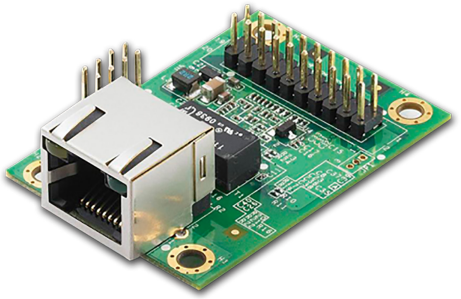
MiiNePort E3 Series

10/100 Mbps embedded serial device servers



- IEEE 802.3af compliant PoE pass-through
- Use Moxa's high quality and reliable second generation MiiNe SoC
- Versatile choice of operation modes fulfill specific application requirements
- Green design with extremely low power consumption
- MiiNePort NetEZ Technology makes integration incredibly easy
- Highly compact embedded device module

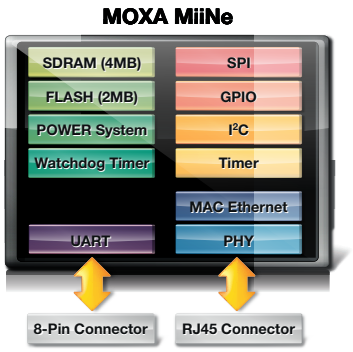
Overview

Moxa's MiiNePort E3 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 E3 is empowered by the MiiNe, Moxa's second generation SoC, which supports 10/100 Mbps Ethernet, up to 921.6 kbps serial baudrate, a versatile selection of ready-to-use operation modes, and requires only a small amount of power. By using Moxa's innovative NetEZ technology, the MiiNePort E3 can be used to convert any device with a standard serial interface to an Ethernet-enabled device in no time. In addition, the MiiNePort E3 is a compact embedded device server with an RJ45 connector, making it easy to fit into virtually any existing serial device.

The MiiNe—Moxa's 2nd Generation SoC

MiiNe The MiiNe was created to provide manufacturers with a competitive embedded serial-to-Ethernet solution. The MiiNePort E3, which uses the MiiNe for its SoC, is a compact embedded device server that has the lowest power consumption among similar products. The MiiNe has the following features:

- Designed for serial-to-Ethernet applications
- Uses an ARM core
- Uses Moxa's own advanced UART technology
- 2 MB Flash and 4 MB SDRAM memory built in



Specifications

Form Factor

Type: Pin header module
Dimensions: 35 x 52.5 x 18 mm (1.38 x 2.07 x 0.71 in)
Weight: 12 g (0.03 lb)

System Information

CPU: 32-bit ARM Core
RAM: 4 MB built in
Flash: 2 MB built in

Ethernet Interface

Number of Ports: 1
Speed: 10/100 Mbps, auto MDI/MDIX
Connector: RJ45 (magnetic)
Magnetic Isolation Protection: 1.5 kV built-in
LEDs: 10BASE-T & 100BASE-TX Link Activity
PoE Pass-through: 802.3af compliant

Serial Interface

Number of Ports: 1
Transmission Format: Standard TTL

Serial Communication Parameters

Data Bits: 5, 6, 7, 8
Stop Bits: 1, 1.5, 2
Parity: None, Even, Odd, Space, Mark
Flow Control: RTS/CTS, DTR/DSR, XON/XOFF
Baudrate:
MiiNePort E3: 50 bps to 230.4 kbps
MiiNePort E3-H: 50 bps to 921.6 kbps
Note: Non-standard baudrates supported

Serial Signals

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

Digital I/O Pins

GPIO: 4 configurable I/O pins

Software

Network Protocols: ICMP, ARP, IPv4, TCP, UDP, DHCP, HTTP, SNMP V1, SMTP, TFTP, Auto IP, Telnet, BOOTP
Configuration Options: Web Console, Serial Console (Serial Command Mode), Telnet Console, Windows Utility
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
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
Linux Real TTY Drivers: Linux 2.4.x, 2.6.x, 3.x, 4.x
Android API: Android 3.1.x and later
Operation Modes: Real COM, TCP Server, TCP Client, UDP, Ethernet Modem, RFC2217
NetEZ Function: EZPower, EZPage, SCM (Serial Command Mode), AutoCFG

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)

Power Requirements

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

Standards and Certifications

EMC: EN 55032/24
EMI: CISPR 32, FCC Part 15B Class B
EMS:
IEC 61000-4-2 ESD: Contact: 4 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
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
Vibration: IEC 60068-2-6, 5-25.7 Hz: ±15 mm; 25.7-500 Hz: 20g; 3 hours/axis
Shock: IEC 60068-2-27, 500g/2ms
Drop: IEC 60068-2-34, IEC 60068-2-32, ISTA-2A
Note: Standards testing is done with the MiiNePort E3-ST or MiiNePort E3-H-ST starter kits.

Reliability

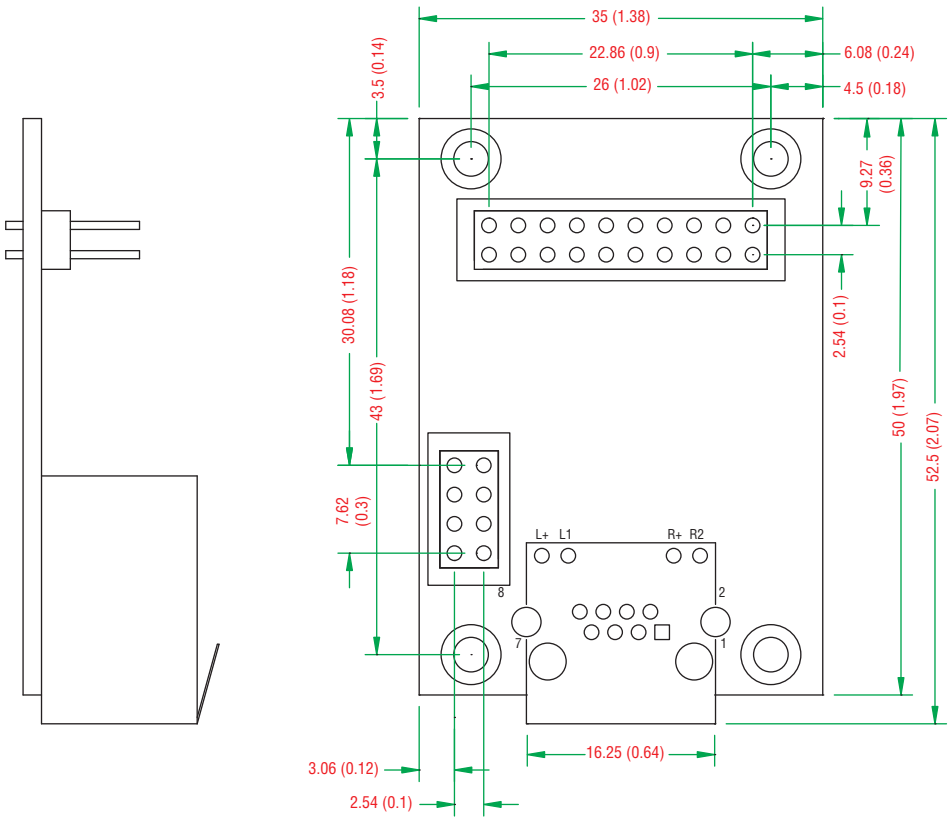
MTBF (mean time between failures):
Time: 3,608,031 hrs
Standard: Telcordia (Bellcore) TR/SR

Warranty

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

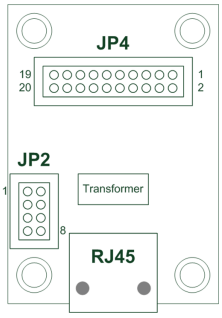
Dimensions

Unit: mm (inch)



Pin Assignment

Ethernet Pins (JP2)			Serial Pins and Power Pins (JP4)					
Pin	Signal Name	Function	Pin	Signal Name	Function	Pin	Signal Name	Function
1	Reserve	N/A	1	Serial Rx	Receive Serial Data	11	DTR	Data Terminal Ready
2	Reserve	N/A	2	Ready LED	System To Ready LED	12	Reserve	N/A
3	Reserve	N/A	3	Serial Tx	Transmit Serial Data	13	LDSR	Data Set Ready
4	Reserve	N/A	4	GPIO	Programmable I/O	14	Reserve	N/A
5	POE signal pair 1	PoE Power from Tx signal	5	LDCD	Data Carrier Detect	15	LCTS	Clear To Send
6	POE spare pair 1	PoE Power from RJ45 4, 5 pin	6	GPIO	Programmable I/O	16	SW_Reset	Reset to factory default
7	POE signal pair 2	PoE Power from Rx signal	7	RS485_ EN0	RS-485 Enable	17	Reserve	N/A
8	POE spare pair 2	PoE Power from RJ45 7, 8 pin	8	GPIO	Programmable I/O	18	Reserve	N/A
			9	LRTS	Request To Send	19	GND	Circuit Ground
			10	GPIO	Programmable I/O	20	VCC	Power Supply



Ordering Information

Available Modules

MiiNePort E3: Embedded device server for TTL devices, pin header module, 10/100M with RJ45 connector, 50 bps to 230.4 kbps baudrate, 0 to 55°C operating temperature
MiiNePort E3-H: Embedded device server for TTL devices, pin header module, 10/100M with RJ45 connector, 50 bps to 921.6 kbps baudrate, 0 to 55°C operating temperature
MiiNePort E3-T: Embedded device server for TTL devices, pin header module, 10/100M with RJ45 connector, 50 bps to 230.4 kbps baudrate, -40 to 85°C operating temperature
MiiNePort E3-H-T: Embedded device server for TTL devices, pin header module, 10/100M with RJ45 connector, 50 bps to 921.6 kbps baudrate, -40 to 85°C operating temperature

Available Starter Kits

MiiNePort E3-ST: Starter kit for the MiiNePort E3 Series, module included
MiiNePort E3-H-ST: Starter kit for the MiiNePort E3-H Series, module included

Optional Accessories (can be purchased separately)

PWR-12125-DT-S1: Desktop power supply (requires power cord), 12 VDC, 1.25 A, 100 to 240 VAC
PWC-C7US-2B-183: 10A/125V US power cord, 183 cm
PWC-C7EU-2B-183: 2.5A/250V Continental European (EU) power cord, 183 cm
CBL-F9M9-150: DB9 female to DB9 male serial cable, 150 cm
CBL-RJ458P-100: 8-pin RJ45 CAT5 Ethernet cable, 100 cm
Assembly Pack: 8 screws and 4 spacers
8-pin Straight Cable: For connecting module and evaluation board
20-pin Straight Cable: For connecting module and evaluation board

Package Checklist (modules)

- MiiNePort E3 module

Package Checklist (starter kits)

- MiiNePort E3 module
- MiiNePort E3 evaluation board
- Universal power adapter
- Power Cord: PWC-C7US-2B-183
- Power Cord: PWC-C7EU-2B-183
- Serial Cable: CBL-F9M9-150
- Ethernet Cable: CBL-RJ458P-100
- Assembly pack (8 screws & 4 spacers)
- 8-pin straight cable (connect module and evaluation board)
- 20-pin straight cable (connect module and evaluation board)
- Documentation and software CD
- Quick installation guide (printed)
- Warranty card