

CS-W121C/P1001

21.5" TFT-LCD Sunlight Readable Touch Panel PC with Intel® Atom™ E3845 Quad Core Processor



- 21.5" TFT-LCD with Ultra High Brightness up to 1,000 nits and 1920 x 1080 Resolution
- Onboard Intel® Atom™ E3845 Processor
- Designed with Aluminum Die-casting Front Frame
- True Flat IP65 Front Panel Protection
- Supports Panel / VESA / Rack Mounting
- Convertible Display System (CDS) Technology Supported



Overview

CS-W121C/P1000 Series is a 21.5" TFT-LCD sunlight readable touch panel PC offering 1,000 nits ultra high brightness and 1920 x 1080 resolution. The system is equipped with Intel® Atom® E3845 processor and provides extensive I/O including 2x GbE, 4x USB, 2x RS232/422/485, 4x DI/4x DO, 1x VGA and 1x DisplayPort. It also supports 1x Mini-PCIe slot and 1x SIM socket for a variety of wireless connections, such as BT/WiFi and 3G/LTE. In addition, there are 2 types of storage devices including 2.5" SATA HDD and CFast. The accessible design of these storage devices allows quick data access and easy maintenance.

CS-W121C/P1000 Series supports Convertible Display System (CDS) technology. Comparing to regular standalone panel PCs, it can lower maintenance cost and reduce unplanned downtime.

Furthermore, CS-W121C/P1000 Series is a truly rugged display system supporting wide range operating temperature (0°C to 70°C), IP65 dust/water proof front panel, wide range DC power input (9 to 48VDC) and rigorous industrial protections.

Specifications

Display

LCD Size	• 21.5" (16:9)
Max. Resolution	• 1920x1080 (Full HD)
Brightness (cd/m2)	• 1,000
Contrast Ratio	• 5,000:1
LCD Color	• 16.7M
Pixel Pitch (mm)	• 0.24825 (H) x 0.24825 (V)
Viewing Angle (H-V)	• 178 /178
Backlight MTBF	• 50,000 hrs (LED Backlight)

Touch

Projected Capacitive	V
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System

Processor	• Onboard Intel® Atom™ Processor E3845 Quad Core, 1.91 GHz with AMI 64Mbit SPI BIOS
Memory	• 1x 204-Pin SO-DIMM DDR3L 1066 / 1333MHz, Max. Up to 8GB (un-buered and non-ECC)

Graphics

Graphics Engine	• Integrated Intel® HD Graphics
Maximum Display Output	• Supports Dual Display - VGA + DP - VGA + CDS - DP + CDS

Audio

Audio Codec	• Realtek ALC888-GR
Line-out	• 1x Speaker-out Phone Jack 3.5mm
Mic-in	• 1x Mic-in, Phone Jack 3.5mm

External I/O Interface

VGA	<ul style="list-style-type: none"> • 1x DB-15 connector, CH7517, Up to 1920x1080@60Hz
DP	<ul style="list-style-type: none"> • 1x DP connector, Up to 1920x1080@60Hz
LAN	<ul style="list-style-type: none"> • 2x 10/100/1000 Mbps, RJ45 - GbE1: Intel I210 - GbE2: Intel I210 Support Wake On Lan, Teaming, Jumbo frame, IEEE 1588v2, PXE
USB	<ul style="list-style-type: none"> • 1x USB 3.0, Type-A • 3x USB 2.0, Type-A
COM	<ul style="list-style-type: none"> • 2x RS-232/422/485, DB9 Support 5V/12V
CDS	<ul style="list-style-type: none"> • Supports Convertible Display System (CDS) Technology

DIO

DIO	<ul style="list-style-type: none"> • 4x Digital Input (Source Type) <ul style="list-style-type: none"> - Input Voltage (Dry Contact): <ul style="list-style-type: none"> Logic 0: Close to GND Logic 1: Open - Input Voltage: <ul style="list-style-type: none"> Logic 0: 3V (Min/DI to COM+) • 4x Digital Output <ul style="list-style-type: none"> - Supply Voltage: 9~30VDC - Sink Current: 1A Max.
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Storage

SSD/HDD	<ul style="list-style-type: none"> • 1x Internal SATA port for 2.5" HDD/SSD
CFast	<ul style="list-style-type: none"> • 1x CFast Socket

Expansion

Mini PCI Express	<ul style="list-style-type: none"> • 1x Full-size Mini PCIe Socket for Wi-Fi / GSM / Expansion Module
SIM Socket	<ul style="list-style-type: none"> • 1x SIM Socket

Other Function

Internal Speaker	<ul style="list-style-type: none"> • AMP 2W + 2W
Rest Button	<ul style="list-style-type: none"> • 1x Reset Button
Instant Reboot	<ul style="list-style-type: none"> • Supports Instant Reboot Technology (0.2 sec)
Watchdog Timer	<ul style="list-style-type: none"> • Software Programmable Supports 256 Levels System Reset
OSD Function	<ul style="list-style-type: none"> • LCD On/Off, Brightness Up, Brightness Down (With Display Module)

Power

Power Button	<ul style="list-style-type: none"> • 1x ATX Power On/Off Button
Power Mode Switch	<ul style="list-style-type: none"> • 1x AT/ATX Mode Switch
Power Input	<ul style="list-style-type: none"> • 9 - 48VDC, 3-pin Terminal Block
Power Adapter (Optional)	<ul style="list-style-type: none"> • Optional AC/DC 12V/5A, 60W

Physical

Dimension (W x D x H)	<ul style="list-style-type: none"> • 550 x 330.5 x 72mm
Weight Information	<ul style="list-style-type: none"> • 6.9 Kg
Front Panel Construction	<ul style="list-style-type: none"> • Die-Casting Flat Surface
Mounting	<ul style="list-style-type: none"> • Panel / VESA / *Rack Mounting (*with optional mounting kit)
Physical Design	<ul style="list-style-type: none"> • Fanless Design

Reliability & Protection

Reverse Power Input Protection	<ul style="list-style-type: none"> • Yes
Over Voltage Protection	<ul style="list-style-type: none"> • Protection Range: 51~58V • Protection Type: shut down operating voltage, re-power on at the preset level to recover
Over Current Protection	<ul style="list-style-type: none"> • 20A
ESD Protection	<ul style="list-style-type: none"> • +/-8kV (air), +/-4kV (contact)

Operating System

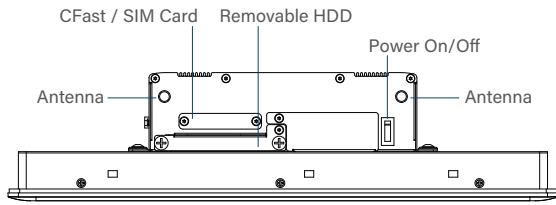
Windows	<ul style="list-style-type: none"> • Windows® 10 • Windows® 8.1 • Windows® 7
Linux	<ul style="list-style-type: none"> • Support by Project

Environment

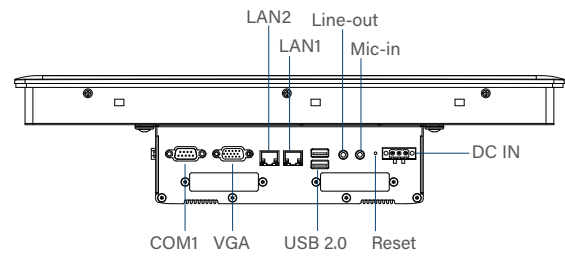
Operating Temperature	<ul style="list-style-type: none"> • Ambient with air flow: 0°C to 70°C (with Industrial Grade Peripherals)
Storage Temperature	<ul style="list-style-type: none"> • -20°C to 70°C
Relative Humidity	<ul style="list-style-type: none"> • 90% RH @ 39°C (Non-condensing)
EMC	<ul style="list-style-type: none"> • CE, FCC, ICES-003 Class A
IP Level	<ul style="list-style-type: none"> • IP65 Compliant Front Panel

External Layout

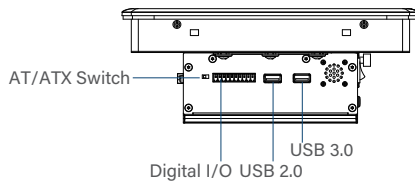
Front



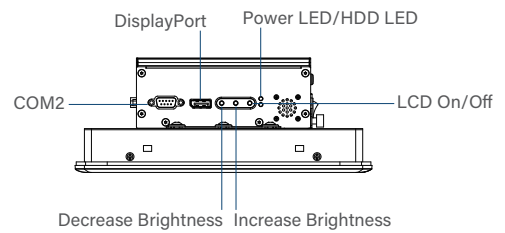
Rear



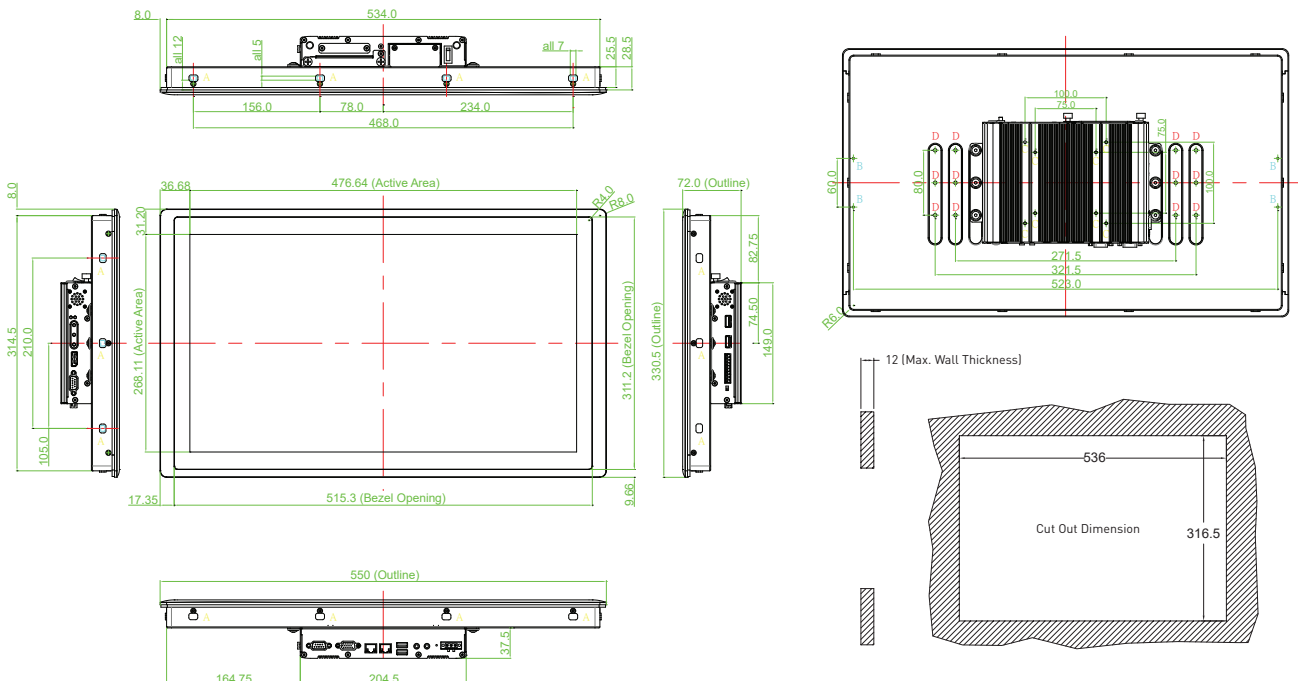
Left



Right



Dimensions



Unit: mm

Ordering Information

Available Models

Model No.	Description
CS-W121C-R10/P1001-R10	21.5" TFT-LCD 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

Package Checklist

• CS-W121C/P1001 Panel PC x 1	• Power Terminal Block Connector x 1
• Panel Mounting Kit x 1	• Screw Pack x 1
• Utility DVD Driver x 1	• DIO Terminal Block Connector x 1

Optional Modules

Model No.	Description
URM01	Universal 19" Rack Mount Kit for Industrial Panel PC & Industrial Monitor

Optional Accessories

Model No.	Description
GST60A12-CIN1	Adapter AC/DC 12V 5A 60W, GST60A12-CIN1, wide temp(-30°C ~ +70°C)



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Updated: Dec. 22, 2021.

CS-W121C/P1001E

21.5" TFT-LCD Sunlight Readable Touch Panel PC with Intel® Atom™ E3845 Quad Core Processor



- 21.5" TFT-LCD with Ultra High Brightness up to 1,000 nits and 1920 x 1080 Resolution
- Onboard Intel® Atom™ E3845 Processor Quad Core, 1.91GHz
- Supports 1x DDR3L SO-DIMM Socket, up to 8 GB
- 1x 2.5" SATA Drive Bay, 1x CFast Card and 1x SIM Card Socket
- 2x GbE LAN, 4x USB, 2x COM, 1x VGA, 1x DisplayPort, 4x DI/4x DO
- 1x Mini-PCIe Expansion Socket for Wireless and I/O Expansion
- Wide Range Operating Temperature 0°C to 70°C
- Designed with Aluminum Die-casting Front Frame
- True Flat IP65 Front Panel Protection
- Supports Panel / VESA / Rack Mounting
- Convertible Display System (CDS) Technology Supported

Overview

CS-W121C/P1000 Series is a 21.5" TFT-LCD sunlight readable touch panel PC offering 1,000 nits ultra high brightness and 1920 x 1080 resolution. The system is equipped with Intel® Atom® E3845 processor and provides extensive I/O including 2x GbE, 4x USB, 2x RS232/422/485, 4x DI/4x DO, 1x VGA and 1x DisplayPort. It also supports 1x Mini-PCIe slot and 1x SIM socket for a variety of wireless connections, such as BT/WiFi and 3G/LTE. In addition, there are 2 types of storage devices including 2.5" SATA HDD and CFast. The accessible design of these storage devices allows quick data access and easy maintenance.

CS-W121C/P1000 Series supports Convertible Display System (CDS) technology. Comparing to regular standalone panel PCs, it can lower maintenance cost and reduce unplanned downtime.

Furthermore, CS-W121C/P1000 Series is a truly rugged display system supporting wide range operating temperature (0°C to 70°C), IP65 dust/water proof front panel, wide range DC power input (9 to 48VDC) and rigorous industrial protections.

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Contrast Ratio	▪ 5,000:1
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Viewing Angle (H-V)	▪ 178 /178
Backlight MTBF	▪ 50,000 hrs (LED Backlight)

Touch

Projected Capacitive	V
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System

Processor	▪ Onboard Intel® Atom™ Processor E3845 Quad Core, 1.91 GHz with AMI 64Mbit SPI BIOS
Memory	▪ 1x 204-Pin SO-DIMM DDR3L 1066 / 1333MHz (un-buered and non-ECC), max. up to 8GB

Graphics

Graphics Engine	▪ Integrated Intel® HD Graphics
Maximum Display Output	▪ Supports Dual Display - VGA + DP - VGA + CDS - DP + CDS

Audio

Audio Codec	▪ Realtek ALC888-GR
Line-out	▪ 1x Speaker-out Phone Jack 3.5mm
Mic-in	▪ 1x Mic-in, Phone Jack 3.5mm

External I/O Interface

VGA	<ul style="list-style-type: none"> • 1x DB-15 connector, CH7517, Up to 1920x1080@60Hz
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USB	<ul style="list-style-type: none"> • 1x USB 3.0, Type-A • 3x USB 2.0, Type-A
COM	<ul style="list-style-type: none"> • 2x RS-232/422/485, DB9 Support 5V/12V
CDS	<ul style="list-style-type: none"> • Supports Convertible Display System (CDS) Technology

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DIO	<ul style="list-style-type: none"> • 4x Digital Input (Source Type) <ul style="list-style-type: none"> - Input Voltage (Dry Contact): <ul style="list-style-type: none"> Logic 0: Close to GND Logic 1: Open - Input Voltage: <ul style="list-style-type: none"> Logic 0: 3V (Min/DI to COM+) • 4x Digital Output <ul style="list-style-type: none"> - Supply Voltage: 9~30VDC - Sink Current: 1A Max.
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CFast	<ul style="list-style-type: none"> • 1x CFast Socket

Expansion

Mini PCI Express	<ul style="list-style-type: none"> • 1x Full-size Mini PCIe Socket for Wi-Fi / GSM / Expansion Module
SIM Socket	<ul style="list-style-type: none"> • 1x SIM Socket
UB	<ul style="list-style-type: none"> • 2x Universal I/O Bracket

Other Function

Internal Speaker	<ul style="list-style-type: none"> • AMP 2W + 2W
Rest Button	<ul style="list-style-type: none"> • 1x Reset Button
Instant Reboot	<ul style="list-style-type: none"> • Supports Instant Reboot Technology (0.2 sec)
Watchdog Timer	<ul style="list-style-type: none"> • Software Programmable Supports 256 Levels System Reset
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Power Input	<ul style="list-style-type: none"> • 9 - 48VDC, 3-pin Terminal Block
Power Adapter (Optional)	<ul style="list-style-type: none"> • Optional AC/DC 12V/5A, 60W

Physical

Dimension (W x D x H)	<ul style="list-style-type: none"> • 550 x 330.5 x 94.5mm
Weight Information	<ul style="list-style-type: none"> • 71 Kg
Front Panel Construction	<ul style="list-style-type: none"> • Die-Casting Flat Surface
Mounting	<ul style="list-style-type: none"> • Panel / VESA / *Rack Mounting (*with optional mounting kit)
Physical Design	<ul style="list-style-type: none"> • Fanless Design

Reliability & Protection

Reverse Power Input Protection	<ul style="list-style-type: none"> • Yes
Over Voltage Protection	<ul style="list-style-type: none"> • Protection Range: 51~58V • Protection Type: shut down operating voltage, re-power on at the preset level to recover
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Operating System

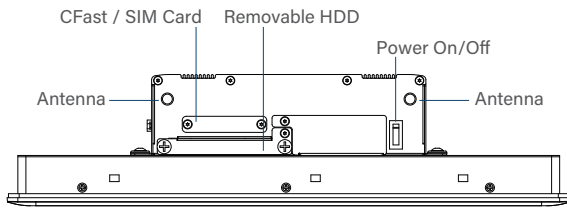
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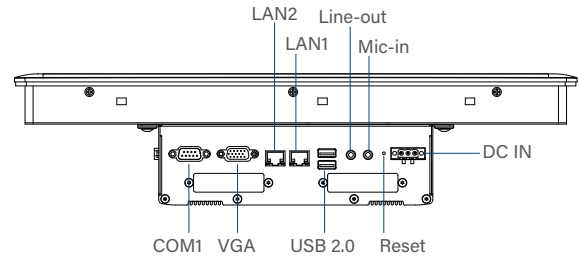
Operating Temperature	<ul style="list-style-type: none"> • Ambient with air flow: 0°C to 70°C (with Industrial Grade Peripherals)
Storage Temperature	<ul style="list-style-type: none"> • -20°C to 70°C
Relative Humidity	<ul style="list-style-type: none"> • 95% RH @ 39°C (Non-condensing)
EMC	<ul style="list-style-type: none"> • CE, FCC, ICES-003 Class A
IP Level	<ul style="list-style-type: none"> • IP65 Compliant Front Panel

External Layout

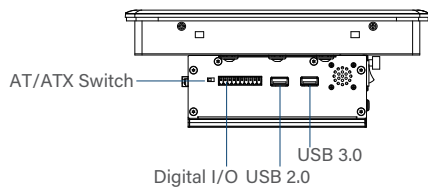
Front



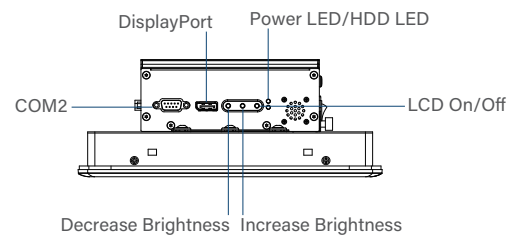
Rear



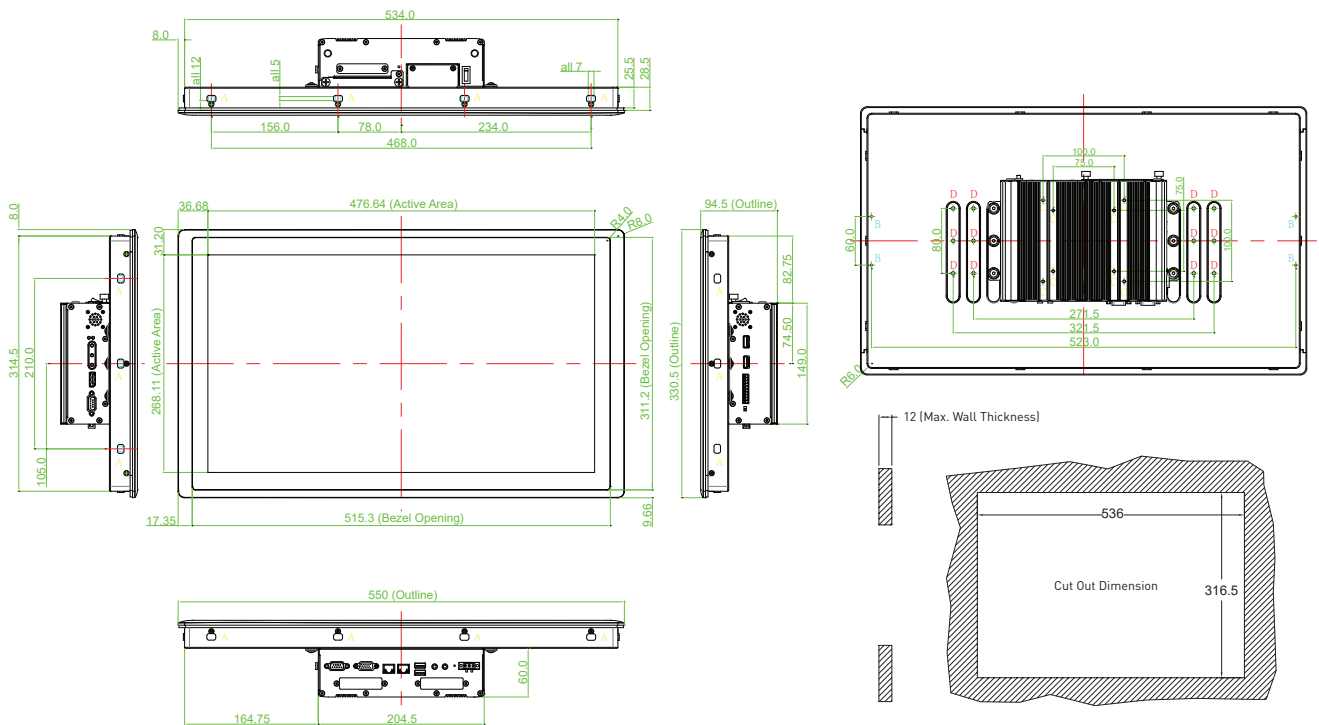
Left



Right



Dimensions



Unit: mm

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Package Checklist

- | | |
|--------------------------------|--------------------------------------|
| • CS-W121C/P1001E Panel PC x 1 | • Power Terminal Block Connector x 1 |
| • Panel Mounting Kit x 1 | • Screw Pack x 1 |
| • Utility DVD Driver x 1 | • DIO Terminal Block Connector x 1 |

Optional Module Configuration



Model No.	Description	1	2
MEC-COM-M212-DB9 /UB0303	Mini-PCIe Module with 2x RS-232 Ports, 1x Standard DB9 Cable / 2x Universal Bracket each with 1x DB9 Cutout	V	V
MEC-USB-M102-30 /UB0314	Mini-PCIe Module with 2x USB 3.2 Gen1 Ports, 1x 15cm cable / 1x Universal Bracket with 2x USB Cutout	V	V
MEC-LAN-M102-30 /UB0311	Mini-PCIe Module with 2x LAN Ports, 2x 30cm cable / 1x Universal Bracket with 2x RJ45 Cutout	V	V

V : Compatible

Optional Modules

Model No.	Description
URM01	Universal 19" Rack Mount Kit for Industrial Panel PC & Industrial Monitor

Optional Accessories

Model No.	Description
GST60A12-CIN1	Adapter AC/DC 12V 5A 60W, GST60A12-CIN1, wide temp(-30°C ~ +70°C)