CV-W124/P1001 Series

24" TFT Full HD 16:9 Panel PC w/ Intel® Atom™ E3845 Quad Core, 4x USB, 2x COM, 1x VGA and 1x DisplayPort

POWER EFFICIENT INDUSTRIAL PANEL PC

| CV-100/P1000 Series |

Overview

CONTACT

The 24" widescreen (16:9) all-in-one panel PC offers LED backlight LCD with resolution up to 1920 x 1080 (Full HD) and 300 nits brightness. CV-W124/P1000 Series features flat surface and IP65 dust/waterproof front panel. In addition, designed with aluminum die-cast front frame with rugged body structure that can be able to apply in industrial applications. CV-W124/P1000 Series supports Convertible Display System (CDS) technology which makes it more flexible in system maintaining and upgrading. CV-W124/P1000 Series carries single touch function with resistive 5-wire touch screen, multi touch function with projected capacitive touch screen or glass screen. By incorporating with Intel® Atom™ E3845 processor and DDR3L memory, CV-W124/P1000 Series offers extensive I/O including 4x USB, 2x RS-232/422/485, 1x VGA, 1x DisplayPort, 4x DI / 4x DO. Besides, the panel PC also includes 2x Universal I/O Bracket. (For P1001E only) CV-W124/P1000 Series supports 3G and WLAN via 2x GbE and 1x Mini-PCIe slot. Furthermore, there are 3 types of storage devices including 2.5" SATA HDD, CFast and SIM card. The accessible design of these storage devices allow quick data access and easy maintenance. Supporting wide range power DC input from 9 ~ 48VDC, CV-W124/P1000 Series can be deployed and powered for various industrial applications.

Key Features

- 24" Full HD TFT-LCD with Resistive 5-wire Touch, P-Cap. Touch, or Glass Only
- Onboard Intel® Atom™ E3845 Processor Quad Core, 1.91GHz
- 1x DDR3L SO-DIMM Socket, Support Up to 8 GB
- Integrated Intel® HD Graphics Support Dual Display
- 1x 2.5" SATA HDD Bay, 1x CFast Socket and 1x SIM Card Socket
- IP65 Compliant Aluminum Die-Cast Front Frame
- 1x Full-size Mini-PCIe Socket for Wireless and I/O Expansion
- Convertible Display System (CDS) Supported
- Rich I/O (2x GbE LAN, 2x COM, 4x USB, 8x Isolated DIO)
- Universal I/O Bracket Expandable Version Available (For P1001E only)

Certifications

IP65   FC   CE   CDS Convertible Display System

CV-W124 Series Specifications

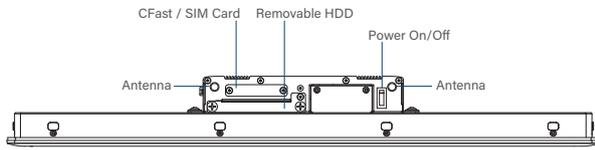| Model Name	CV-W124R	CV-W124C	CV-W124G
Display			
LCD Size	▪ 24" (16:9)		
Max. Resolution	▪ 1920 x 1080		
Brightness (cd/m2)	▪ 300		
Contrast Ratio	▪ 5000 : 1		
LCD Color	▪ 16.7M		
Pixel Pitch (mm)	▪ 0.27675 (H) x 0.27675 (V)		
Viewing Angle (H-V)	▪ 178 / 178		
Backlight LED Life Time	▪ 50,000 hrs (LED Backlight)		
Touch Screen			
Touch Type	▪ Resistive 5-wire	▪ Projected Capacitive	▪ Glass Screen
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	▪ Ambient with Air flow: -20°C to 70°C (with Industrial Grade Peripherals)		
Storage Temperature	▪ -30°C to 80°C		
Relative Humidity	▪ 80% RH @ 50°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		

P1001 Series Specifications

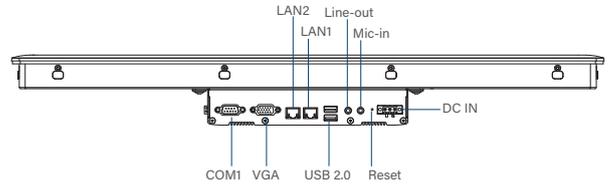| Model Name	P1001	P1001E
System		
Processor	▪ Onboard Intel® Atom™ Processor E3845 Quad Core, 1.91 GHz	
Memory	▪ 1x DDR3L 1066/1333 MHz SO-DIMM Socket (un-buffered and non-ECC) ▪ Support up to 8 GB	
BIOS	▪ AMI 64Mbit SPI BIOS	
Graphics		
CDS (Convertible Display System) Technology	▪ 1x Convertible Display System (CDS) Interface	
VGA	▪ 1x VGA Connector (1920x1080@60Hz)	
DP	▪ 1x DisplayPort Connector (1920x1080@60Hz)	
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	▪ 1x USB 3.2 Gen1 (Type A), 3x USB 2.0 (Type A)	
Serial Port	▪ 2x RS-232/422/485 with Auto Flow Control Support, DB9	
DIO	▪ 8x Isolated Digital I/O (4in/4out)	
Storage		
SSD/HDD	▪ 1x 2.5" HDD/SSD Drive	
SIM Card	▪ 1x Front Accessible SIM Socket	
CFast	▪ 1x Front Accessible CFast Socket	
Expansion		
Mini PCI Express	▪ 1x Full-size Mini-PCIe Socket for Wi-Fi/GSM/Expansion Module	
Universal Bracket		▪ 2x Universal I/O Bracket
Other Function		
Watchdog Timer	▪ Software Programmable Supports 256 Levels System Reset	
Internal Speaker	▪ AMP 2W + 2W	
OSD Function	▪ LCD On/Off, Brightness Up, Brightness Down	
Reset Button	▪ 1x Reset Button	
Power		
Power Button	▪ 1x ATX Power On/Off 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	

Physical		
Dimension (W x D x H)	▪ 204.5 x 149 x 37.5 mm	▪ 204.5 x 150 x 60 mm
Weight Information	▪ 1.34kg	▪ 1.54kg
Mechanical Construction	▪ Extruded Aluminum with Heavy Duty Metal	
Mounting	▪ Wall / VESA / CDS Mounting	
Physical Design	▪ Fanless Design ▪ Jumper-less Design	

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	▪ 20A

Operating System	
Microsoft® Windows®	▪ Windows® 10, Windows® 8, Windows® 7 ▪ Windows® Embedded 8 Standard, Windows® Embedded Standard 7
Linux	▪ Supports by project

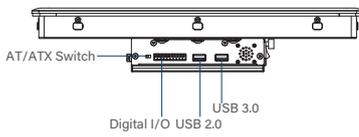| Environment	
Operating Temperature	▪ Ambient with Air Flow: -20°C to 70°C (with Industrial Grade Peripherals)
Storage Temperature	▪ -30°C to 85°C
Relative humidity	▪ 10%~95% RH (Non-condensing)
Shock	▪ Operating, 15 Grms, Half-sine 11 ms Duration (w/ SSD, according to IEC60068-2-27)
Vibration	▪ Operating, 1 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

CV-W124/P1001 External Layout

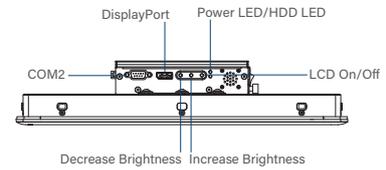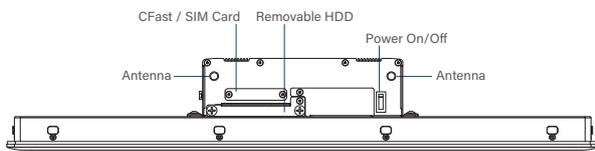### Front I/O

CFast / SIM Card   Removable HDD

Power On/Off

Antenna

Antenna

Rear I/O

LAN2   Line-out
LAN1   Mic-in

DC IN

COM1   VGA   USB 2.0   Reset

Left I/O

AT/ATX Switch

USB 3.0

Digital I/O   USB 2.0

Right I/O

DisplayPort   Power LED/HDD LED

COM2   LCD On/Off

Decrease Brightness   Increase Brightness

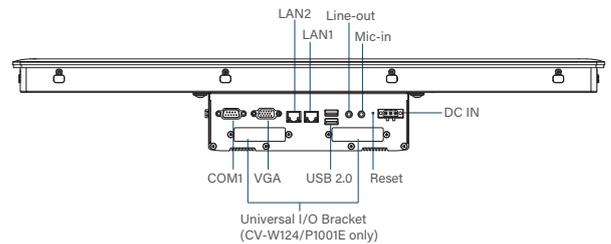## CV-W124/P1001E External Layout

Front I/O

CFast / SIM Card   Removable HDD

Power On/Off

Antenna

Antenna

Rear I/O

LAN2   Line-out
LAN1   Mic-in

DC IN

COM1   VGA   USB 2.0   Reset

Universal I/O Bracket
(CV-W124/P1001E only)

Left I/O

AT/ATX Switch

USB 3.0

Digital I/O   USB 2.0

Right I/O

DisplayPort   Power LED/HDD LED

COM2   LCD On/Off

Decrease Brightness   Increase Brightness
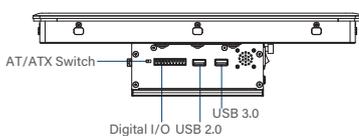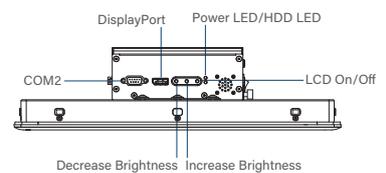
CV-W124/P1001 Dimensions
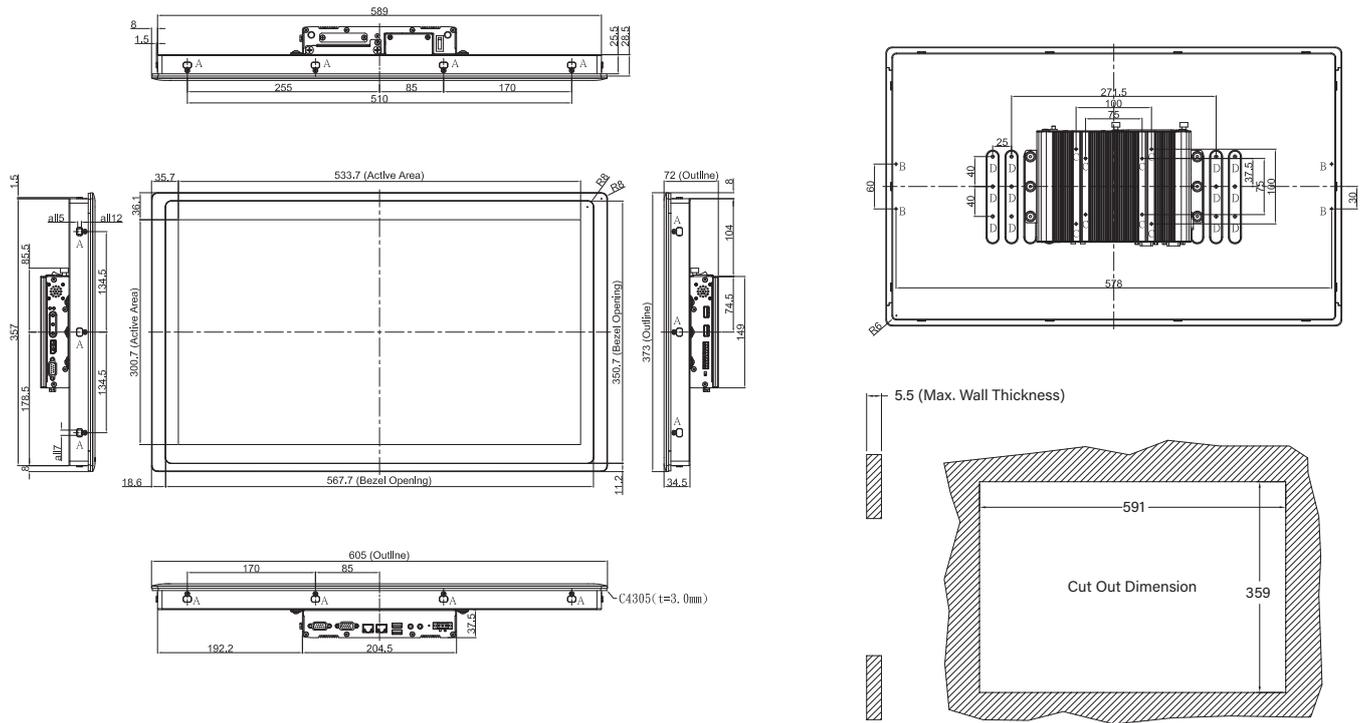
CV-W124/P1001E Dimensions
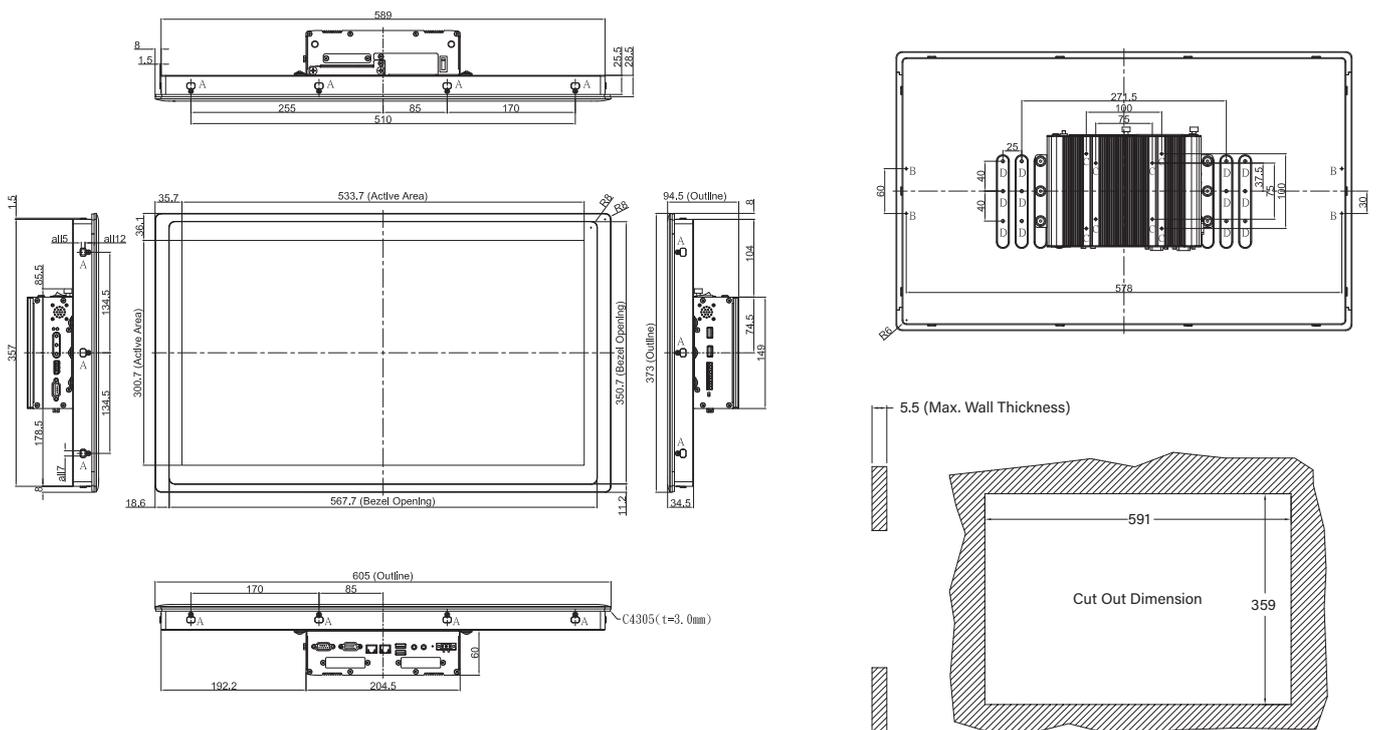
Unit: mm

Ordering Information

Available Models

Model No.	Description
CV-W124R-R10/P1001-R10	24" TFT Full HD 16:9 Panel PC with Resistive 5-wire Touch and Intel® Atom™ E3845 Quad Core PC Module, 4x USB, 2x COM, 1x VGA, 1x DisplayPort
CV-W124C-R11/P1001-R10	24" TFT Full HD 16:9 Panel PC with Projected Capacitive Touch and Intel® Atom™ E3845 Quad Core PC Module, 4x USB, 2x COM, 1x VGA, 1x DisplayPort
CV-W124G-R10/P1001-R10	24" TFT Full HD 16:9 Panel PC without Touch and Intel® Atom™ E3845 Quad Core PC Module, 4x USB, 2x COM, 1x VGA, 1x DisplayPort
CV-W124R-R10/P1001E-R10	24" TFT Full HD 16:9 Panel PC with Resistive 5-wire Touch and Intel® Atom™ E3845 Quad Core PC Module, 4x USB, 2x COM, 1x VGA, 1x DisplayPort, 2x Universal Brackets
CV-W124C-R11/P1001E-R10	24" TFT Full HD 16:9 Panel PC with Projected Capacitive Touch and Intel® Atom™ E3845 Quad Core PC Module, 4x USB, 2x COM, 1x VGA, 1x DisplayPort, 2x Universal Brackets
CV-W124G-R10/P1001E-R10	24" TFT Full HD 16:9 Panel PC without Touch and Intel® Atom™ E3845 Quad Core PC Module, 4x USB, 2x COM, 1x VGA, 1x DisplayPort, 2x Universal Brackets

Model Configuration

|	CV-W124R	CV-W124C	CV-W124G	P1001	P1001E
CV-W124R/P1001	V	--	--	V	--
CV-W124C/P1001	--	V	--	V	--
CV-W124G/P1001	--	--	V	V	--
CV-W124R/P1001E	V	--	--	--	V
CV-W124C/P1001E	--	V	--	--	V
CV-W124G/P1001E	--	--	V	--	V

V : Compatible

Package Checklist

- CV-W124/P1001 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

Optional Modules and Accessories

Model No.	Description
MEC-COM-M212-DB9	Mini-PCIe Module with 2x COM Ports, 1x Standard DB9 Cable (For P1001E only)
MEC-LAN-M102-30	Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable (For P1001E only)
MEC-USB-M102-30	Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x 30cm cable (For P1001E only)
UB0303	2x Universal Bracket each with 1x DB9 Cutout (For P1001E only)
UB0311	1x Universal Bracket with 2x RJ45 Cutout (For P1001E only)
UB0314	1x Universal Bracket with 2x USB Cutout (For P1001E only)
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)
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

Optional Module Configuration (For P1001E only)
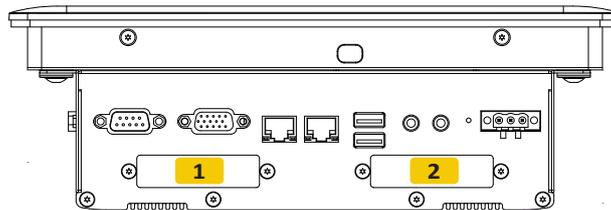
Model No.	Description	1	2
MEC-COM-M212-DB9/UB0303	Mini-PCIe Module with 2x COM Ports, 1x Standard DB9 Cable, 2x Universal Bracket each with 1x DB9 Cutout	V	V
MEC-LAN-M102-30/UB0311	Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable, w/ 1x Universal Bracket with 2x RJ45 Cutout	V	V
MEC-USB-M102-30/UB0314	Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x 30cm cable, 1xUniversal Bracket with 2x USB Cutout	V	V

V : Compatible