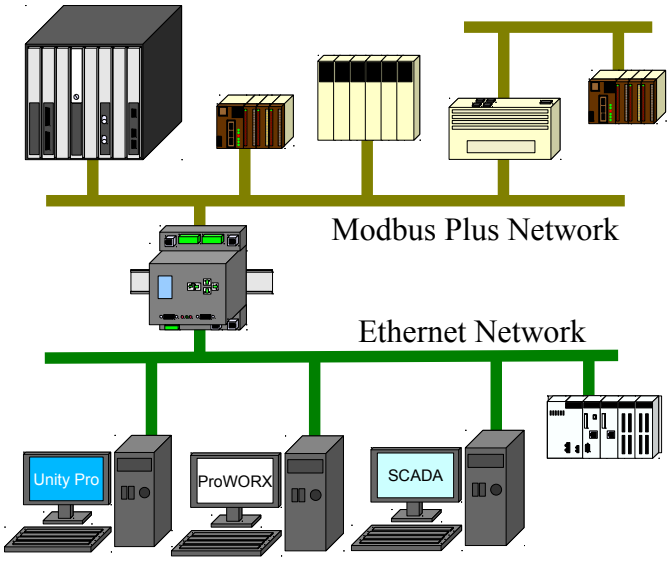
MEBII

Modbus Plus ⟷ Ethernet Bridge

MEBII+001

Overview

Niobrara's MEBII is a Unity Pro compatible, fully functional, bi-directional Modbus Plus to Ethernet bridge. Devices on either 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 other Modicon compatible programming packages.

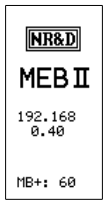


The Modbus Plus port provides redundant cable connections and may also be used in standard single cable networks. The MEBII supports the full five drop MB+ routing allowing full access of downstream Bridge Plus (BP85) and Bridge Mux (BM85) networks.

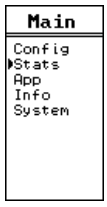
The Ethernet port supports simultaneous Modbus/TCP client and server operation. A built-in Web server simplifies configuration and troubleshooting. No special configuration software is required.

Two isolated serial ports are included to allow Modbus serial devices (Master or Slave) to be accessed by Modbus Plus and Ethernet. Each serial port supports 18 protocol modes including SY/MAX and PowerLOGIC for integrating legacy hardware.

Front Panel Operation

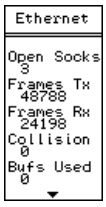


Default Screen

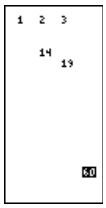


Main Menu

MB+ Config



Statistics



MB+ Stations

The MEBII's front panel LCD and keypad make configuration quick and easy. The basic Ethernet, MB+, and serial port settings may be inspected and modified using the arrow buttons. The front panel may be password protected to prevent unauthorized activity.

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Hot Modbus Plus

A pair of MEBII units may be operated in "Hot Modbus Plus" mode to provide a fully automatic redundant bridging system. Failure of the primary MEBII (loss of power, loss of Ethernet link, sole station on MB+) will cause the secondary MEBII to assume the Primary's network configuration and take over the bridging operation.

Message Routing and Data Concentration

The primary operation of the MEBII is fully transparent message pass-through between serial, Ethernet, and Modbus Plus networks. These messages may include data and PLC programming instructions.

The MEBII may also operate as a data concentrator for automatic transfer of data between networks. A 2048 register mailbox may be accessed from any port. The MB+ port supports Global Data. The Ethernet port includes a 128 entry Modbus/TCP I/O Scanner. Each serial port includes a 48 entry Auto Scan table. All of these data concentration operations may occur simultaneously with normal message routing.

Ordering Information

MEBII+001	One 100BaseTX Ethernet, Dual Cable MB+, two RS-232/RS-485 serial ports
MEBII+201	Two 100BaseTX Ethernet, Dual Cable MB+, two RS-232/RS-485 serial ports

Related Equipment

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

RoHS

Dimensions	DIN rail mount 4.4" wide by 4.4"tall by 3.5" deep. Approx. 1.2 pounds net
Power Requirements	9-30VDC 6W – 3 position removable connector is provided
Indicators	Module: LCD with backlight Serial Ports: TX and RX for each port Ethernet: Link/Activity, 10/100 for each port Modbus Plus: Active, Channel A Error, Channel B Error
Ethernet	10/100BaseTX port with RJ45 connector. Modbus/TCP and/or SY/MAX 802.3 protocols. Web server for configuration. MEBII+201 includes second 10/100BaseTX port supporting RST for copper ring operation.
Modbus Plus	Dual Cable Modbus Plus port with two DB9 female connectors
Serial Ports	Two isolated ports selectable between RS-232 (RJ-45 connector) and RS-485 (5 position removable screw terminal) Independently configurable for baud rate, data bits, parity, stop bits, and protocol. RS-485 port is 2-wire 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, Chevron, Dual Slave.
Operating Conditions	0-50 degrees C operating temperature; -40 to 80 degrees C storage. Humidity up to 90% non-condensing. Pressure altitude -200 to +10,000 feet MSL.
Warranty/Manual	The MEBII is furnished with a user manual on CD and carries a one-year warranty from the date of shipment.

NR&D

MEBII+201

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