

# CV-W121/P1101 Series

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



## POWER EFFICIENT INDUSTRIAL PANEL PC

| CV-100/P1000 Series |

### Overview

 CONTACT

CV-100/P1101 Series is a 8.4" - 24" TFT-LCD touch panel PC offering 300 nits - 400 nits high brightness and 800 x 600 1920 x 1080 resolution. The system is based on Intel® Atom® / Pentium® processor and supports triple independent displays (via VGA and DisplayPort outputs). CV-100/P1101 Series features extensive connectivity including 2x GbE, 4x USB 3.0, 4x COM, and 8x isolated DIO. It also offers 2x full size Mini-PCIe socket and 1x SIM socket for a variety of wireless data connections. Through the ready-to-use CFM modules, users can easily add power ignition sensing and Power over Ethernet (PoE) functions for a variety of applications. CV-100/P1101 Series also supports Convertible Display System (CDS) technology. Comparing with regular standalone panel PCs, it is more flexible and reduces maintenance cost dramatically. Featuring with rigorous industrial protections, wide range operating temperature, IP65 dust/waterproof front panel, and wide range DC power input (9 to 48VDC), CV-100/P1101 Series is appropriate for harsh environments and critical applications.

### Key Features

- 21.5" TFT-LCD Full HD with Resistive 5-wire / Projected Capacitive Touch
- Onboard Intel® Atom® / Pentium® Processor
- Triple Independent Displays (via VGA and DisplayPort outputs)
- 2x LAN, 4x USB, 4x COM, 1x VGA, 1x DisplayPort, 4x DI/4x DO
- 2x Full Size Mini-PCIe, 1x 2.5" SATA Drive Bay, 1x mSATA Socket
- Designed with Aluminum Die-Casting Front Frame
- True Flat IP65 Front Panel Protection
- Supports Panel / VESA / Rack Mounting
- Supports CDS Technology, Ignition Sensing and Power over Ethernet

### Certifications



## Power Efficient

CV-100/P1101 Series is an energy-saving fanless panel PC. Based on Intel® Atom® / Pentium® processor, the system can operate up to triple independent displays and support up to 4K display resolution (via DisplayPort).



## Multiple Functions

CV-100/P1101 Series provides extensive I/O, Mini-PCIe slot, 2.5" SATA drive bay, mSATA socket, and SIM card slot. It also supports power ignition sensing and PoE by adding ready-to-use CFM modules.

## CDS Technology

CDS (Convertible Display Systems) is a Cincoze patented technology, which allows for easy system maintenance, upgrades or replacement.



## CV-W121 Series Specifications

Model Name	CV-W121R	CV-W121C	CV-W121G
<b>Display</b>			
LCD Size	• 21.5" (16:9)		
Max. Resolution	• 1920 x 1080		
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)		
<b>Touch Screen</b>			
Touch Type	• Resistive 5-wire	• Projected Capacitive	• Glass Screen
<b>Physical</b>			
Dimension ( W x D x H )	• 550 x 330.5 x 63.2mm		
Weight Information	• 5.56 kg		
Mechanical Construction	• Die-Casting Flat Surface		
<b>Power</b>			
Power Consumption	• 24.85W (Max.)	• 24.8W (Max.)	• 24.35W (Max.)
<b>Environment</b>			
Front Panel Protection	• IP 65 Compliant		
Operating Temperature	• 0°C to 60°C (with Industrial Grade peripherals; Ambient with air flow)		
Storage Temperature	• -20°C to 60°C		
Relative Humidity	• 80% RH @ 50°C (Non-condensing)		
EMC	• CE, UKCA, FCC, ICES-003 Class A		
EMI	<ul style="list-style-type: none"> <li>• CISPR 32 Conducted &amp; Radiated: Class A</li> <li>• EN/BS EN 55032 Conducted &amp; Radiated: Class A</li> <li>• EN/BS EN IEC 61000-3-2 Harmonic current emissions: Class A</li> <li>• EN/BS EN61000-3-3 Voltage fluctuations &amp; flicker</li> <li>• FCC 47 CFR Part 15B, ICES-003 Conducted &amp; Radiated: Class A</li> </ul>		
EMS	<ul style="list-style-type: none"> <li>• EN/IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV</li> <li>• EN/IEC 61000-4-3 RS: 80 MHz to 1000 MHz: 3 V/m</li> <li>• EN/IEC 61000-4-4 EFT: AC Power: 1 kV; DC Power: 0.5 kV; Signal: 0.5 kV</li> <li>• EN/IEC 61000-4-5 Surges: AC Power: 2 kV; Signal: 1 kV</li> <li>• EN/IEC 61000-4-6 CS: 3V</li> <li>• EN/IEC 61000-4-8 PFMF: 50 Hz, 1A/m</li> <li>• EN/IEC 61000-4-11 Voltage Dips &amp; Voltage Interruptions: 0.5 cycles at 50 Hz</li> </ul>		
Safety	• UL, cUL, CB, IEC, EN 62368-1		

**P1101 Series Specifications**

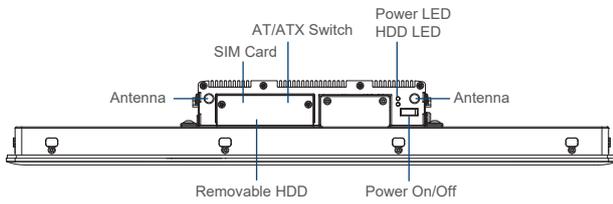
Model Name	P1101
<b>System</b>	
Processor	<ul style="list-style-type: none"> <li>Onboard Intel® Atom® x7-E3950 Quad Core Processor, up to 2.00 GHz</li> <li>Onboard Intel® Pentium® N4200 Quad Core Processor, up to 2.50 GHz</li> </ul>
Memory	<ul style="list-style-type: none"> <li>1x DDR3L 1333/1600/1866 MHz SO-DIMM Socket, with up to 1600 MHz operation</li> <li>Supports Un-buffered and Non-ECC Type, Up to 8GB</li> </ul>
<b>Graphics</b>	
Graphics Engine	<ul style="list-style-type: none"> <li>Integrated Intel® HD Graphics 505</li> </ul>
Maximum Display Output	<ul style="list-style-type: none"> <li>Supports Triple Independent Display</li> </ul>
CDS (Convertible Display System) Technology	<ul style="list-style-type: none"> <li>1x Convertible Display System (CDS) Interface</li> </ul>
VGA	<ul style="list-style-type: none"> <li>1x VGA (1920 x 1200 @60Hz)</li> </ul>
DP	<ul style="list-style-type: none"> <li>1x DisplayPort (4K x 2K @60Hz)</li> </ul>
<b>Audio</b>	
Audio Codec	<ul style="list-style-type: none"> <li>Realtek® ALC888, High Definition Audio</li> </ul>
Line-out	<ul style="list-style-type: none"> <li>1x Line-out, Phone Jack 3.5mm</li> </ul>
Mic-in	<ul style="list-style-type: none"> <li>1x Mic-in, Phone Jack 3.5mm</li> </ul>
<b>I/O</b>	
LAN	<ul style="list-style-type: none"> <li>2x GbE LAN (Supports WoL, Teaming, Jumbo Frame &amp; PXE), RJ45                             <ul style="list-style-type: none"> <li>GbE1: Intel® I210</li> <li>GbE2: Intel® I210</li> </ul> </li> </ul>
USB	<ul style="list-style-type: none"> <li>4x USB 3.2 Gen1 (Type A)</li> </ul>
Serial Port	<ul style="list-style-type: none"> <li>4x RS-232/422/485 with Auto Flow Control Support 5V/12V, DB9</li> </ul>
DIO	<ul style="list-style-type: none"> <li>8x Isolated Digital I/O (4in/4out), 10-Pin Terminal Block</li> </ul>
<b>Storage</b>	
SSD/HDD	<ul style="list-style-type: none"> <li>1x 2.5" SATA HDD Bay (SATA 3.0)</li> </ul>
SIM Socket	<ul style="list-style-type: none"> <li>1 x SIM Socket</li> </ul>
mSATA	<ul style="list-style-type: none"> <li>1x mSATA Socket (SATA 3.0, Shared by Mini-PCIe Socket)</li> </ul>
<b>Expansion</b>	
Mini PCI Express	<ul style="list-style-type: none"> <li>2x Full-size Mini-PCIe Socket</li> </ul>
CFM (Control Function Module) Interface	<ul style="list-style-type: none"> <li>Optional CFM IGN Module for Power Ignition Function</li> <li>Optional CFM PoE Module for Power over Ethernet Function</li> </ul>
CDS (Convertible Display System) Technology	<ul style="list-style-type: none"> <li>1x Convertible Display System (CDS) Interface</li> </ul>
Antenna Holes	<ul style="list-style-type: none"> <li>4x Antenna Holes</li> </ul>
<b>Other Function</b>	
Instant Reboot	<ul style="list-style-type: none"> <li>Support 0.2sec</li> </ul>
Watchdog Timer	<ul style="list-style-type: none"> <li>Software Programmable Supports 256 Levels System Reset</li> </ul>
Internal Speaker	<ul style="list-style-type: none"> <li>AMP 2W + 2W</li> </ul>

OSD Function	LCD On/Off, Brightness Up, Brightness Down
Clear CMOS Switch	1x Clear CMOS Switch
Reset Button	1x Reset Button
<b>Power</b>	
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
<b>Physical</b>	
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
<b>Reliability &amp; Protection</b>	
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
<b>Operating System</b>	
Microsoft® Windows®	• Windows®10
Linux	• Supports by project
<b>Environment</b>	
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

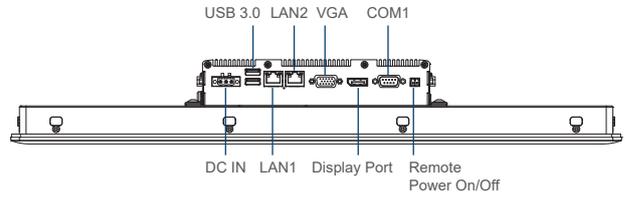
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<p>Safety</p>	<ul style="list-style-type: none"> <li>• LVD IEC/EN 62368-1</li> </ul>

**CV-W121/P1101 External Layout**

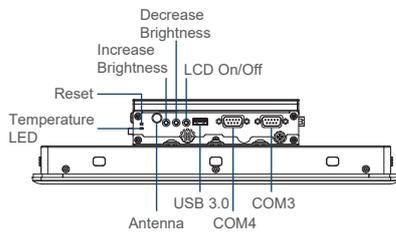
Front I/O



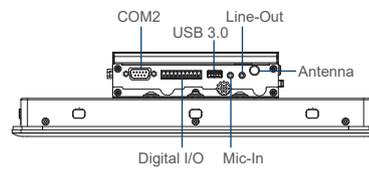
Rear I/O



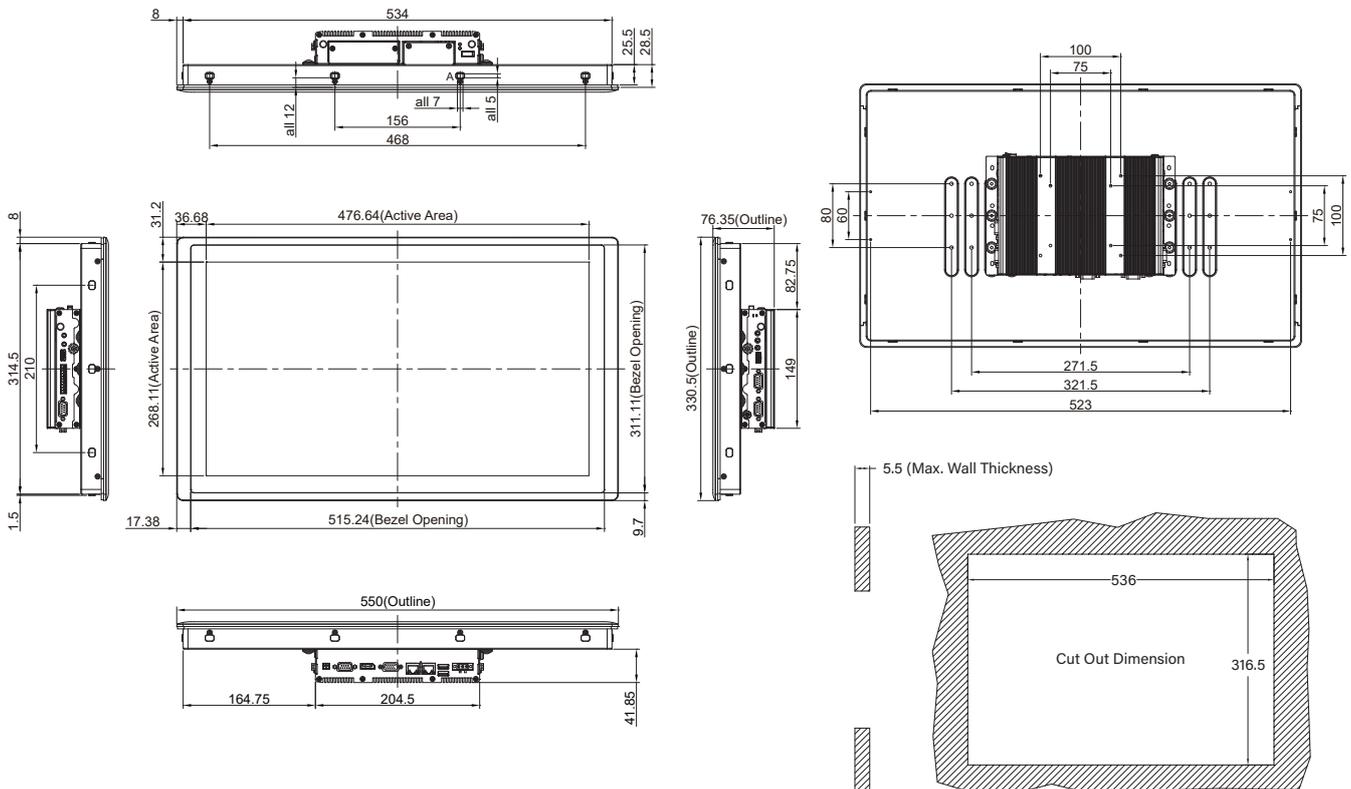
Left I/O



Right I/O



**CV-W121/P1101 Dimensions**



Unit: mm

## Ordering Information

### Available Models

Model No.	Description
CV-W121R-R10/P1101-E50-R11	21.5" TFT-LCD Full HD 16:9 Modular Touch Panel PC with Intel® Atom® E3950 Quad Core Processor and Resistive 5-wire Touch
CV-W121C-R11/P1101-E50-R11	21.5" TFT-LCD Full HD 16:9 Modular Touch Panel PC with Intel® Atom® E3950 Quad Core Processor and P-Cap. Touch
CV-W121G-R10/P1101-E50-R11	21.5" TFT-LCD Full HD 16:9 Modular Touch Panel PC with Intel® Atom® E3950 Quad Core Processor and without Touch
CV-W121R-R10/P1101-N42-R10	21.5" TFT-LCD Full HD 16:9 Modular Touch Panel PC with Intel® Pentium® N4200 Quad Core Processor and Resistive 5-wire Touch
CV-W121C-R11/P1101-N42-R10	21.5" TFT-LCD Full HD 16:9 Modular Touch Panel PC with Intel® Pentium® N4200 Quad Core Processor and P-Cap. Touch
CV-W121G-R10/P1101-N42-R10	21.5" TFT-LCD Full HD 16:9 Modular Touch Panel PC with Intel® Pentium® N4200 Quad Core Processor and without Touch

### Model Configuration

	CV-W121R	CV-W121C	CV-W121G	P1101-E50	P1101-N42
CV-W121R/P1101-E50	V	--	--	V	--
CV-W121C/P1101-E50	--	V	--	V	--
CV-W121G/P1101-E50	--	--	V	V	--
CV-W121R/P1101-N42	V	--	--	--	V
CV-W121C/P1101-N42	--	V	--	--	V
CV-W121G/P1101-N42	--	--	V	--	V

V : Compatible

### Package Checklist

• CV-W121/P1101 Series Panel PC x 1	• Power Terminal Block Connector (Female) x 1
• Panel Mounting Kit x 1	• 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

Updated: Feb. 20, 2025.