CV-W124/P1201 Series

24" TFT-LCD Modular Panel PC with Intel® Elkhart Lake Atom® x6000E Series Processor



POWER EFFICIENT INDUSTRIAL PANEL PC

| CV-100/P1000 Series |

Overview

CONTACT

The CV-100/P1201 series is a modular industrial panel PC with an Intel® Atom® (Elkhart Lake) processor. Available in a selection of screen sizes, the CV-100/P1201 has flexible expansion options, including rich native I/O interfaces (GbE LAN, USB 3.2, COM, and DIO), Mini PCIe and M.2 Key E Type 2230 expansion slots, and exclusive CFM expansion to add functions such as PoE and IGN. Cincoze's exclusive patented Convertible Display System (CDS) technology enables further flexible future computer performance upgrades and screen replacements. The robust CV-100/P1201 series is well suited for equipment HMI and production process visualization applications.

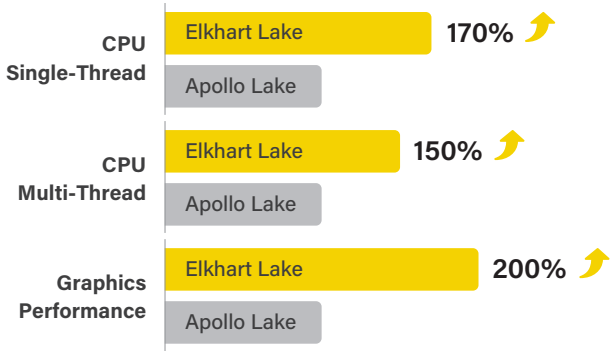
Key Features

- 24" TFT-LCD Full HD with Resistive 5-wire / Projected Capacitive Touch
- Intel® Elkhart Lake Atom® x6425E/x6211E Processor
- 1x DDR4 SO-DIMM
- Designed with Rugged Aluminum Die-casting Front Bezel
- Support Panel / VESA / Rack Mount
- Front Panel IP65 Compliant
- Wide Operating Temperature
- Cincoze Patent CDS Technology Support

Certifications

Next-gen Performance

The CV-100/P1201 supports up to an Intel® Atom® x6425E (Elkhart Lake) 4-core processor, with 1.7 times the single-thread performance, 1.5 times the multi-thread performance, and double the graphics performance of the previous-generation Apollo Lake processor. Up to 32 GB of 3200 MHz DDR4 is supported.





Patented CDS Technology

Convertible Display System (CDS), the patented technology that connects the CV-100 display module to the P1201 embedded computer, has the advantages of easy maintenance in the field and easy future upgrades because the screen size can be changed and performance can be improved by only replacing a single part, rather than the whole system, saving on upgrade costs.

Patent No. M482908

Comprehensive Range of Sizes

The CV-100/P1201 series has a diverse selection of screen sizes (8.4" to 24"), aspect ratios (4:3, 5:4, 16:9), and touch technologies (multi-point capacitive, single-point resistive) available to suit various application needs.





Robust, Safe, Reliable

The CV-100/P1201 series has industrial-grade protections, including wide operating temperature, wide-range DC power input (9 to 48 VDC), and IP65 front panel dust and water resistance, to face harsh and dangerous use environments such as on-site HMI and production process visualization. The CV-100/P1201 (19"-24" only) has separately passed product safety standards (UL certification) for information and communication technology and audio-visual equipment in the United States, an assurance of product safety.

CV-W124 Series Specifications

Model Name	CV-W124R	CV-W124C	CV-W124G
Display			
LCD Size	▪ 24" (16:9)		
Max. Resolution	▪ 1920 x 1080		
Brightness (cd/m2)	▪ 300		
Contrast Ratio	▪ 5000 : 1		
LCD Color	▪ 16.7M		
Pixel Pitch (mm)	▪ 0.27675 (H) x 0.27675 (V)		
Viewing Angle (H-V)	▪ 178 / 178		
Backlight LED Life Time	▪ 50,000 hrs (LED Backlight)		
Touch Screen			
Touch Type	▪ Resistive 5-wire	▪ Projected Capacitive	▪ Non-Touch (Glass Cover)
Wet Touch Tracking		v	
Physical			
Dimension (W x D x H)	▪ 605 x 373 x 63.2 mm		
Weight Information	▪ 6.92 kg	▪ 6.64 kg	
Mechanical Construction	▪ Die-Casting Flat Surface		
Power			
Power Consumption	▪ 23.8W (Max.)	▪ 23.75W (Max.)	▪ 23.3W (Max.)
Environment			
Front Panel Protection	▪ IP 65 Compliant		
Operating Temperature	▪ -20°C to 70°C (-4°F to 158°F) (With Industrial Grade Peripherals; Ambient with air flow)		
Storage Temperature	▪ -30°C to 80°C (-22°F to 176°F)		
Relative Humidity	▪ 90% RH @ 40°C (non-Condensing)		
Vibration		▪ Operating, 1 Grms, 10-500 Hz, 3 Axes (w/P2012E 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, EN 62368-1		

P1201 Specifications

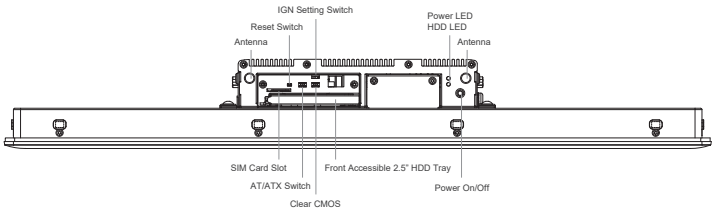
Model Name	P1201
System	
Processor	▪ Intel® Atom® x6425E Processor (1.5M Cache, up to 3.00 GHz, 12W) ▪ Intel® Atom® x6211E Processor (1.5M Cache, up to 3.00 GHz, 6W)
Memory	▪ 1x DDR4 SO-DIMM Socket ▪ Supports DDR4 3200MHz Memory Up to 32GB (un-buffered and non-ECC)
BIOS	▪ AMI BIOS
Graphics	
Graphics Engine	▪ Integrated Intel® UHD Graphics
Maximum Display Output	▪ Supports Triple Independent Display
CDS	▪ 1x CDS Connector (1920 x 1080 @60Hz)
DP	▪ 1x DisplayPort Connector (4096 x 2304 @ 60Hz,According to CPU Specifications) * Verified maximum resolution: 3840 x 2160 @60Hz
VGA	▪ 1x VGA Connector (1920 x 1200 @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 1GbE LAN, RJ45 - GbE1: Intel® I210 - GbE2: Intel® I210
COM	▪ 3x RS-232/422/485 with Auto Flow Control (Supports 5V/12V), DB9
USB	▪ 3x 10Gbps USB 3.2 Gen2, Type A ▪ 1x 480Mbps USB 2.0, Type A
DIO	▪ 8x Isolated DIO (4x DI/4x DO), 10-Pin Terminal Block
Storage	
SSD/HDD	▪ 1x 2.5" Front Accessible SATA HDD/SSD Drive Bay (SATA3.0)
mSATA	▪ 1x mSATA Socket (SATA 3.0, shared by Mini-PCIe socket)
Expansion	
Mini PCI Express	▪ 1x Full-size Mini-PCIe Socket
SIM Socket	▪ 1x SIM Socket
M.2	▪ 1x M.2 Key E Type 2230 Socket, Support Wireless Module
CFM (Control Function Module) Interface	▪ 1x CFM IGN Interface for optional CFM-IGN Module Expansion ▪ 1x CFM PoE Interface for optional CFM-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

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, Temperature 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
Remote Power LED	▪ 1x Remote Power LED, 2-pin Terminal Block
Operating System	
Windows	▪ Windows® 10
Linux	▪ Supports by project
Physical	
Dimension (W x D x H)	▪ 204.5 x 149 x 41.5 mm
Weight Information	▪ 1.54 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 Protection	▪ 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	▪ 283,091 Hours - Database: Telcordia SR-332 Issue3, Method 1, Case 3
Environment	
Operating Temperature	▪ -40°C to 70°C * PassMark BurnInTest: 100% CPU, 2D/3D Graphics (without thermal throttling) * With extended temperature peripherals; Ambient with air flow * According to IEC60068-2-1, IEC60068-2-2, IEC60068-2-14
Storage Temperature	▪ -40°C to 85°C
Relative Humidity	▪ 95%RH @ 70°C (non-Condensing)
Shock	▪ Operating, 50 Grms (w/ SSD, according to IEC60068-2-27)
Vibration	▪ Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-64) ▪ Operating, 1 Grms, 10-500 Hz, 3 Axes (w/ SSD, according to IEC60068-2-6)
EMC	▪ CE, UKCA, FCC, ICES-003 Class A ▪ EN IEC 61000-6-4, EN IEC 61000-6-2(24VDC Input Only)

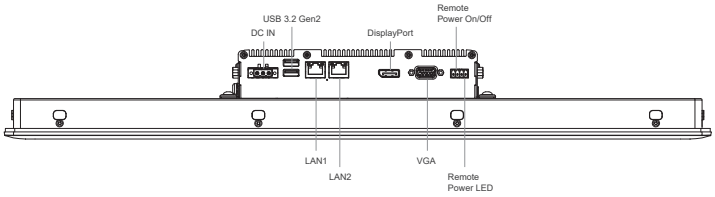
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CV-W124/P1201 External Layout

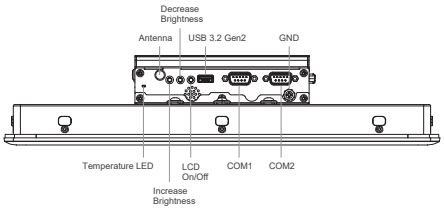
Front I/O



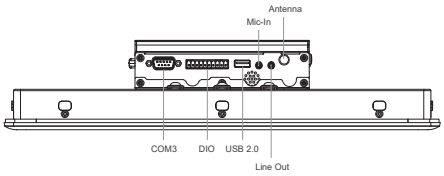
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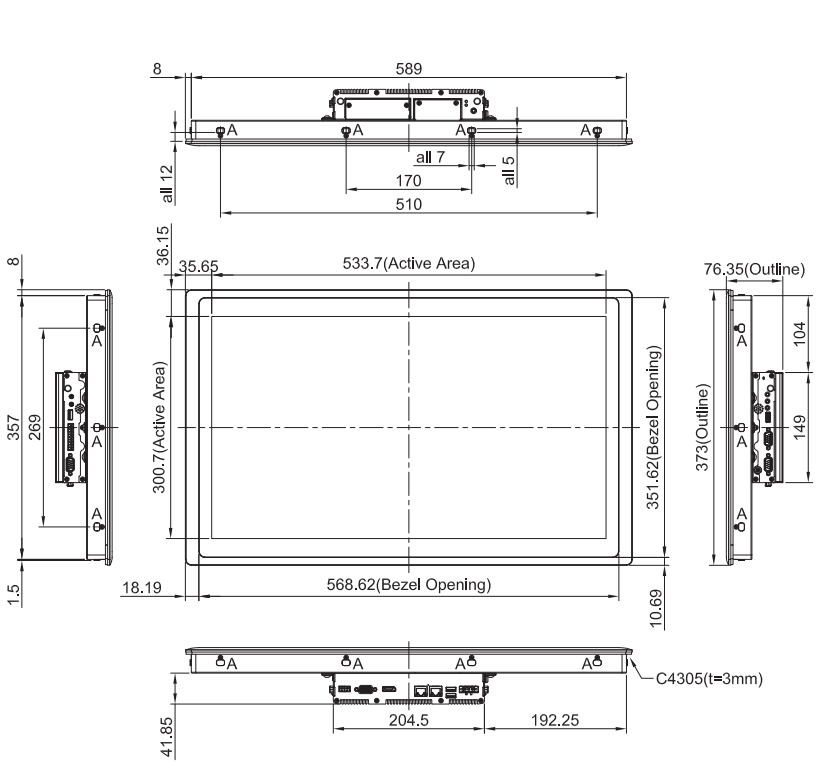
Left I/O

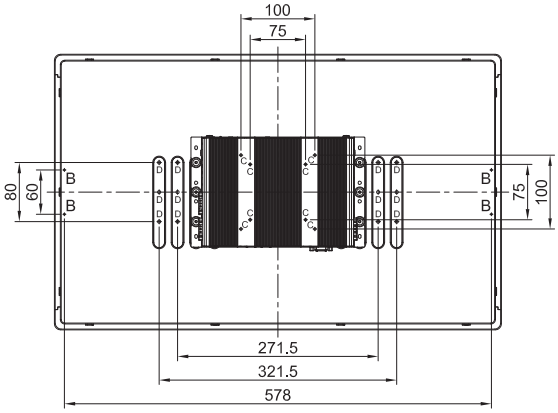


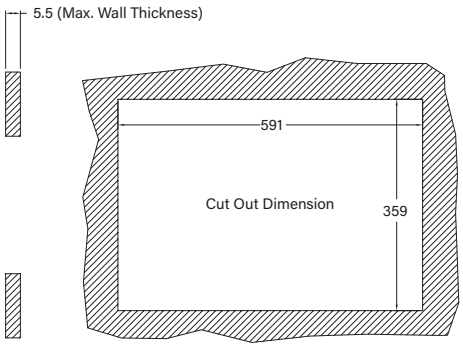
Right I/O



CV-W124/P1201 Dimensions







Unit: mm

Ordering Information

Available Models

Model No.	Description
CV-W124R-R10/P1201-X6425E-R11	24" TFT-LCD Full HD 16:9 Panel PC with Intel Atom x6425E Quad Core Processor and Resistive 5-wire Touch
CV-W124C-R11/P1201-X6425E-R11	24" TFT-LCD Full HD 16:9 Panel PC with Intel Atom x6425E Quad Core Processor and P-Cap. Touch
CV-W124G-R10/P1201-X6425E-R11	24" TFT-LCD Full HD 16:9 Panel PC with Intel Atom x6425E Quad Core Processor and without Touch
CV-W124R-R10/P1201-X6211E-R11	24" TFT-LCD Full HD 16:9 Panel PC with Intel Atom x6211E Dual Core Processor and Resistive 5-wire Touch
CV-W124C-R11/P1201-X6211E-R11	24" TFT-LCD Full HD 16:9 Panel PC with Intel Atom x6211E Dual Core Processor and P-Cap. Touch
CV-W124G-R10/P1201-X6211E-R11	24" TFT-LCD Full HD 16:9 Panel PC with Intel Atom x6211E Dual Core Processor and without Touch

Model Configuration

	CV-W124R	CV-W124C	CV-W124G	P1201-X6425E	P1201-X6211E
CV-W124R/P1201-X6425E	V	--	--	V	--
CV-W124C/P1201-X6425E	--	V	--	V	--
CV-W124G/P1201-X6425E	--	--	V	V	--
CV-W124R/P1201-X6211E	V	--	--	--	V
CV-W124C/P1201-X6211E	--	V	--	--	V
CV-W124G/P1201-X6211E	--	--	V	--	V

V : Compatible

Package Checklist

- CV-W124/P1201 Series Panel PC x 1
- Power Terminal Block Connector (Female) x 1
- Thermal Pad (for CPU Thermal Block) x 1
- Screw Pack x 1
- DIO Terminal Block Connector (Female) x 1
- Remote Power On/Off Terminal Block Connector x 1
- Panel Mounting Kit x 14

Optional Modules and Accessories

Model No.	Description
CFM-PoE02	CFM Module with PoE Control Function, Individual Port 25.5W
CFM-IGN101	CFM Module with Power Ignition Sensing Control Function, 12V/24V Selectable (43 x 36 mm)
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

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