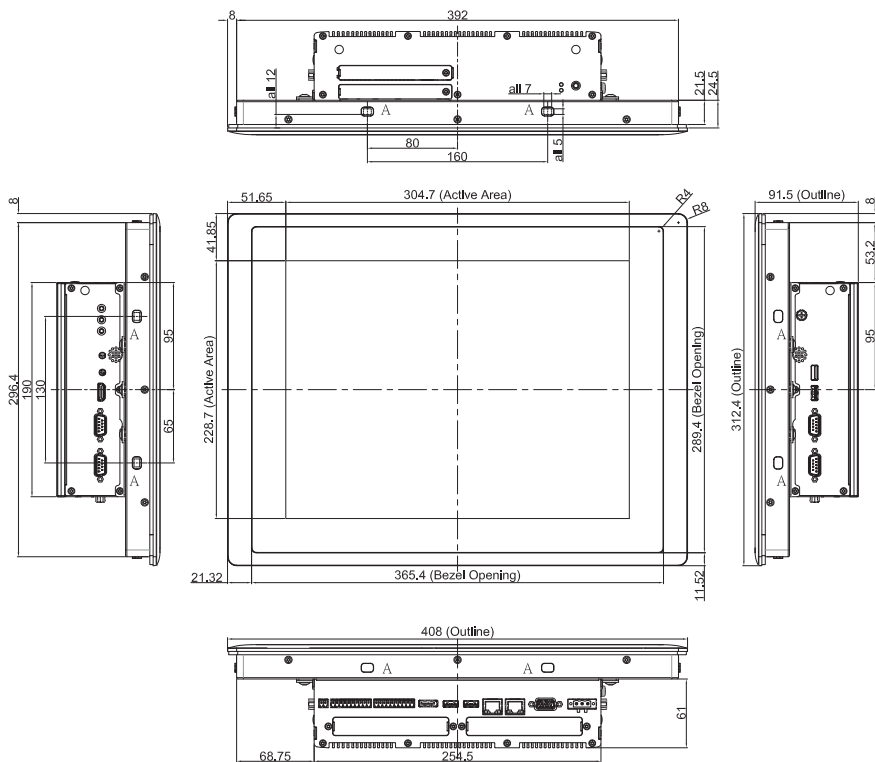
CS-115/P2202 Dimensions



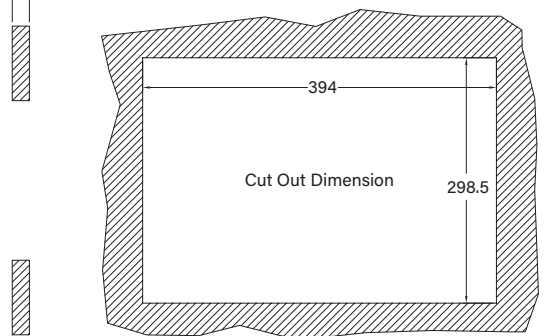
5.5 (Max. Wall Thickness)



CS-115/P2202E Dimensions



5.5 (Max. Wall Thickness)



Ordering Information

Available Models

| Model No. | Description |
|---------------------------|--|
| CS-115C-R11/P2202-i5-R10 | 15" TFT-LCD 1800 nits XGA 4:3 Display Modular Panel PC with 12th Gen. Intel® Core™ i5-1245UE Processor and Projected Capacitive Touch |
| CS-115C-R11/P2202E-i5-R10 | 15" TFT-LCD 1800 nits XGA 4:3 Display Modular and Expandable Panel PC with 12th Gen. Intel® Core™ i5-1245UE Processor and Projected Capacitive Touch |
| CS-115C-R11/P2202-i3-R10 | 15" TFT-LCD 1800 nits XGA 4:3 Display Modular Panel PC with 12th Gen. Intel® Core™ i3-1215UE Processor and Projected Capacitive Touch |
| CS-115C-R11/P2202E-i3-R10 | 15" TFT-LCD 1800 nits XGA 4:3 Display Modular and Expandable Panel PC with 12th Gen. Intel® Core™ i3-1215UE Processor and Projected Capacitive Touch |

Model Configuration

| | CS-115C | P2202(i3/i5) | P2202E(i3/i5) |
|----------------|---------|--------------|---------------|
| CS-115C/P2202 | V | V | -- |
| CS-115C/P2202E | V | -- | V |

V : Compatible

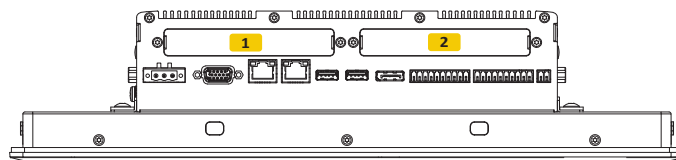
Package Checklist





| | |
|---|----------------------------|
| • CS-115/P2202 Series Panel PC x1 | • Thermal Pad x1 |
| • Power Terminal Block x1 | • Screw Pack x5 |
| • Remote Power On/Off Terminal Block Connector x1 | • Panel Mounting Kit x1 |
| • DIO Terminal Block Connector x2 | • DIN Rail Mounting Kit x1 |
| • PCI / PCIe Card Installation Kit x1 (For P2202E Only) | |

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 |
| GST60A12-CIN1 | Adapter AC/DC 12V 5A 60W, GST60A12-CIN, wide temp (-30°C ~ +70°C), 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 5.0mm Pitch, with TUBES, level VI (For P2202E Only) |

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: Dec. 25, 2024