UC-8100-ME-T Series

Arm Cortex-A8 1 GHz IIoT gateways with 1 Mini PCIe expansion slot for a wireless module

Features and Benefits

- Armv7 Cortex-A8 1000 MHz processor
- Dual auto-sensing 10/100 Mbps Ethernet ports
- SD slot for storage expansion
- Programmable LEDs and a programmable button for easy installation and maintenance
- Cybersecurity functions
- Debian 9 open platform

Certifications

Introduction

The UC-8100-ME-T computing platform is designed for embedded data acquisition applications. The computer comes with dual RS- 232/422/485 serial ports and dual 10/100 Mbps Ethernet ports, as well as a Mini PCIe socket to support cellular modules. These versatile capabilities let users efficiently adapt the UC-8100-ME-T to a variety of complex communications solutions.

The UC-8100-ME-T is built around a Cortex-A8 processor that has been optimized for use in energy monitoring systems, but is widely applicable to a variety of industrial solutions. With flexible interfacing options, this tiny embedded computer is a reliable and secure gateway for data acquisition and processing at field sites as well as a useful communications platform for many other large-scale deployments.

Wide-temperature and LTE-enabled models are available. All units are thoroughly tested in a testing chamber, guaranteeing that the LTE-enabled computing platforms are suitable for wide-temperature applications.

Appearance

MOXA®
Reliable Networks ▲ Sincere Service
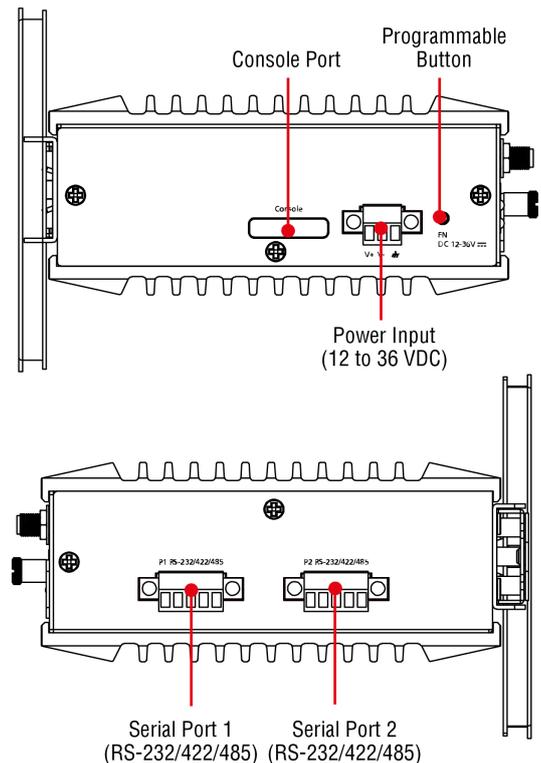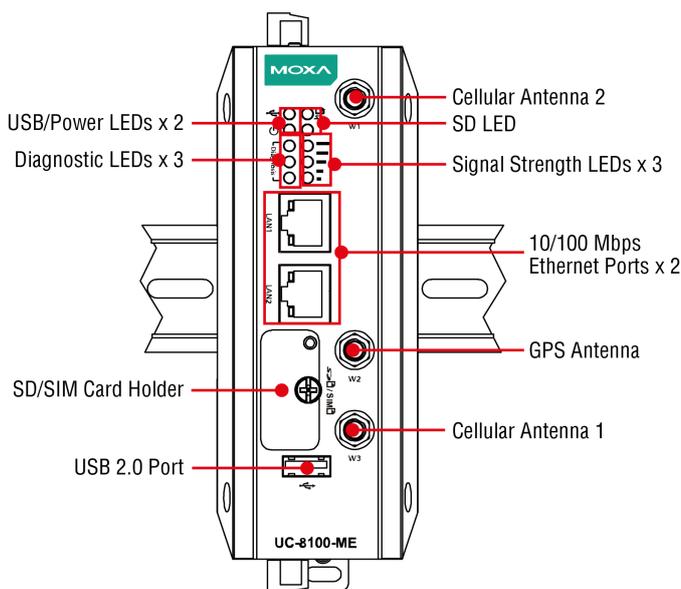
Specifications

Computer

CPU	Armv7 Cortex-A8 1 GHz
DRAM	UC-8112-ME-T-LX: 512 MB DDR3 UC-8112-ME-T-LX1: 1 GB DDR3
Storage Pre-installed	8 GB eMMC
Pre-installed OS	Linux Debian 9 (kernel v4.4)

Computer Interface

USB 2.0	USB 2.0 hosts x 1, type-A connectors
Expansion Slots	mPCIe slot x 1
Number of SIMs	1
SIM Format	Mini
Buttons	Reset button

Ethernet Interface

Ethernet Ports	Auto-sensing 10/100 Mbps ports (RJ45 connector) x 2
Magnetic Isolation Protection	1.5 kV (built-in)

LED Indicators

System	Power x 1 SD slots x 1 Programmable x 4
Wireless Signal Strength	Cellular/Wi-Fi x 3

Serial Interface

Serial Ports	2 x RS-232/422/485
Console Port	1 x 4-pin header to DB9 console port
Data Bits	5, 6, 7, 8
Parity	None, Even, Odd, Space, Mark
Stop Bits	1, 1.5, 2

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

Power Parameters

Input Voltage	12 to 36 VDC
Input Current	500 mA @ 12 VAC
Power Consumption	6 W

Reliability

Alert Tools	External RTC (real-time clock)
Automatic Reboot Trigger	External WDT (watchdog timer)

Physical Characteristics

Housing	Metal
Dimensions	141 x 125.6 x 54.8 mm (5.55 x 4.94 x 2.15 in)
Weight	550 g (1.22 lb)
Installation	DIN-rail mounting, Wall mounting (with optional kit)

Environmental Limits

Operating Temperature	-40 to 85°C (-40 to 185°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)
Vibration	2 Grms @ IEC 60068-2-64, random wave, 5-500 Hz, 1 hr per axis (without USB devices attached)
Shock	IEC 60068-2-27

Standards and Certifications

Safety	UL 60950-1
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 PFMF
Green Product	RoHS, CRoHS, WEEE
Hazardous Locations	Class I Division 2

MTBF

Time	535,916 hrs
Standards	Telcordia (Bellcore) Standard

Warranty

Warranty Period	5 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x UC-8100-ME-T Series computer
Documentation	1 x quick installation guide 1 x warranty card
Installation Kit	1 x DIN-rail kit (preinstalled) 1 x power jack

Dimensions

Unit: mm (inch)

54.8 (2.16)　　125.6 (4.94)

141 (5.55)

9.2 (0.36)
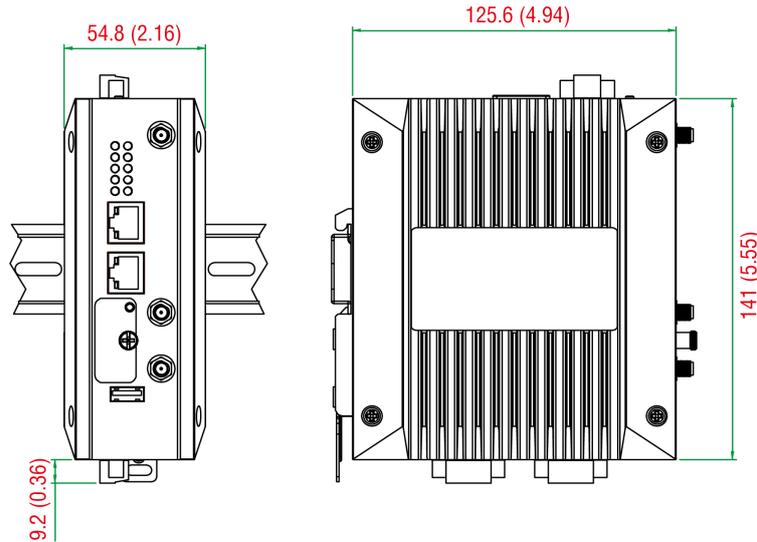
Ordering Information

Model Name	CPU	RAM	Storage	US LTE Module Built-in	Operating Temp.
UC-8112-ME-T-LX	Armv7 Cortex-A8 1 GHz	512 MB	8 GB eMMC	–	-40 to 70°C
UC-8112-ME-T-LX1	Armv7 Cortex-A8 1 GHz	1 GB	8 GB eMMC	–	-40 to 85°C

Accessories (sold separately)

Power Adapters

PWR-12150-CN-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, CN plug, -40 to 75°C operating temperature
PWR-12150-AU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, AU plug, -40 to 75°C operating temperature
PWR-12150-USJP-SA-T	Locking barrel plug, 12 VDC 1.5 A, 100 to 240 VAC, US/JP plug, -40 to 75°C operating temperature
PWR-12150-EU-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, EU plug, -40 to 75°C operating temperature
PWR-12150-UK-SA-T	Locking barrel plug, 12 VDC, 1.5 A, 100 to 240 VAC, UK plug, -40 to 75°C operating temperature

Cables

CBL-F9DPF1x4-BK-100	Console cable with 4-pin connector, 1 m

Wall-Mounting Kits

UC-8100-ME Wall Mount Kit	Wall-mounting kit with screws

DIN-Rail Mounting Kits

DK-25-01	DIN-rail mounting kit, 2 screws

Antennas

ANT-LTEUS-ASM-01	GSM/GPRS/EDGE/UMTS/HSPA/LTE, 1 dBi, omnidirectional rubber-duck antenna
ANT-LTE-OSM-06-3m BK MIMO	Multiband antenna with screw-fastened mounting option for 700-2700/2400-2500/5150-5850 MHz frequencies
ANT-LTE-ASM-05 BK	704-960/1710-2620 MHz, LTE stick antenna, 5 dBi
ANT-LTE-ASM-04 BK	704 to 960/1710 to 2620 MHz, LTE omnidirectional stick antenna, 4.5 dBi
ANT-LTE-OSM-03-3m BK	700-2700 MHz, multiband antenna, specifically designed for 2G, 3G, and 4G applications, 3 m cable

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