

CV-221C/P1101 Series

21.5" TFT-LCD Panel PC, w/ Intel® Atom® / Pentium® Processor,
4x USB, 4x COM, 1x VGA and 1x DisplayPort



Slim • Modular • Durable

CV-200/P1000 Series — Modernized Industrial Panel PCs

Overview

[CONTACT](#)

The CV-200 / P1101 series is an entry-level slim-bezel modular industrial panel PC, powered by Intel® Atom®/Pentium® processors. It supports up to three independent displays (VGA and DisplayPort) and offers a rich set of I/O interfaces. It's equipped with 2x Mini PCIe slots and 1x SIM card slot, enabling a variety of wireless communication applications. Supporting Full HD resolution and available in sizes from 10" to 21.5", its industrial-grade rugged design makes it well suited for deployment in demanding industrial environments.

Key Features

- 21.5" Full HD LCD (1920 x 1080) with 16:9 Aspect Ratio
- Projected Capacitive Touch with Anti-Glare Coating.
- Wide Viewing Angle of 178°/178°
- Onboard Intel® Atom® / Pentium® Processor
- Supports Triple Independent Display
- 2x Full Size Mini-PCIe Expansion Socket
- Designed with Rugged Aluminum Die-casting Front Bezel
- Front Panel IP66 Compliant

Certifications



Entry-Level Industrial Computing

Equipped with Intel® Atom®/Pentium® processors, providing sufficient performance for basic HMI and control applications.

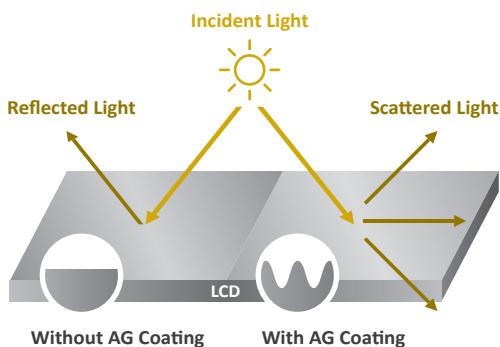
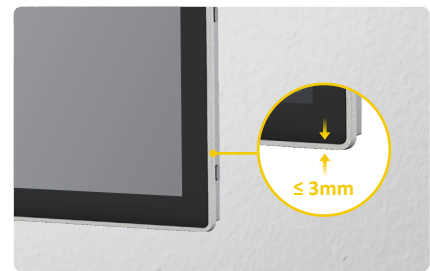


CDS Patented Technology

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.

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/P1101 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.



CV-221C Series Specifications

Model Name	CV-221C
Display	
LCD Size	• 21.5" (16:9)
Max. Resolution	• 1920x1080
Brightness (cd/m2)	• 300
Contrast Ratio	• 5000 : 1
LCD Color	• 16.7M
Pixel Pitch (mm)	• 0.24825 (H) x 0.24825 (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)	• 522.4 x 318.3 x 63.4 mm
Weight Information	• 5.28 kg
Mechanical Construction	• Die-Casting Flat Surface
Power	
Power Consumption	• 24.8 W (Max.)
Environment	
Front Panel Protection	• IP 66 Compliant
Operating Temperature	• 0°C - 60°C (32°F to 140°F) - With Industrial Grade peripherals; Ambient with air flow
Storage Temperature	• -20°C - 60°C (-4°F to 140°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 50121-3-2 Conducted & Radiated: Class A • EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A • EN/BS EN 61000-3-3 Voltage fluctuations & flicker • FCC 47 CFR Part 15B, ICES-003 Conducted & Radiated: Class A
EMS	• EN/IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV • EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 20 V/m • EN/IEC 61000-4-4 EFT: AC Power: 2 kV; DC Power: 1 kV; Signal: 2 kV • EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV • EN/IEC 61000-4-6 CS: 10V (**Compliant with the standard when utilizing shielded cable.) • EN/IEC 61000-4-8 PFMF: 50/60 Hz, 30A/m • EN/IEC 61000-4-11 (50/60 Hz): Voltage dips duration up to 25/30 cycles; interruptions up to 250/300 cycles.
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
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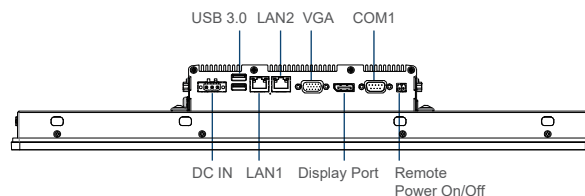
P1101 Series Specifications

Model Name	P1101
System	
Processor	- Onboard Intel® Atom® x7-E3950 Quad Core Processor, up to 2.00 GHz - Onboard Intel® Pentium® N4200 Quad Core Processor, up to 2.50 GHz
Memory	1x DDR3L 1333/1600/1866 MHz SO-DIMM Socket, with up to 1600 MHz operation - Supports Un-buffered and Non-ECC Type, Up to 8GB
Graphics	
Graphics Engine	Integrated Intel® HD Graphics 505
Maximum Display Output	Supports Triple Independent Display
CDS (Convertible Display System) Technology	1x Convertible Display System (CDS) Interface
VGA	1x VGA (1920 x 1200 @60Hz)
DP	1x DisplayPort (4K x 2K @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® I210 - GbE2: Intel® I210
USB	4x USB 3.2 Gen1 (Type A)
Serial Port	4x RS-232/422/485 with Auto Flow Control Support 5V/12V, DB9
DIO	8x Isolated Digital I/O (4in/4out), 10-Pin Terminal Block
Storage	
SSD/HDD	1x 2.5"SATA HDD Bay (SATA 3.0)
SIM Socket	1 x SIM Socket
mSATA	1x mSATA Socket (SATA 3.0, Shared by Mini-PCIe Socket)
Expansion	
Mini PCI Express	2x Full-size Mini-PCIe Socket
CFM (Control Function Module) Interface	- Optional CFM IGN Module for Power Ignition Function - Optional CFM PoE Module for Power over Ethernet Function
CDS (Convertible Display System) Technology	1x Convertible Display System (CDS) Interface
Antenna Holes	4x Antenna Holes
Other Function	
Instant Reboot	Support 0.2sec
Watchdog Timer	Software Programmable Supports 256 Levels System Reset
Internal Speaker	AMP 2W + 2W

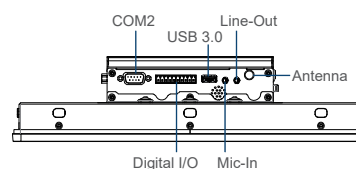
OSD Function	LCD On/Off, Brightness Up, Brightness Down
Clear CMOS Switch	1x Clear CMOS Switch
Reset Button	1x Reset Button
Power	
Power Switch	• 1x Power Switch
Power Mode Switch	• 1x AT/ATX Mode Switch
Power Input	• 1x 3-pin Terminal Block Connector with Power Input 9~48VDC
Power Adapter (Optional)	• 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)	• 204.5 x 149 x 41.5 mm
Weight Information	• 1.49kg
Mechanical Construction	• Extruded Aluminum with Heavy Duty Metal
Physical Design	• Fanless Design • Jumper-less Design
Mounting	• Wall / VESA / CDS / DIN Mounting
Reliability & Protection	
Reverse Power Input	• Yes
Over Voltage Protection	• Protection Range: 51~58V • Protection Type: shut down operating voltage, re-power on at the present level to recover
Over Current Protection	• 15A
CMOS Battery Backup	• SuperCap Integrated for CMOS Battery Maintenance-free Operation
MTBF	• Time: 294,617 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 85°C
Relative humidity	• 95% RH @ 75°C (Non-condensing)
Shock	• Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Vibration	• Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64)
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	• LVD IEC/EN 62368-1

Rear I/O



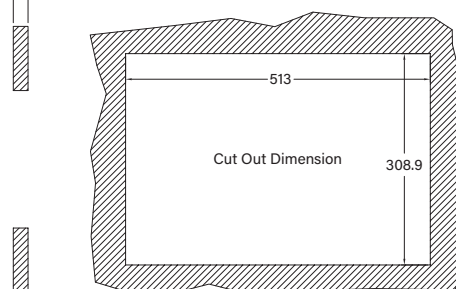
Right I/O



Technical drawing of the front view of the R1.2 device. The drawing shows a rectangular frame with a central display area. The display area is divided into three main sections: a left section with two vertical columns of circular elements, a central section with a large rectangular area, and a right section with two vertical columns of circular elements. Dimensions are provided for the overall size and the internal components.

Dimension	Value
Overall Width	129.15
Overall Height	115.95
Left Section Width	60
Central Section Width	218
Right Section Width	75
Bottom Section Width	205.5
Bottom Section Height	5.7
Central Section Height	75
Bottom Section Height	100
Bottom Section Height	500

– 5.5 (Max. Wall Thickness)



Ordering Information

Available Models

Model No.	Description
CV-221C-R10/P1101-E50-R11	21.5" FHD 16:9 Slim Bezel Panel PC with Intel® Atom® E3950 Quad-Core Embedded Computer, Projected Capacitive Touch, and AG Coating
CV-221C-R10/P1101-N42-R11	21.5" FHD 16:9 Slim Bezel Panel PC with Intel® Pentium® N4200 Quad-Core Embedded Computer, Projected Capacitive Touch, and AG Coating

Model Configuration

	CV-221C	P1101-E50	P1101-N42
CV-221C/P1101-E50	V	V	--
CV-221C/P1101-N42	V	--	V

V : Compatible

Package Checklist

• CV-221C/P1101 Series Panel PC x 1	• Power Terminal Block Connector (Female) x 1
• Panel Mounting Kit x 14	• Screw Pack x 1
• DIO Terminal Block Connector (Female) x 1	• Remote Power On/Off Terminal Block Connector x 1
• Thermal Pad (for CPU Thermal Block) x 1	

Optional Modules and Accessories

Model No.	Description
CFM-IGN101	CFM Module with Power Ignition Sensing Control Function, 12V/24V Selectable (43 x 36 mm)
CFM-PoE02	CFM Module with PoE Control Function, Individual Port 25.5W
URM01	Universal 19" Rack Mount Kit for Industrial Panel PC & Industrial Monitor
GST60A12-CIN1	Adapter AC/DC 12V 5A 60W, GST60A12-CIN1, wide temp (-30°C ~ +70°C)
GST120A24-CIN	Adapter AC/DC 24V 5A 120W, GST120A24-CIN, wide temp (-30°C ~ +70°C), 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