MultiNet

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

Digital Energy
Multilin

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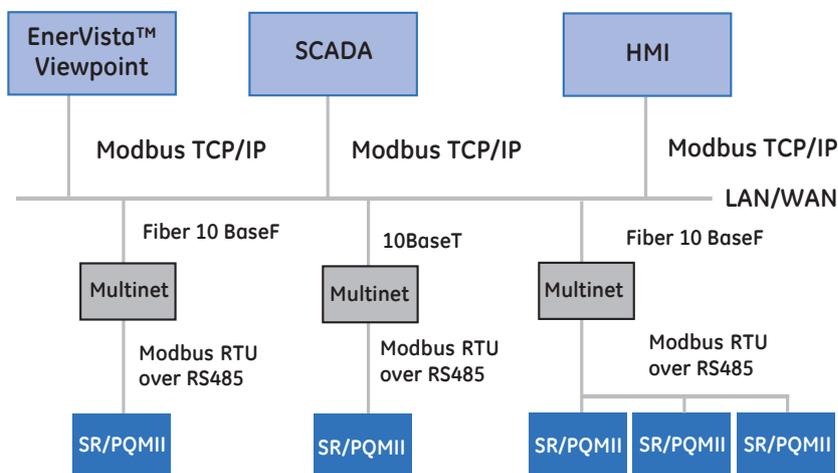
- PQM/PQMII - Power Quality Meter
- SR Family IEDs
- M Family IEDs
- ALPS - Advanced Line Protection System
- DDS Family IEDs

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

MultiNet™ can connect GE Multilin RS485 devices to Modbus TCP/IP masters over a LAN/WAN

Mounting

Rail Mounted

Switch Gear

Example of Multinet rail mounted in Switch Gear

Technical Specifications

APPLICATIONS
Converts Modbus® RTU in 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: 820 nm, multi-mode, fiber-optic with ST connector Protocol: ModBus® TCP/IP
RS485 ports:	RS485 2-wire, half duplex, isolated Baud Rate: 300 bps to 115.2 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:	PART-15

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

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

TYPE TESTS
EMC Test Levels:	EN 50263
Test Conditions:	IEC60255-6
ESD:	IEC60255-22-2 (IEC 61000-4-2) IEEE/ANSI C37.90.3
Surge Immunity:	*IEC 60255-22-5(IEC 61000-4-5)
Fast Transient:	IEC 60255-22-4(IEC 61000-4-4) IEEE/ANSI C37.90.1
Oscillatory:	IEEE/ANSI C37.90.1 *IEC 60255-22-1
Dielectric Strength:	IEC 60255-5
Insulation Resistance:	EC 60255-5
Impulse Voltage:	EC 60255-5
Power Fr. Magnetic Field:	IEC 61000-4-8

TYPE TESTS
Pulse Magnetic Field:	IEC 61000-4-9
Voltage Dip/ Interruption:	IEC 61000-4-11
RF cond. & radiated emission:	IEC 60255-25
RF Conducted Immunity:	IEC 60255-22-6 (IEC 61000-4-6)
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 *RJ-45 not supported

Ordering

MultiNet™	*	Description
MultiNet™	*	Modbus RTU to Modbus TCP/IP converter with RS485 Comm.RS232 comm port
	FE	10BaseT ethernet port and 10BaseF fiber port

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

Media & Protocol Converters