SERIAL TO ETHERNET CONVERTER

Ethernet communications made simple for any GE Multilin IED

KEY BENEFITS

• Converts Modbus RTU over RS485 into Modbus TCP/IP over Ethernet
• Supports both 10BaseT and 10BaseF fiber connections
• Connect up to 32 RS485 serial devices to an Ethernet network
• Modbus TCP/IP provides multiple SCADA masters allowing simultaneous communications to the same IED
• Flexible mounting options allow retrofit to existing devices.
• Industrial hardened for utility and industrial applications
• Simple “plug & play” device setup with EnerVista™ software

APPLICATIONS

Provides Modbus TCP/IP communications to the following Multilin devices:

- PQM / PQM II - Power Quality Meter
- SR Family IEDs
- M Family IEDs
- ALPS - Advanced Line Protection System
- DDS Family IEDs
- Other Modbus RTU compatible devices
- Includes EnerVista™ software - an industry-leading suite of software tools that simplifies every aspect of working with GE Multilin devices

FEATURES

User Interfaces

- 10BaseT: RJ45 connection
- 10BaseF: 820 nm, multi-mode, fiber optic with ST connector
- RS485 2-wire, half duplex, isolated
Overview

One Simple Communications Solution for all your GE Multilin Devices

MultiNet™ is a communications module that provides GE Multilin serial ModBus IEDs with ModBus TCP/IP communications over Ethernet, allowing connection to fiber optic LAN and WAN network systems. MultiNet™ has the capability to connect up to 32 serial ModBus devices eliminating complex wiring and additional communications converters, and providing a streamlined and economical Ethernet hub. Unlike most communications converters that are designed for commercial use, MultiNet™ is environmentally hardened to withstand severe utility and industrial conditions.

- Converts Modbus RTU over RS485 into Modbus TCP/IP over Ethernet
- Supports both 10BaseT and 10BaseF fiber connections
- Connect up to 32 RS485 serial devices
- Modbus TCP/IP provides multiple SCADA masters allowing simultaneous communications to the same IED
- Flexible mounting options allow retrofit to existing devices
- Simple “plug & play” device setup with EnerVista™ software

The Easiest Way to Add Ethernet Communications to ModBus Devices

MultiNet™ gives you the ability to connect ModBus serial devices to new or existing Ethernet networks. It has a 10BaseF fiber optic interface that provides high EMI/RFI immunity and inherent electrical isolation over long cable runs. MultiNet™ setup is simple, with a Windows-based software program for installing and configuring the communication drivers.

MultiNet™ is Compatible with GE Multilin IEDs:

MultiNet™ provides a simple way to add Ethernet communications to your existing devices, and its convenient size can be accommodated easily in any panel. MultiNet™ can be used with any GE Multilin ModBus IED including:

- PQM/PQMII - Power Quality Meter
- SR Family IEDs
- M Family IEDs
- ALPS - Advanced Line Protection System
- DDS Family IEDs

Industrial and Utility Environments

MultiNet™ is designed for industrial and utility applications. Unlike traditional communication devices, MultiNet™ is industrial hardened to withstand the harshest environmental conditions.

- Temperature range of -20ºC to 70ºC
- Internal DC and AC Power supply
- DIN rail Mounting
- Transients Protection (IEC and IEEE)

Typical Configurations

EnerVista™ Viewpoint

<table>
<thead>
<tr>
<th>Modbus TCP/IP</th>
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<tr>
<td>Fiber 10 BaseF</td>
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<td>10BaseT</td>
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<td>Multinet</td>
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<td>Modbus RTU over RS485</td>
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MultiNet™ can connect GE Multilin RS485 devices to Modbus TCP/IP masters over a LAN/WAN.

![MultiNet Serial to Ethernet Converter](image-url)
## Technical Specifications

### Applications

Converts Modbus® RTU to Modbus® TCP/IP over Ethernet for up to 32 devices on a RS485 network. Provides a 10BaseT or 10BaseF Modbus® TCP/IP connection.

### User Interfaces

- **Ethernet:** Version 2.0/IEEE 802.3
- **10BaseT:** RJ45 connection
- **10BaseF:** 850 nm, multi-mode, fiber-optic with ST connector
- **Protocol:** ModBus® TCP/IP
- **RS485 Ports:** RS485 2-wire, half duplex, isolated 150 Kbps Protocol: ModBus® RTU
- **Installation:** Configuration through EnerVista setup software

### Mechanical

- **Mounting:** DIN-rail (35 mm) Flush mount brackets
- **Material:** Metal enclosure
- **Dimensions:** 6.6” x 3.98” x 1.46”
- **Shipping box:** 12.9” x 9” x 3.25”
- **Ship weight:** 2 lbs.

### Approvals

- **ISO:** Manufactured at an ISO9001 registered program
- **UL:** Listed for US and Canada under E83849 – Vol. 1 Sec.10. (AC Power only, Approval with DC sources is pending)
- **FCC:**

### Power Supply

- **DC power:** 90 to 300 V DC, 5 W Max.
- **AC power:** 100 to 240 V AC at 50/60 Hz, 20 VA Max.

### Environmental

- **Humidity:** 95% non-condensing
- **Operating Temperature:** -20°C to 70°C
- **Storage Temperature:** -40°C to 85°C (40°F to 185°F)
- **IP rating:** IP 40

### Power

- **DC power:** 90 to 300 V DC, 5 W Max.
- **AC power:** 100 to 240 V AC at 50/60 Hz, 20 VA Max.

### Applications

- Converts Modbus® RTU to Modbus® TCP/IP over Ethernet for up to 32 devices on a RS485 network
- Provides a 10BaseT or 10BaseF Modbus® TCP/IP connection

### Type Tests

- **Pulse Magnetic Field:** IEC 61000-4-9
- **Voltage Dip/ Interruption:** IEC 61000-4-11
- **RF Conducted Immunity:** IEC 60255-22-6
- **RF Radiated Immunity:** IEC 60255-22-3 (IEC 61000-4-3)
- **IEEE/ANSI C37.90.2**
- **Digital Port. Tel. Immunity:** IEC 50204
- **Temperature:** (Cold) IEC 60068-2-1, (Hot) IEC 60068-2-2
- **Relative humidity:** IEC 60068-2-30
- **Ingress Protection:** IEC 60529
- **Mechanical Stress:** 2 G
- ***IEC 60255-22-1**
- **Dielectric Strength:** IEC 60255-5
- **Insulation Resistance:** IEC 60255-5
- **Impulse Voltage:** IEC 60255-5
- **Power Fr. Magnetic Field:** IEC 61000-4-8

### Ordering

<table>
<thead>
<tr>
<th>MultiNet™</th>
<th>Description</th>
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<tbody>
<tr>
<td>MultiNet™</td>
<td>Modbus RTU to Modbus TCP/IP converter with RS485 Comm.RS232 comm port</td>
</tr>
<tr>
<td>FE</td>
<td>10BaseT ethernet port and 10BaseF fiber port</td>
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Visit www.GEMultilin.com/Multinet to:

- Watch MultiNet™ installation video
- Download the instruction manual
- Review applications notes and support documents
- Buy a MultiNet™ online
- View the MultiNet™ brochure