

NR&D

DEB

Serial / Ethernet Bridge

Description

The DEB is a Unity Pro compatible, fully functional, bi-directional Modbus serial to Ethernet bridge. Devices on one network can access devices on the other network. This network traffic can be I/O and register data or programming commands from Unity Pro or any other programming package.

The Ethernet port is available in either a single 10/100BaseT or double 10/100BaseT versions. The twin Ethernet version includes an internal switch for daisy-chain operation and also supports RSTP for use in a copper ring.

The standard DEB includes two isolated serial ports that support 18 different protocols including Modbus RTU and ASCII (Master and Slave). Serial devices may access or be accessed from devices on Ethernet or the other serial port. The DEB may be ordered with an additional two RS-232 (9-pin male) or RS-485 (9-pin female) ports.

The DEB is a stand-alone version of Niobrara's popular EPE5-T with the following features:

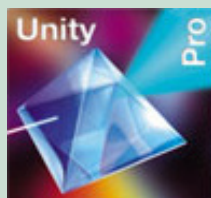
- DIN rail mount
- 24VDC Operation
- 100BaseT RJ45 Ethernet port
- Two Isolated serial ports switchable between RS-232 (RJ45) and RS-485 (5-position screw terminal)
- LCD and keypad for configuration and status
- Automatic Modbus/TCP and serial routing table configuration
- Ethernet and Serial I/O Scanning
- Web server for configuration

Front Panel Operation

The DEB's front panel LCD and keypad make configuration a snap. The basic Ethernet and serial port settings may all be inspected and modified from the front panel. The arrow keys allow quick access to the device's firmware versions, serial number, MAC address, and port communication statistics. The front panel may be password protected to prevent unauthorised activity.

"...bi-directional communication between devices on all serial ports and the Ethernet network."

"...front panel LCD and keypad makes configuration a snap."



 DEB 192.168 1.19	Main ▶Config Status App Info System	Enet ▶Address Mask Gate IP Source Protocol Drop MB Routes IP Routes Enet Mode	IP Add 192.168. 1. 19	IP Add 192.168. 1. 19 AutoFill IP Tables? No. <u>Yes</u>	Port 1 Protocol ▶Baud Parity Data Bits Stop Bits Driver Drop MB Routes
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Modbus Router

The DEB can route messages between Modbus/TCP Ethernet and Modbus Serial (RTU or ASCII); all at the same time. The Ethernet port may be a client and server. The serial ports may be connected to masters or slaves. Any master can communicate with any slave on any other port. These masters may be a programming package such as Unity Pro, Concept, or ProWORX.

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Legacy SY/MAX Operation

The DEB supports legacy Square D SY/MAX communication including Ethernet and serial. The Ethernet port may be configured to operate in a combined Modbus/TCP and SY/MAX mode providing high speed bridging between Quantum NOEs and Model 650 and 450 PLCs. SY/MAX serial, PNIM, Net-to-Net, and RNIM protocols are all supported to tie in older SY/NET equipment with a newer Modbus system.

Ordering Information

The MEBII is available as:

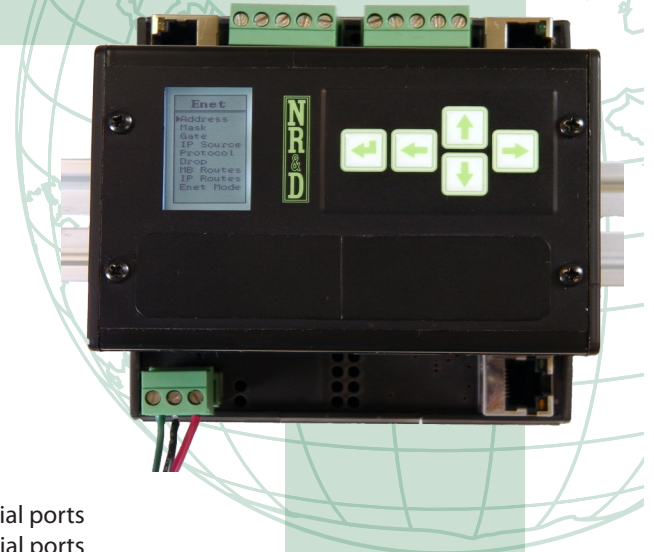
- **DEB+101** with one 100BaseT Ethernet and 2 isolated RS-232/485 serial ports
- **DEB+201** with two 100BaseT Ethernet and 2 isolated RS-232/485 serial ports

Related Products

- **MM1** RS-232 cable for connecting to 9-pin PC serial port.
- **MU7** RS-422 cable for connecting to 9-pin SY/MAX port.
- **TR121ST** 110VAC (US) wall mount transformer.

Specifications

Warranty / Manual	The DEB is furnished with a user manual on CD and carries a one-year warranty from the date of shipment. During the warranty period, free firmware upgrades are available. See Niobrara's Standard Terms and Conditions of Sale for additional warranty information.
Dimensions	DIN rail mount 4.4" wide by 4.4" tall by 3.5" deep. Approximately 1.2 pounds net.
Power Requirements	9-30VDC 6W - 3 position removable connector is provided
Indicators	Module: LCD with backlight and two red LEDs for error Serial Ports: Transmit and Receive for each port Ethernet: Link/Activity, 10/100
Ethernet Port	10/100BaseT port with RJ45 connector on bottom of unit. Modbus/TCP and/or SY/MAX 802.3 protocols. E-Peer compatible. Optional second Ethernet connector for daisy-chain switch or RST copper ring operation.
Serial Ports	Two isolated ports selectable between RS-232 (RJ45 connector) and RS-485 (5 position removable screw terminal is provided). Independently configurable for baud rate, data bits, parity, stop bits, and protocol. RS-485 mode is 2- and 4-wire compatible.
Serial Port Modes	Each serial port can independently operate in any of the following modes: Modbus (RTU or ASCII, master or slave), SY/MAX; Net-to-Net; Peripheral; PLogic; Multidrop; IDEC; Gateway; Transparent; Share; PNIM; RNIM (master or slave); Transfer; Chevrion; Dual Slave.
Setup Registers	Module configuration is stored in internal registers and is compatible with older EPES models. These setup registers can be accessed through any of the DEB's ports (in most modes). Configuration is restored from EPROM memory after a power cycle.
Environmental	Operating conditions are 0-50C; humidity up to 90% noncondensing; pressure altitude -200 to +10,000 ft MSL.



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