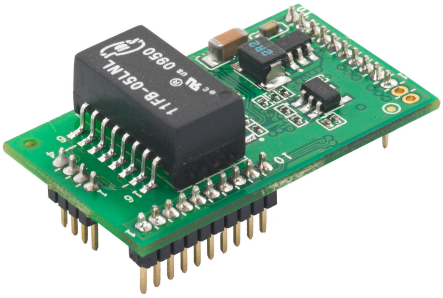
MiiNePort E2 Series

10/100 Mbps embedded serial device servers



Features and Benefits

- Smallest embedded device server available—only 29 x 17 x 12.6 mm
- Supports EZPower for 3.3 to 5 VDC system power input
- Green design with extremely low power consumption
- Uses Moxa's high-quality and reliable second-generation MiiNe SoC
- MiiNePort NetEZ technology makes integration incredibly easy
- Operation versatility with Real COM/TCP/UDP/RFC2217/MCSC

Certifications

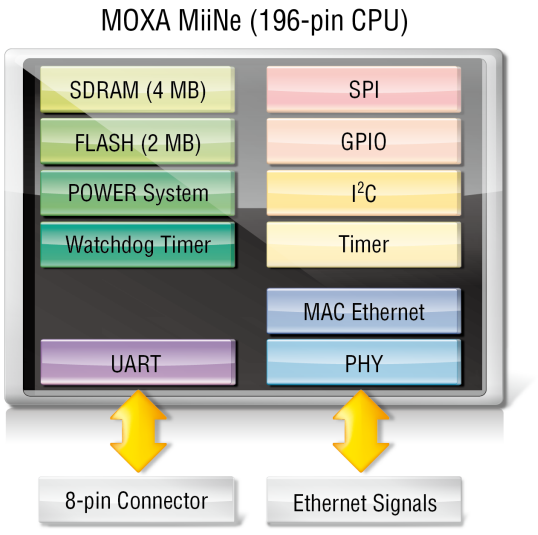
Introduction

Moxa's MiiNePort E2 Series embedded device servers are designed for manufacturers who want to add sophisticated network connectivity to their serial devices with minimal integration effort. The MiiNePort E2 is empowered by the MiiNe, Moxa's second-generation SoC, which supports 10/100 Mbps Ethernet, delivers a serial baudrate of up to 921.6 kbps, offers a versatile selection of ready-to-use operation modes, and requires a minimal amount of power. With Moxa's innovative NetEZ technology, the MiiNePort E2 can convert any device with a standard serial interface to an Ethernet-enabled device. In addition, the MiiNePort E2 is the smallest embedded device server without an RJ45 connector, making it easy to fit into virtually any existing serial device.

Moxa's Second-generation SoC

The MiiNe was created to provide manufacturers with a competitive embedded serial-to-Ethernet solution. The MiiNePort E2, which uses the MiiNe for its SoC, is one of the world's tiniest embedded device servers and has the lowest power consumption among similar products. The MiiNe's features include:

- Cost-effective serial-to-Ethernet conversions
- Arm core
- Advanced UART technology
- Internal 2 MB Flash and 4 MB SDRAM memory



Specifications

Embedded System	
CPU	32-bit Arm Core

Memory	
Flash	2 MB
SDRAM	4 MB

Input/Output Interface

Configurable DIO Channels (by software)	4

Ethernet Interface

10/100BaseT(X) Ports, Auto MDI/MDI-X	4-pin pin header
Magnetic Isolation Protection	1.5 kV (built-in)

Ethernet Software Features

Configuration Options	Web Console (HTTP), Windows Utility
Management	ARP, BOOTP, Device Search Utility (DSU), DHCP Client, IPv4, SMTP, SNMPv1, TCP/IP, Telnet, TFTP, UDP, ICMP
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8/8.1/10 (x86/x64), Windows 2008 R2/2012/2012 R2 (x64), Windows Embedded CE 5.0/6.0, Windows XP Embedded
Linux Real TTY Drivers	Kernel versions: 2.4.x, 2.6.x, 3.x, 4.x, and 5.x
Fixed TTY Drivers	SCO UNIX, SCO OpenServer, UnixWare 7, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i, Mac OS X
Android API	Android 3.1.x and later

Serial Interface

No. of Ports	1
Serial Standards	TTL
Operation Modes	MiiNePort E2 Series: Real COM mode, RFC2217 mode, TCP Client mode, TCP Server mode, UDP mode, Ethernet Modem mode, MCSC mode MiiNePort E2-SDK: Real COM mode, Ethernet Modem mode
Baudrate	MiiNePort E2 Series: 50 bps to 230.4 kbps MiiNePort E2-H/-SDK Series: 50 bps to 921.6 kbps
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	None, RTS/CTS, DTR/DSR, XON/XOFF

Serial Signals

TTL	• TxD, RxD, RTS, CTS, DTR, DSR, DCD, RST (reset circuit), GND

NetEZ Technology

NetEZ Functions	EZPower, EZPage, SCM (Serial Command Mode), AutoCFG, MCSC (Multi-Channel Serial Communication)

Serial Software Features

Serial to Ethernet Sample Source Code	MiiNePort E2-SDK (Integrated in MiiNePort-IDE): 1. TCP Server Echo 2. TCP Server to Serial (Single connection) 3. TCP Server to Serial (Multi-connection) 4. TCP Client Echo 5. TCP Client to Serial (Startup) 6. TCP Client to Serial (Any character) 7. TCP Client to Serial (Designed destination TCP/IP port from serial) 8. UDP Echo 9. UDP to Serial

Power Parameters

Input Current	157 mA @ 3.3 VDC
Input Voltage	3.3 to 5 VDC

Physical Characteristics

Dimensions	MiiNePort E2/E2-H/E2-SDK Series: 29 x 17 x 12.6 mm (1.14 x 0.67 x 0.50 in)
Weight	MiiNePort E2/E2-H Series: 5 g (0.01 lb) MiiNePort E2-ST/E2-H-ST/E2-SDK: 77 g (0.17 lb)
Form Factor Type	Drop-in modules

Environmental Limits

Operating Temperature	Standard Models: 0 to 55°C (32 to 131°F) Wide Temp. Models: -40 to 85°C (-40 to 185°F)
Storage Temperature (package included)	-40 to 60°C (-40 to 140°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 1 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 0.5 kV IEC 61000-4-6 CS: 150 kHz to 80 MHz: 3 V/m; Signal: 3 V/m IEC 61000-4-8 PFMF IEC 61000-4-11 DIPs
Environmental Testing	IEC 60068-2-1 IEC 60068-2-1 IEC 60068-2-3
EMC	EN 55032/24
EMI	CISPR 32, FCC Part 15B Class B
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	5,696,350 hrs
Standards	Telcordia SR332

Warranty

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

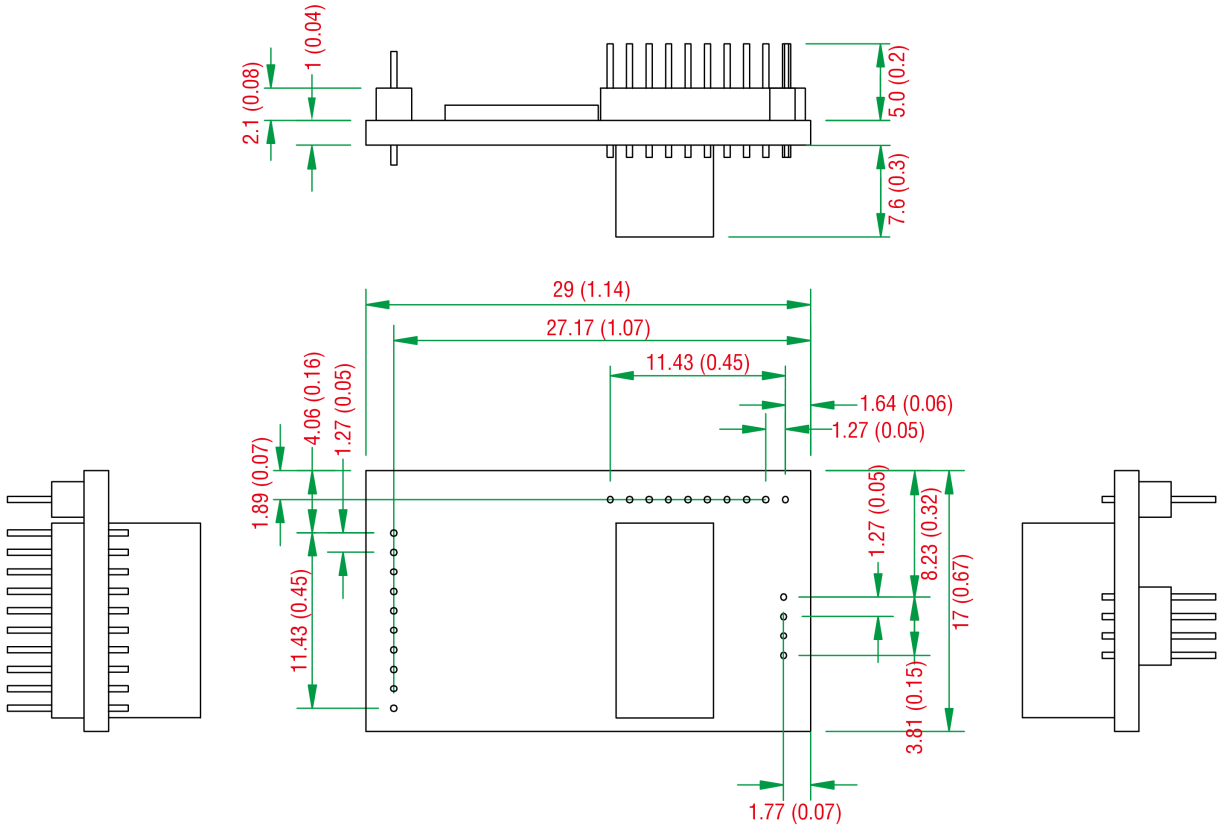
Package Contents

Device	1 x MiiNePort E2 Series device server
Cable	1 x Ethernet, crossover cable (-ST/-SDK models) 1 x null modem serial cable (-ST/-SDK models) 1 x USB cable (-SDK model)

Power Supply	1 x power adapter, universal (-ST/-SDK models) 1 x power cord, EU type (-ST/-SDK models) 1 x power cord, US type (-ST/-SDK models)
Documentation	1 x document and software CD (-ST/-SDK models) 1 x quick installation guide (-ST/-SDK models) 1 x warranty card (-ST/-SDK models)

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	No. of Serial Ports	Supported Baudrates	Operating Temp.	With Evaluation Board	With Software Development Kit
MiiNePort E2	1	50 bps to 230.4 kbps	0 to 55°C	–	–
MiiNePort E2-H	1	50 bps to 921.6 kbps	0 to 55°C	–	–
MiiNePort E2-T	1	50 bps to 230.4 kbps	-40 to 85°C	–	–
MiiNePort E2-H-T	1	50 bps to 921.6 kbps	-40 to 85°C	–	–
MiiNePort E2-ST	1	50 bps to 230.4 kbps	0 to 55°C	✓	–
MiiNePort E2-H-ST	1	50 bps to 921.6 kbps	0 to 55°C	✓	–
MiiNePort E2-SDK	1	50 bps to 921.6 kbps	0 to 55°C	✓	✓