



CS-112H/P2202 Series – 12.1” Sunlight Readable Modular Panel PC with 12th Generation Intel® Core Processor

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. 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. 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. 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. 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.

SPECIFICATIONS

CPU	Intel® Core™ i5-1245UE 10 Cores Up to 4.40 GHz, TDP 15W OR Intel® Core™ i3-1215UE 6 Cores Up to 4.40 GHz, TDP 15W
Memory Type	262-pin DDR5 4800MHz SO-DIMM (un-buffered and non-ECC)
Memory Slots	2
Maximum Memory Supported	64GB
Integrated Graphics	Integrated Intel® Iris® Xe Graphics: Core™ i5-1245UE; Integrated Intel® UHD Graphics: Core™ i3-1215UE
Video	1 x CDS (1920 x 1080 @60Hz), 1 x DisplayPort (4096 x 2304 @60Hz, Verified maximum resolution: 3840 x 2160 @ 60Hz), 1 x HDMI (3840 x 2160 @30Hz), 1 x VGA (1920 x 1200 @60Hz)
LAN Ports	1 x Intel® I210 GbE LAN, 1 x Intel® I219 GbE LAN

Serial ATA (SATA)	2 x SATA III for 2.5" SSD/HDD
RAID	Support RAID 0/1
M.2 Expansion	1 x M.2 Key E Type 2230 Socket
Other Expansion	2 x Mini-PCIe, 1 x PCI or PCIe x4 with E SKUs, 1 x SIM, 1 x CDS Interface for Convertible Display Module, 1 x CFM for IGN Module Expansion, 1 x CFM for PoE Module Expansion
COM	4 x 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
Audio	Realtek ALC888 HD Audio
Watchdog Timer	Software Programmable Supports 256 Levels System Reset
Digital I/O	16x Isolated Digital I/O (8in/8out) 20-Pin Terminal Block
Power Input	9 – 48VDC, 3-pin Terminal Block
Remote Power On/Off	1 x Remote Power On/Off, 2-pin Terminal Block
Power Consumption	95.06W: Core i5-1245UE
Inrush Current (Peak)	i5-1245UE CPU: 5.381 A @ 24V
LCD Size	12.1" (4:3)
Max Resolution	1024 x 768 (XGA)
Brightness (cd/m2)	1500
Contrast Ratio	700:1
LCD Color	16.7M
Pixel Pitch (mm)	0.24 (H) x 0.24 (V)
Dimensions	Monitor: 345 x 265.3 x 57 mm, System: 254.5 x 190 x 41.5 mm, E-SKU Systems: 254.5 x 190 x 61 mm

Weight	Monitor: 3.16 kg, System: 2.22 kg, E-SKU Systems: 2.74 kg
Viewing Angle (H/V)	160/140
Backlight Lifetime (hours)	50,000 (LED)
Touchscreen Type	Projected Capacitive
Front Panel Protection	IP 65 Compliant
Mechanical Construction	Monitor: Flat Rugged Aluminum Die-casting Bezel, System: Extruded Aluminum with Heavy Duty Metal
Operating Temperature	Monitor: -20°C to 80°C (With Industrial Grade Peripherals; Ambient with air flow), System: -40°C to 70°C (With Industrial Grade Peripherals; Ambient with air flow)
Storage Temperature	Monitor: -30°C to 80°C, System: -40°C to 70°C
Relative Humidity	Monitor: 90% RH @ 40°C non-condensing, System: 95%RH @ 70°C non-condensing
Shock	System: Operating, 50 Grms (w/ SSD, according to IEC60068-2-27)
Vibration	System: 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)
OS Software Supported	Windows 11, Windows 10, Ubuntu 22.04
Certifications	<p>Monitor: • CE, UKCA, FCC, ICES-003 Class A • 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 • 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</p> <p>System: • CE, UKCA, FCC, ICES-003 Class A • EN IEC 61000-6-4, EN IEC 61000-6-2 (24VDC Input Only) • 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 • 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</p>
Safety	Monitor: UL, cUL, CB, IEC, EN 62368-1, System: UL, cUL, CB, IEC/EN 62368-1

Ordering Options

CS-112HC-R11/P2202-i5-R10 (SKU# 2907846A): 12.1" TFT-LCD 1500 nits XGA 4:3 Display Modular Panel PC with 12th Gen. Intel® Core™ i5-1245UE Processor and Projected Capacitive Touch CS-112HC-R11/P2202E-i5-R10 (SKU# 2907846B): 12.1" TFT-LCD 1500 nits XGA 4:3 Display Modular and Expandable Panel PC with 12th Gen. Intel® Core™ i5-1245UE Processor and Projected Capacitive Touch CS-112HC-R11/P2202-i3-R10 (SKU# 2907846C): 12.1" TFT-LCD 1500 nits XGA 4:3 Display Modular Panel PC with 12th Gen. Intel® Core™ i3-1215UE Processor and Projected Capacitive Touch CS-112HC-R11/P2202E-i3-R10 (SKU# 2907846D): 12.1" TFT-LCD 1500 nits XGA 4:3 Display Modular and Expandable Panel PC with 12th Gen. Intel® Core™ i3-1215UE Processor and Projected Capacitive Touch Package Checklist: 1 x CS-112H/P2202 Series Panel PC 1 x Power Terminal Block 1 x Remote Power On/Off Terminal Block Connector 2 x DIO Terminal Block Connector 1 x PCI / PCIe Card Installation Kit (For P2202E Only) 1 x Thermal Pad 5 x Screws Pack 1 x Panel Mounting Kit 1 x DIN Rail Mounting Kit [CMI Module List \(https://globalamericaninc.com/wp-content/uploads/2024/12/CMI-Module-List.pdf\)](https://globalamericaninc.com/wp-content/uploads/2024/12/CMI-Module-List.pdf)