EM-1220 Series

Arm-based industrial computer-on-module with 2 serial ports and 2 LAN ports



Features and Benefits

- MOXA ART Arm9 32-bit 192 MHz processor
- 16 MB RAM, 8 MB flash disk onboard
- 2 software-selectable RS-232/422/485 serial ports
- Dual 10/100 Mbps Ethernet ports for network redundancy
- · SD signals supported for external SD slot connection
- Built-in RTC, buzzer
- · 10 GPIOs reserved for system integration
- Ready-to-run µClinux kernel 2.6 platform
- Full-function development kit for quick evaluation and application development
- -40 to 75°C wide-temperature models available

Certifications



Introduction

The EM-1220 embedded module features 2 RS-232/422/485 serial ports, dual Ethernet ports, and an SD slot for external storage expansion. The module has a compact design that can be easily integrated with industrial applications such as gas stations, vending machines, and ticketing machines, and offers a powerful serial communication capability for better system integration.

Programmers will find that the preinstalled, ready-to-run µClinux platform and the full-function development kit make it easy to develop software and build a reliable communication base for industrial automation applications. In addition, a wide-temperature model is also available to provide a reliable solution for harsh environments.



Appearance

Top View

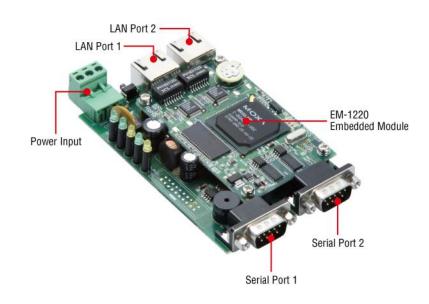


Onboard 16 MB RAM

Bottom View



Development Kit



Specifications

Computer

Computer		
CPU	MOXA ART Arm9, 192 MHz	
SDRAM	16 MB	
Flash	NOR Flash, 8 MB	
Pre-installed OS	μCLinux	
Storage Slot	SD slots x 1	
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	System Ready x 1	
Serial	2 per port (Tx, Rx)	
Serial Interface		
Serial Ports	2 x RS-232/422/485	
Console Port	1 x 4-pin header to DB9 console port	

Serial Signals

Serial Signals		
Data Bits	5, 6, 7, 8	
Stop Bits	1, 1.5, 2	
Parity	None, Even, Odd, Space, Mark	
Flow Control	RTS/CTS, XON/XOFF, ADDC® (automatic data direction control) for RS-485, RTS Toggle (RS-232 only)	
Baudrate	50 bps to 921.6 kbps	
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND	
RS-422	Tx+, Tx-, Rx+, Rx-, GND	
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND	
RS-485-2w	Data+, Data-, GND	
Power Parameters		
Input Voltage	3.3 VDC	
Input Current	625 mA @ 3.3 VAC	
Power Consumption	2.1 W	
Reliability		
Alert Tools	Built-in buzzer and RTC (real-time clock)	
Automatic Reboot Trigger	Built-in WDT	
Physical Characteristics		
Dimensions	EM-1220 Module: 80 x 50 mm (3.15 x 1.97 in) EM-1220 Development Kit: 117 x 70 mm (4.61 x 2.76 in)	
Weight	EM-1220 Module: 40 g (0.09 lb) EM-1220 Development Kit: 120 g (0.27 lb)	
Environmental Limits		
Operating Temperature	EM-1220-LX: -10 to 60°C (14 to 140°F) EM-1220-T-LX: -40 to 75°C (-40 to 167°F)	
Storage Temperature (package included)	EM-1220-LX: -20 to 80°C (-4 to -176°F) EM-1220-T-LX: -40 to 85°C (-40 to 185°F)	
Standards and Certifications		
EMC	EN 55032/24, EN 61000-3-2 Class A, EN 61000-3-3, CISPR 32, FCC Part 15B Class A	
Green Product	RoHS, CRoHS, WEEE	
MTBF		
Time	405,735 hrs	
Standards	Telcordia (Bellcore) Standard	
Warranty		
Warranty Period	5 years	
Details	See www.moxa.com/warranty	

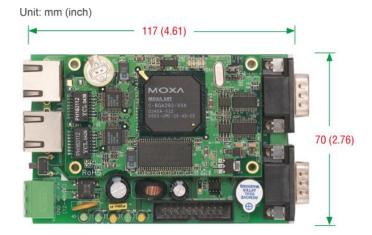


Dimensions

EM-1220

EM-1220-DK

Unit: mm (inch) 50 (1.97)



Ordering Information

Model Name	Description	Operating Temp.
EM-1220-LX	Arm-based embedded core module with 2 serial ports, dual LAN ports, SD slot, μClinux OS, -10 to 60°C operating temperature	-10 to 60°C
EM-1220-T-LX	Arm-based embedded core module with 2 serial ports, dual LAN ports, SD slot, μClinux OS, -40 to 75°C operating temperature	-40 to 75°C

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