MC-1100 Series

Intel® Atom® E3800 DIN-rail computer with hazardous environment and DNV GL certifications



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
- Moxa Smart Recovery utility to recover system from boot failure (W7E only)
- 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.

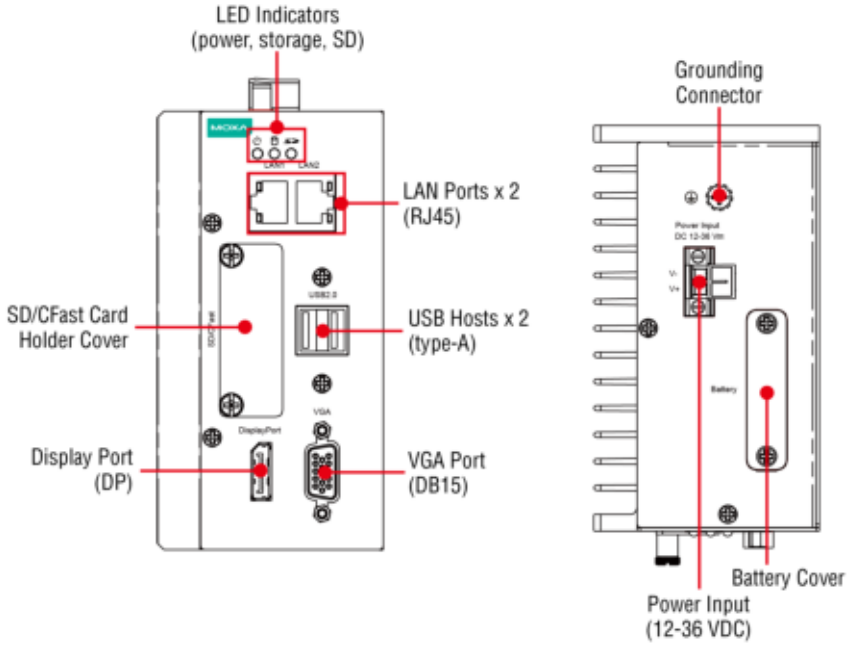
The MC-1100 Series supports the Moxa Proactive Monitoring tool for device I/O status monitoring and alerts, system temperature monitoring and alerts, and system power management. Close monitoring of the system status makes it easier to recover from errors and provides the most reliable platform for your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

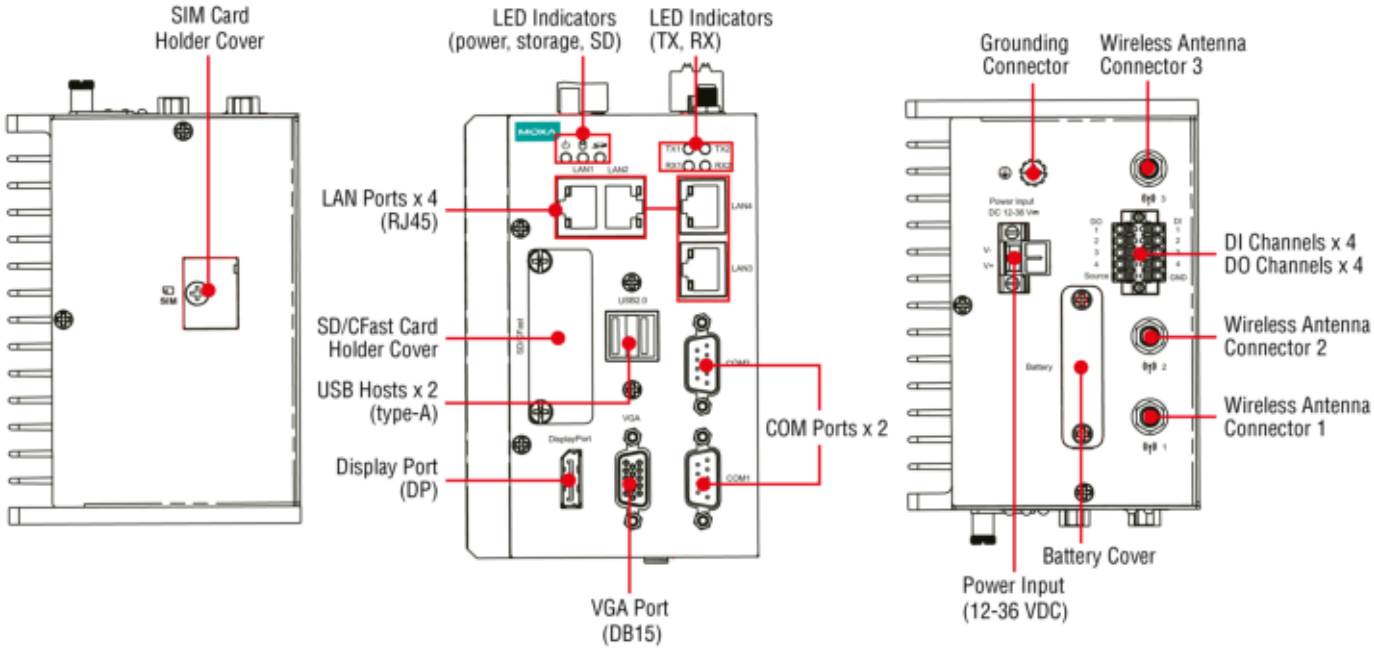
For more information on the Azure Certified for IoT program, visit: https://catalog.azureiotsuite.com/
A complete list of Moxa's Azure Certified for IoT products is available at: https://catalog.azureiotsuite.com/?q=moxa

Appearance

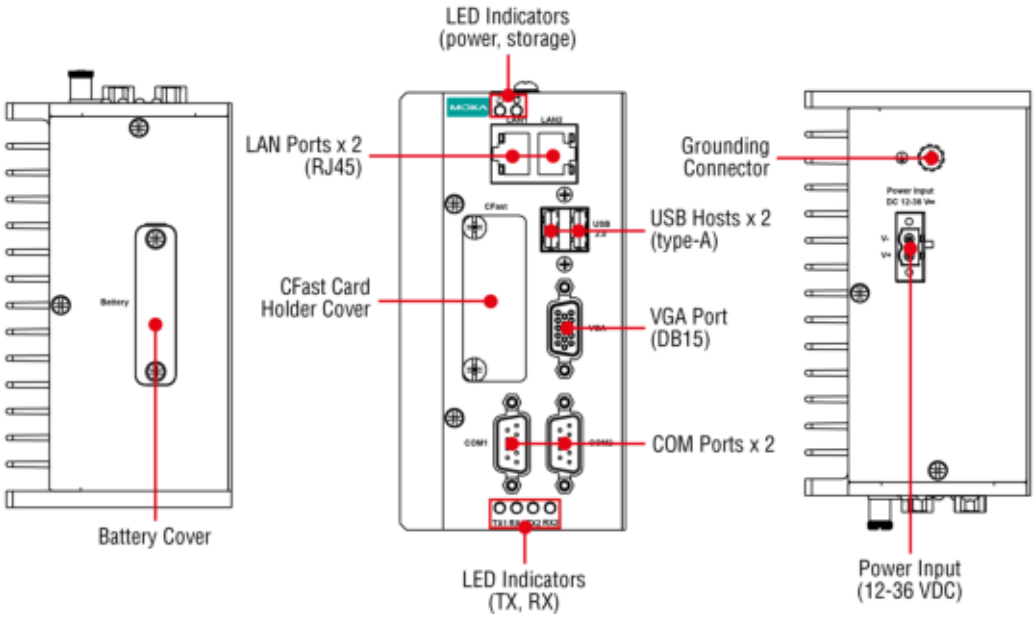
MC-1111



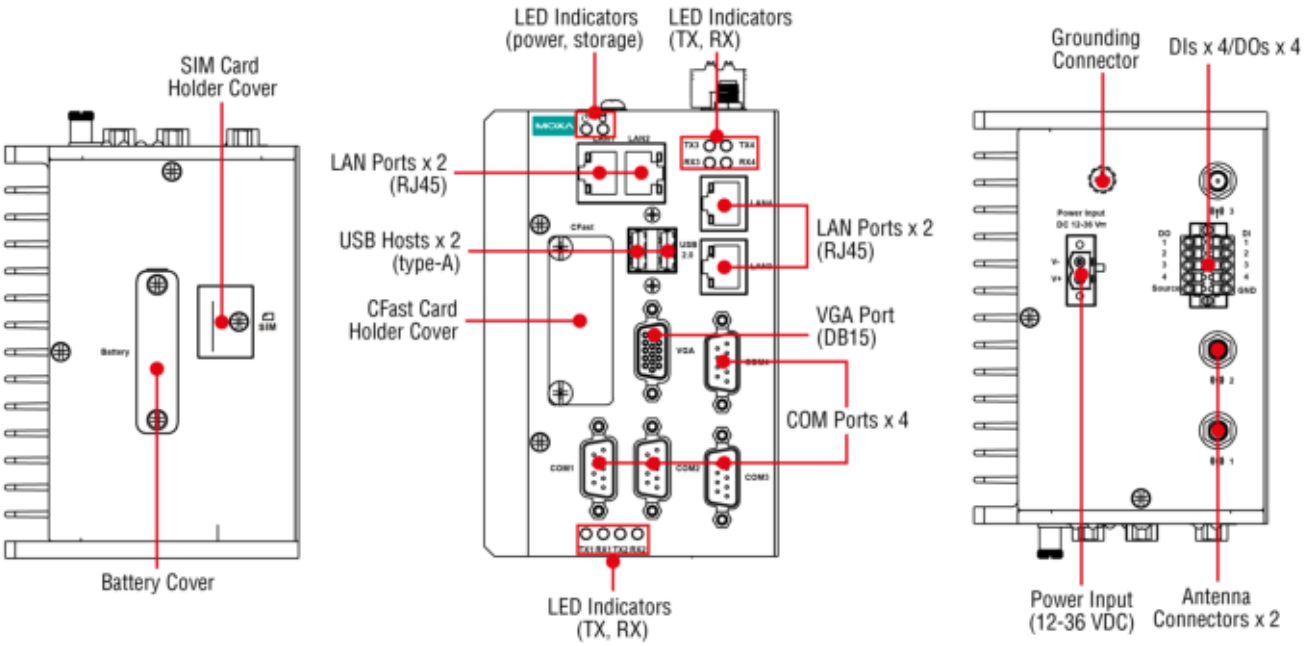
MC-1121



MC-1112



MC-1122



Specifications

Computer

CPU	MC-1100-E2-T Series: Intel Atom® Processor E3826 (1M Cache, 1.46 GHz) MC-1100-E4-T Series: Intel Atom® Processor E3845 (2M Cache, 1.91 GHz)
Graphics Controller	Intel® HD Graphics
System Memory Pre-installed	4 GB DDR3L
System Memory Slot	SODIMM DDR3/DDR3L slot x 1
Supported OS	Linux Debian 8 (Linux kernel v4.1) Windows Embedded Standard 7 (WS7E) 64-bit Windows 10 Embedded IOT Ent 2016 LTSB
Storage Slot	All models: CFast x 1 MC-1111/1121 Series: SD x 1

Computer Interface

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

LED Indicators

System	Power x 1 Storage x 1
LAN	2 per port (10/100/1000 Mbps)
Serial	2 per port (Tx, Rx)

Serial Interface

Baudrate	50 bps to 115.2 kbps
Connector	DB9 male
Data Bits	5, 6, 7, 8
Flow Control	ADDC® (automatic data direction control) for RS-485 RTS/CTS, XON/XOFF
Isolation	N/A
Parity	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

Physical Characteristics

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

Weight	MC-1111/1112 Series: 1,022 g (2.25 lb) MC-1121/1122 Series: 1,340 g (2.95 lb)
Installation	DIN-rail mounting Wall mounting (with optional kit)

Environmental Limits

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)

Standards and Certifications

EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-8 PFMF IEC 61000-4-6 CS: 10 V IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV
Hazardous Locations	ATEX Zone 2 Class I Division 2 IECEx Zone 2
Maritime	DNV-GL IEC 60945
Radio Frequency	FCC
Safety	UL 60950-1

Warranty

Warranty Period	3 years
Details	See www.moxa.com/warranty

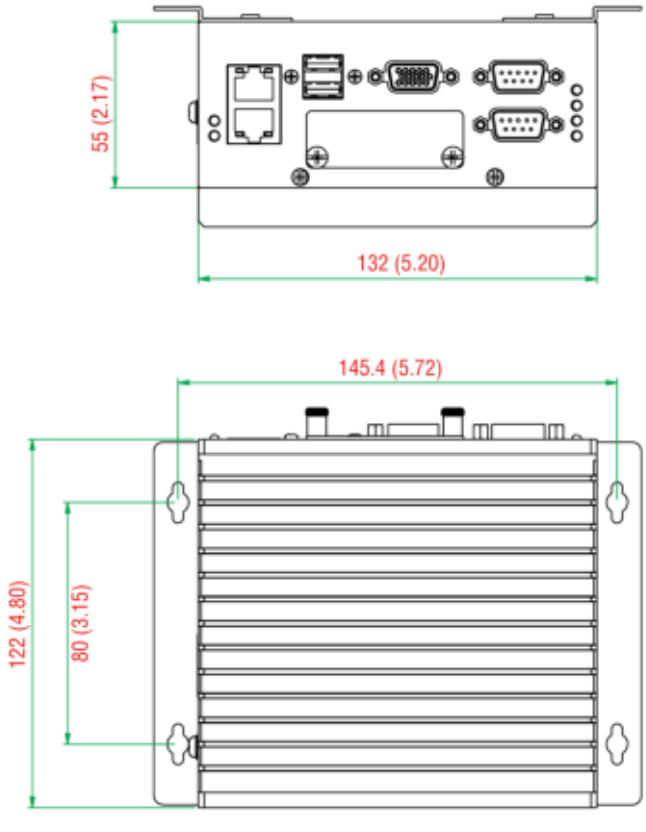
Package Contents

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

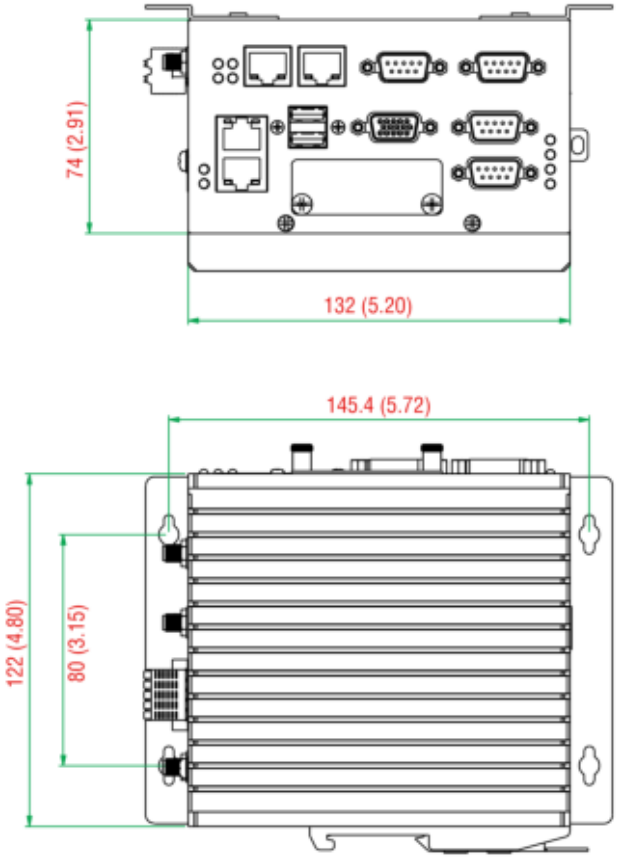
MC-1112

Unit: mm (inch)



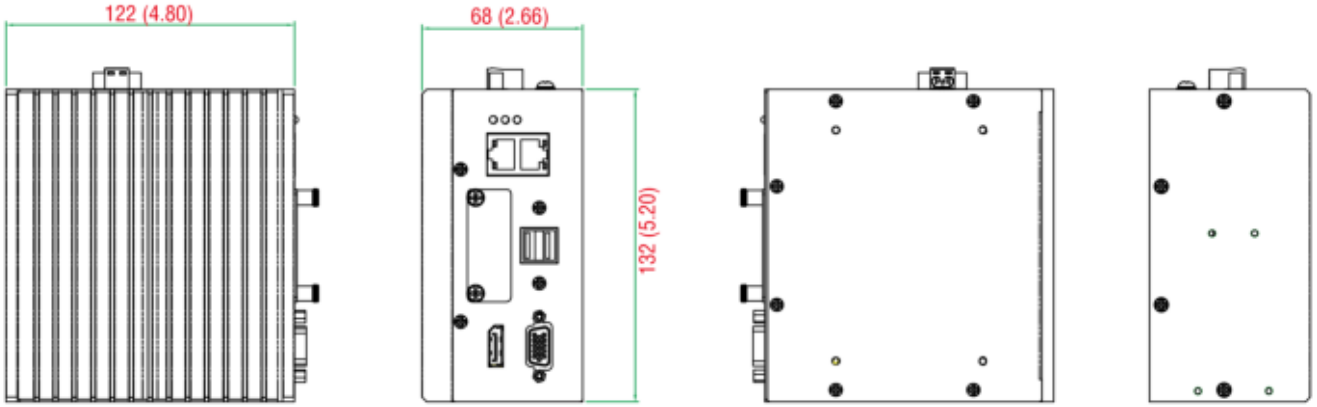
MC-1122

Unit: mm (inch)

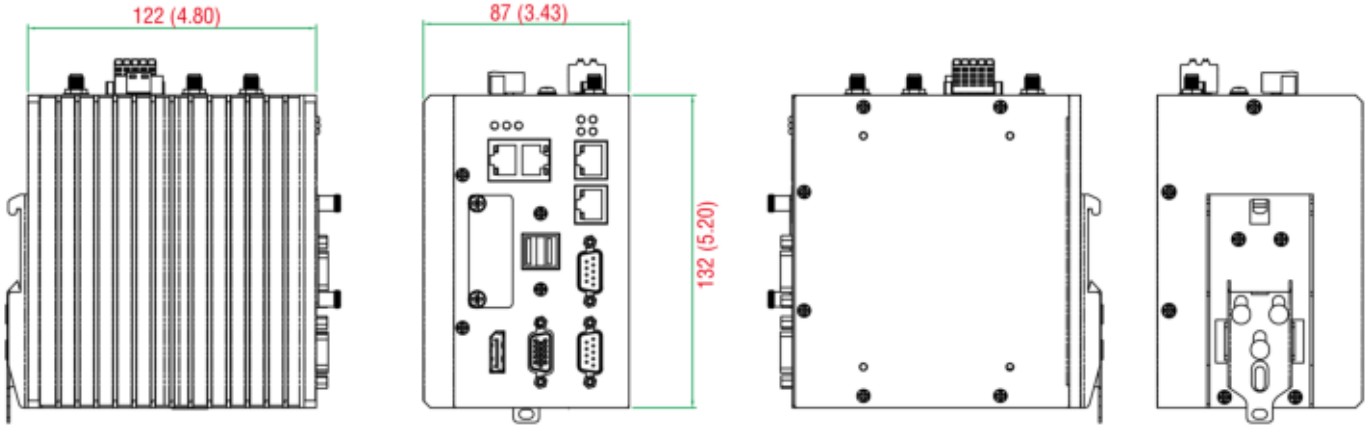


MC-1111

Unit: mm (inch)



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)

Cellular Wireless Modules

CELLULAR-LTE (L201)	LTE cellular module, with 2 mounting screws, for LTE (FDD) bands B2, B4, B5, B13 and B41 in the North American region
CELLULAR-LTE (L210)	LTE cellular module, with 2 mounting screws, for LTE (FDD) bands B1, B3, B5, B7, B8 and B20 in Europe and APAC regions

Wi-Fi Wireless Modules

Wi-Fi-BGN(252NI)	Wi-Fi module, 2 antennas with cable and connector, 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 Australian (AU) plug, 2.5A/250V, 1.83 m
PWC-C7CN-2B-183	Power cord with three-prong China (CN) plug, 2.5A/250V, 1.83 m
PWC-C7EU-2B-183	Power cord with Continental Europe (EU) plug, 2.5A/250V, 1.83 m
PWC-C7UK-2B-183	Power cord with United Kingdom (UK) plug, 2.5A/250V, 1.83 m
PWC-C7US-2B-183	Power cord with United States (US) plug, 10A/125V, 1.83 m

Power Adapters

PWR-24270-DT-S1	Power adapter, input voltage 90 to 264 VAC, output voltage 24 V with 2.5 A DC load

© Moxa Inc. All rights reserved. Updated Jul 01, 2021.

This document and any portion thereof may not be reproduced or used in any manner whatsoever without the express written permission of Moxa Inc. Product specifications subject to change without notice. Visit our website for the most up-to-date product information.