

# MC-1100 Series

Intel Atom® E3800 DIN-rail computers with hazardous-environment and DNV certifications, -40 to 70°C operating temperature



## Features and Benefits

- Intel Atom® Quad-core E3845 processor
- Dual storage (SD and CFAST slots)
- Dual independent displays (VGA + display port)
- Variety of interfaces: 2 serial ports, 4 Giga LANs, 4 DIs, 4 DOs, 2 USB 2.0 ports
- Mini-PCIe sockets for Wi-Fi, 3G, LTE, GPS
- 12 to 36 VDC, wide-range isolated power input
- -40 to 70°C system operating temperature range
- Marine-grade and ATEX, IECEx Zone 2 compliance

## Certifications



## Introduction

The MC-1100 Series DIN-rail mountable, fanless, x86 embedded computers use the Intel Atom® E3800 Series processor, feature the most reliable I/O design to maximize connectivity, and support wireless modules (Wi-Fi/3G/LTE), making them suitable for a diverse range of communication applications.

The MC-1100's wide operating temperature range (-40 to 70°C) and safety/EMI/EMS compliances make it ideal for intelligent computing and communication solutions in critical environments, including marine communication, oil and gas field site monitoring, and transportation.

The MC-1100 Series supports the Moxa Proactive Monitoring tool for device I/O status monitoring and alerts, system temperature monitoring and alerts, and system power management. Close monitoring of the system status makes it easier to recover from errors and provides the most reliable platform for your applications.

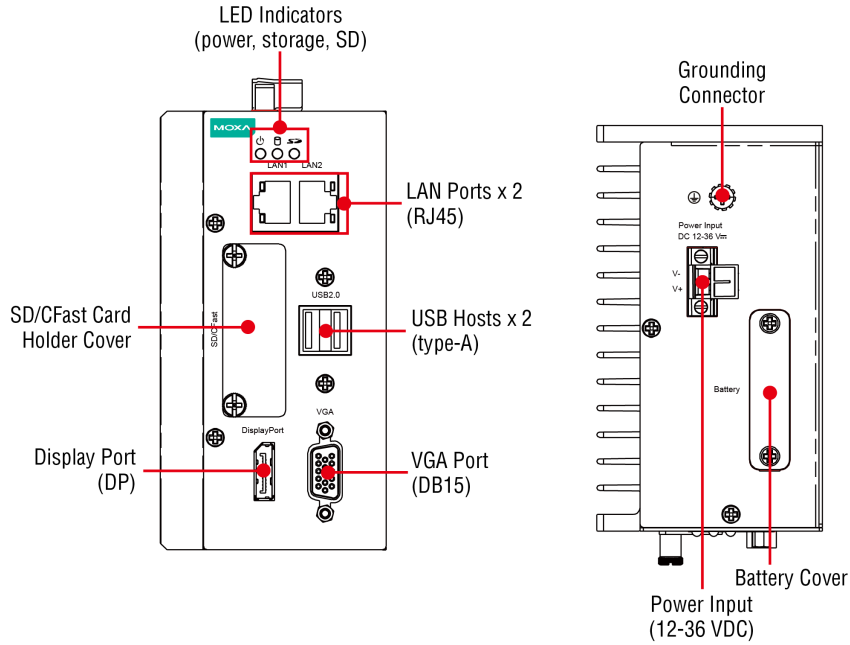
The MC-1100 Series is Microsoft Azure Certified for IoT. It can leverage the Microsoft reference configuration and has been tested to work with Microsoft Azure IoT services for Industrial IoT applications.

For more information on the Azure Certified for IoT program, visit: <https://catalog.azureiotsuite.com/>

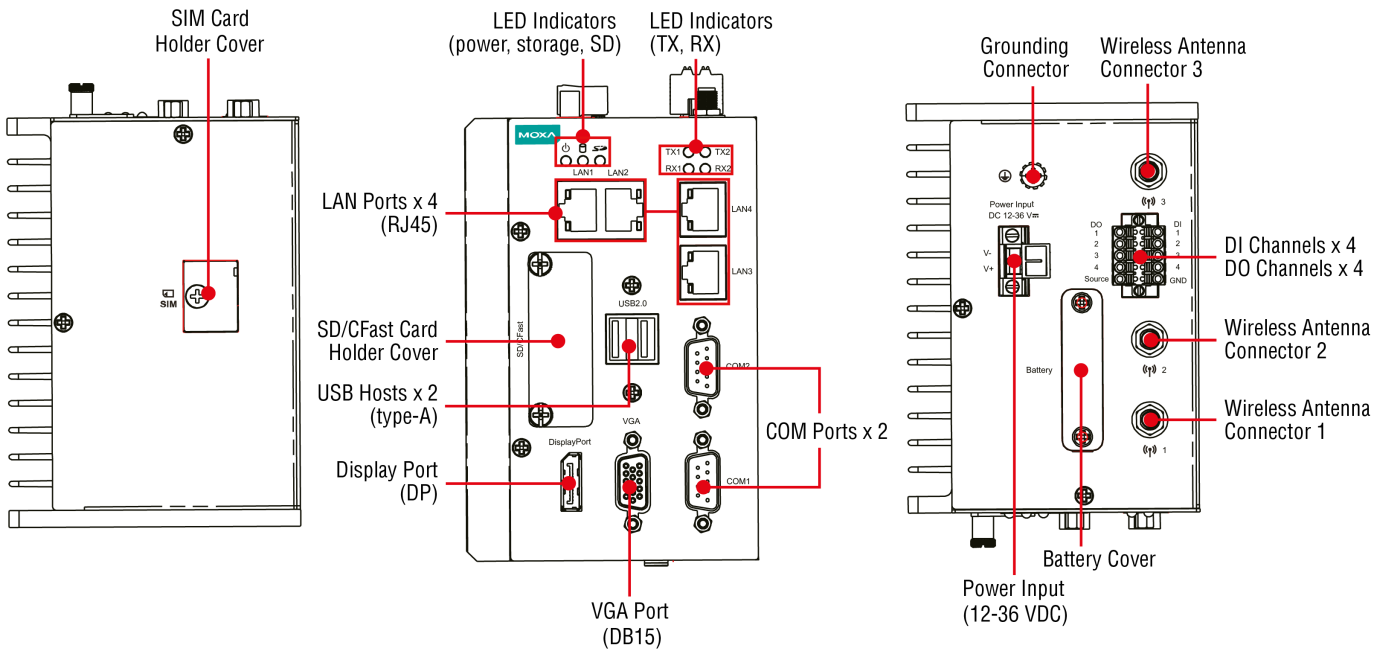
A complete list of Moxa's Azure Certified for IoT products is available at: <https://catalog.azureiotsuite.com/?q=moxa>

# Appearance

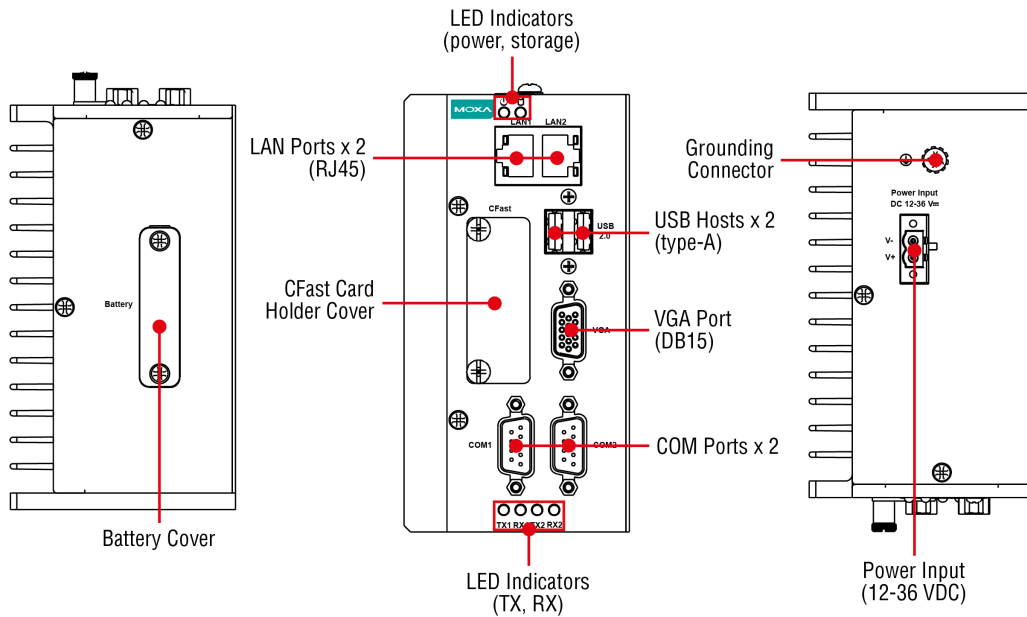
## MC-1111



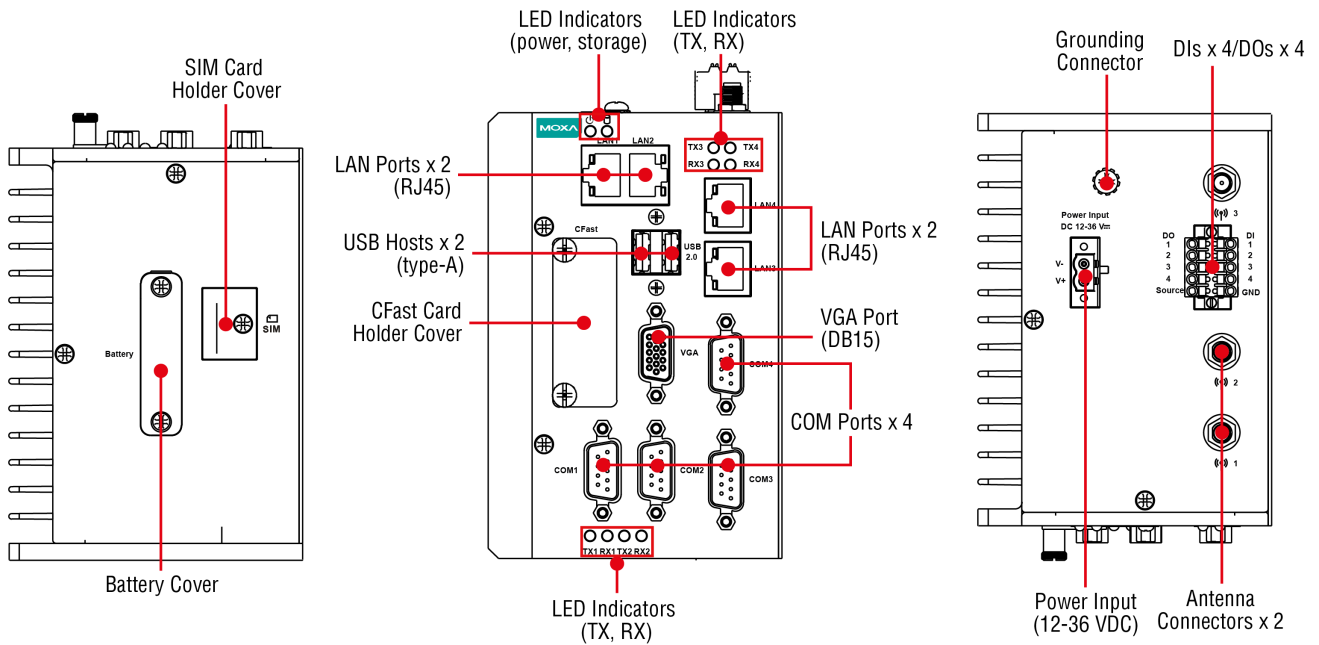
## MC-1121



## MC-1112



## MC-1122



## Specifications

### Computer

CPU	MC-1100-E2-T models: Intel Atom® E3826 processor (1M cache, 1.46 GHz) MC-1100-E4-T models: Intel Atom® E3845 processor (2M cache, 1.91 GHz)
Graphics Controller	Intel® HD Graphics
System Memory Pre-installed	4 GB DDR3L
System Memory Slot	SODIMM DDR3/DDR3L slots x 1
Supported OS	Windows 10 IoT Enterprise LTSC 2021 Linux Debian 9 (kernel v4.9)
Storage Slot	All models: CFast x 1 MC-1111/1121 models: SD x 1

## Computer Interface

Ethernet Ports	MC-1111/1112 models: Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 2 MC-1121/1122 models: Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 4
Serial Channels	MC-1121/1112 models: RS-232/422/485 ports x 2, software-selectable (DB9 male) MC-1122 models: RS-232/422/485 ports x 4, software-selectable (DB9 male)
USB 2.0	USB 2.0 hosts x 2, type-A connectors
Digital Input	MC-1121/1122 models: DIs x 4
Digital Output	MC-1121/1122: DOs x 4
Expansion Slots	mPCIe slots x 1
TPM	TPM v1.2 (MC-1122-E4-TPM-T only)
Video Output	MC-1111/1121 models: VGA x 1, DisplayPort x 1 All models: VGA x 1, 15-pin D-sub connector (female)
Number of SIMs	MC-1121/1122 models: 1
SIM Format	MC-1121/1122 models: Mini

## LED Indicators

System	Storage x 1
LAN	2 per port (10/100/1000 Mbps)
Serial	MC-1112/1121/1122 models: 2 per port (Tx, Rx)

## Serial Interface

Baudrate	MC-1112/1121/122 models: 50 bps to 115.2 kbps
Connector	MC-1112/1121/122 models: DB9 male
Data Bits	MC-1112/1121/122 models: 5, 6, 7, 8
Flow Control	MC-1112/1121/122 models: Automatic Data Direction Control (ADDC) for RS-485 RTS/CTS, XON/XOFF
Isolation	MC-1112/1121/122 models: N/A
Parity	MC-1112/1121/122 models: None, Even, Odd, Space, Mark

## Power Parameters

Input Voltage	11.4 to 36 VDC
Power Connector	Terminal block (for DC models)
Power Consumption	30 W (max.)

## Reliability

Automatic Reboot Trigger	Built-in WDT
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## Physical Characteristics

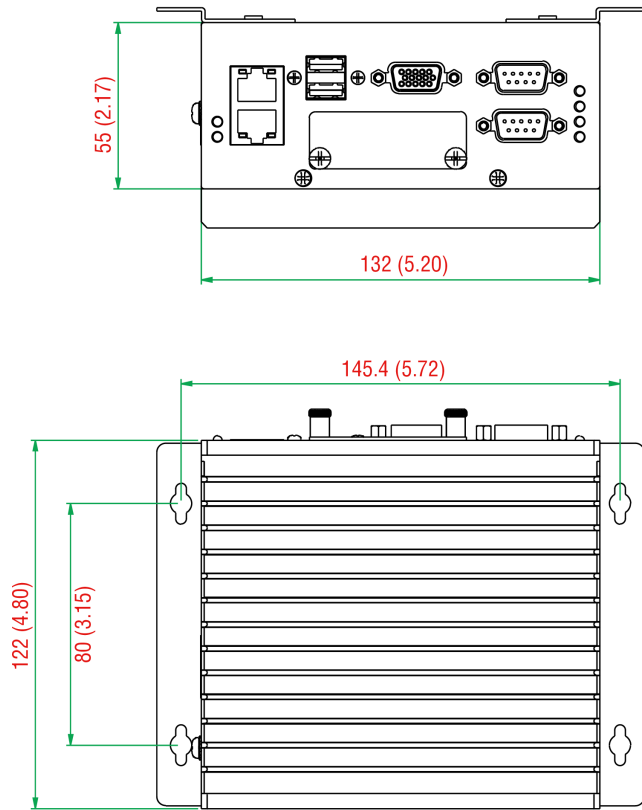
Housing	Metal
Dimensions	MC-1111/1112 models: 132 x 122 x 68 mm (5.2 x 4.81 x 2.68 in) MC-1121/1122 models: 132 x 122 x 87 mm (5.2 x 4.81 x 3.43 in)

Weight	MC-1111/1112 models: 1,022 g (2.25 lb) MC-1121/1122 models: 1,340 g (2.95 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)
<b>Environmental Limits</b>	
Operating Temperature	-40 to 70°C (-40 to 158°F)
Storage Temperature (package included)	-45 to 75°C (-49 to 167°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
<b>Standards and Certifications</b>	
EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Hazardous Locations	All models excluding MC-1121-E4-T-US: ATEX Zone 2 IECEX Zone 2 Class I Division 2
Maritime	DNV IEC 60945 LR
Radio Frequency	FCC
Safety	UL 60950-1
<b>Warranty</b>	
Warranty Period	3 years
Details	See <a href="http://www.moxa.com/warranty">www.moxa.com/warranty</a>
<b>Package Contents</b>	
Device	1 x MC-1100 Series computer
Cable	1 x terminal block to power jack converter
Installation Kit	1 x terminal block, 2-pin 1 x DIN-rail kit
Documentation	1 x quick installation guide 1 x warranty card

## Dimensions

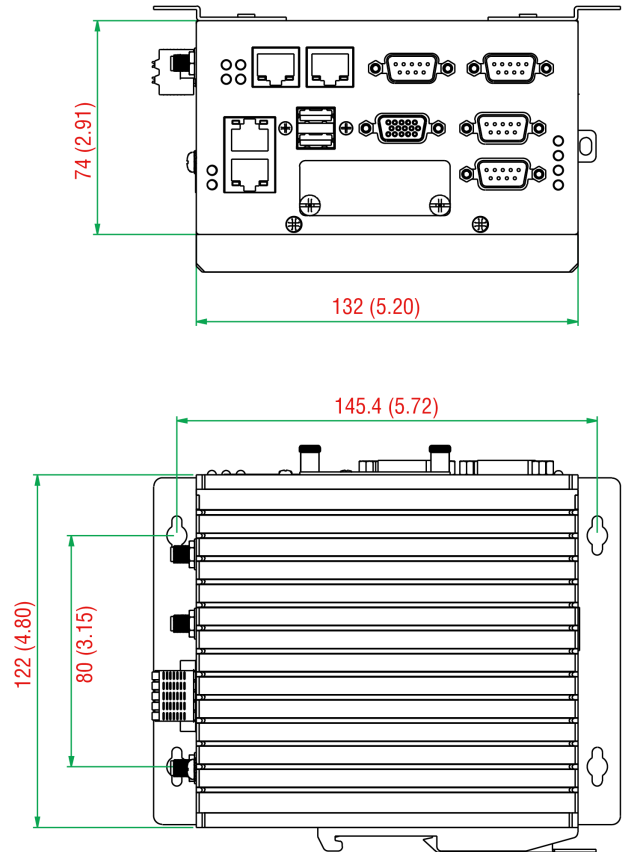
### MC-1112

Unit: mm (inch)



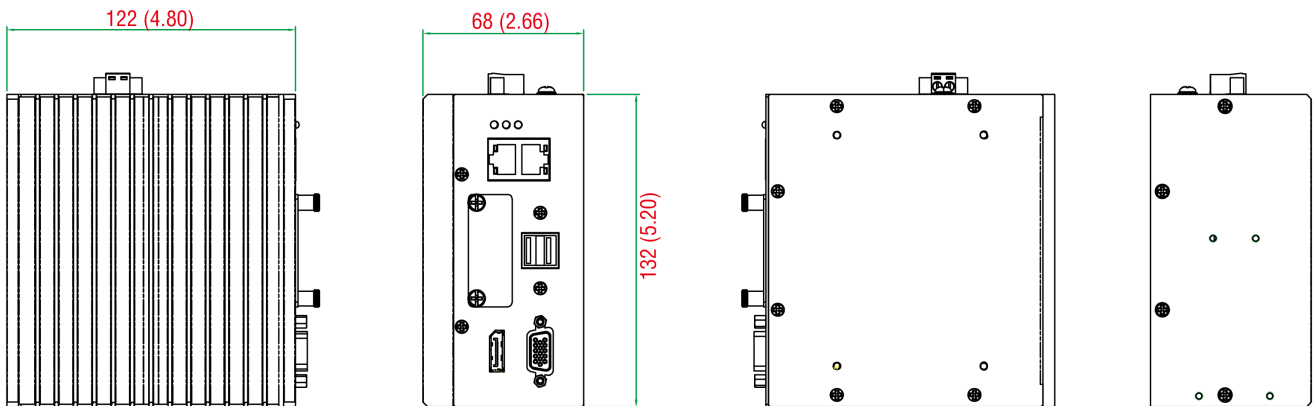
### MC-1122

Unit: mm (inch)



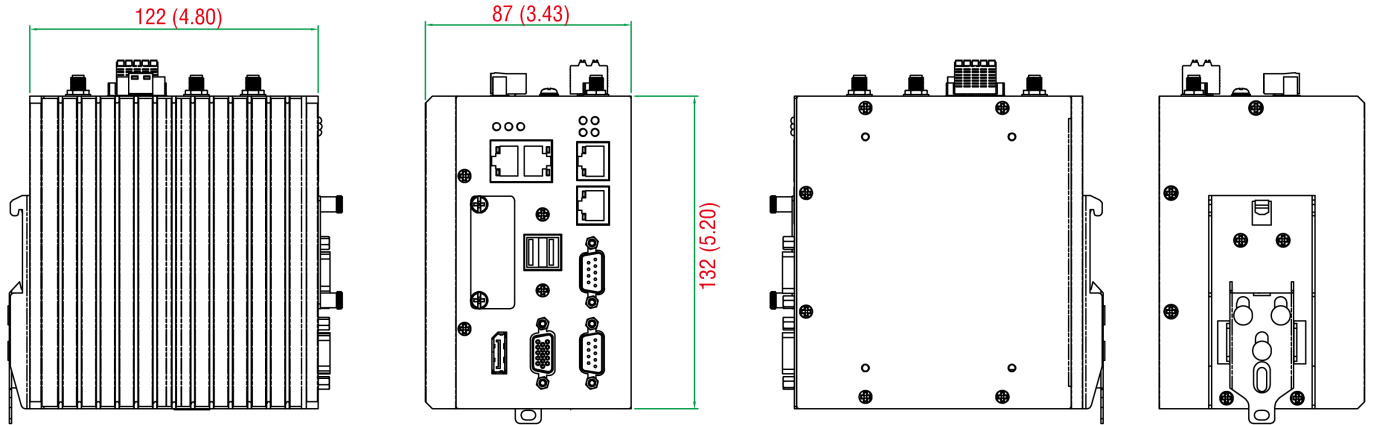
### MC-1111

Unit: mm (inch)



## MC-1121

Unit: mm (inch)



## Ordering Information

Model Name	CPU	RAM	Storage Slots	OS Preinstalled	LAN/Serial	USB 2.0	Video Outputs	Interface Expansion
MC-1111-E2-T	Intel Atom® E3826	4 GB	1 x CFast 1 x SD	-	2/-	2	1 x VGA 1 x DP	-
MC-1111-E4-T	Intel Atom® E3845	4 GB	1 x CFast 1 x SD	-	2/-	2	1 x VGA 1 x DP	-
MC-1121-E2-T	Intel Atom® E3826	4 GB	1 x CFast 1 x SD	-	4/2	2	1 x VGA 1 x DP	1 x mPCIe
MC-1121-E4-T	Intel Atom® E3845	4 GB	1 x CFast 1 x SD	-	4/2	2	1 x VGA 1 x DP	1 x mPCIe
MC-1121-E4-T-W7E	Intel Atom® E3845	4 GB	1 x CFast (32 GB preinstalled) 1 x SD	WS7E	4/2	2	1 x VGA 1 x DP	1 x mPCIe
MC-1112-E2-T	Intel Atom® E3826	4 GB	1 x CFast	-	2/2	2	1 x VGA	-
MC-1112-E4-T	Intel Atom® E3845	4 GB	1 x CFast	-	2/2	2	1 x VGA	-
MC-1122-E2-T	Intel Atom® E3826	4 GB	1 x CFast	-	4/4	2	1 x VGA	1 x mPCIe
MC-1122-E4-T	Intel Atom® E3845	4 GB	1 x CFast	-	4/4	2	1 x VGA	1 x mPCIe
MC-1122-E4-TPM-T	Intel Atom® E3845	4 GB	1 x CFast	-	4/4	2	1 x VGA	1 x mPCIe

## Accessories (sold separately)

### Wi-Fi Wireless Modules

#### Wi-Fi-BGN(252NI)

Wi-Fi module with 2 antennas, antenna cables and connectors, 2 black screws, 2 lock washers, 2 nuts, 1 thermal pad

### DIN-Rail Mounting Kits

#### MC-1100 DIN-Rail Kit

DIN-rail mounting kit, 4 screws

### Wall-Mounting Kits

#### MC-1100 Wallmount Kit

Wall-mounting kit, 4 screws

## Power Cords

PWC-C7AU-2B-183	Power cord with AU plug, 2.5A/250V, 1.83 m
PWC-C7CN-2B-183	Power cord with three-prong CN plug, 2.5A/250V, 1.83 m
PWC-C7EU-2B-183	Power cord with EU plug, 2.5A/250V, 1.83 m
PWC-C7UK-2B-183	Power cord with UK plug, 2.5A/250V, 1.83 m
PWC-C7US-2B-183	Power cord with US plug, 10A/125V, 1.83 m

## Power Adapters

PWR-24250-DT-S1	Desktop power supply (requires power cord), 24 VDC, 2.5 A, 100 to 240 VAC, 0 to 40°C operating temperature
PWR-24270-DT-S1	Power adapter, input voltage 90 to 264 VAC, output voltage 24 V with 2.5 A DC load

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