GE
Digital Energy

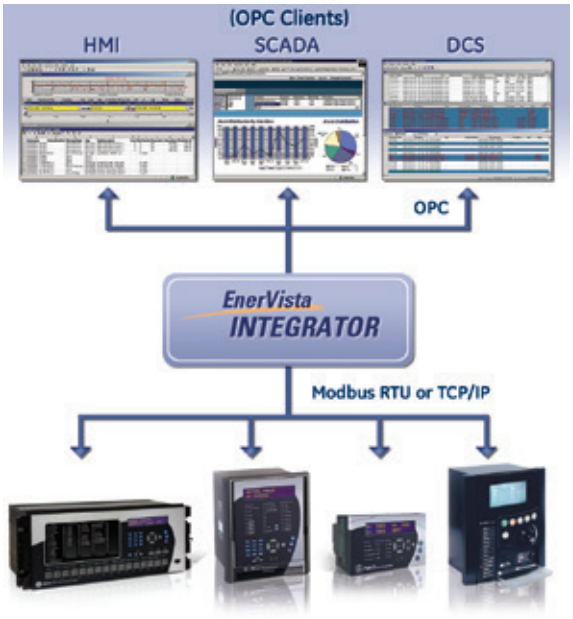
EnerVista Integrator

Comprehensive Communication Engine for Rapid Integration

EnerVista™ Integrator enables seamless integration with GE's Multilin™ devices for new or existing automation systems through tested, pre-configured memory maps. EnerVista Integrator reduces the setup and commissioning efforts required to obtain device, event and waveform data by over 90% for integration with an HMI, SCADA or DCS system.

Key Benefits

- Reduces the effort and cost to integrate GE Multilin devices into new or existing HMI, SCADA or DCS systems
- Provides comprehensive, accurate and high quality, device, event and waveform data from devices
- Archives and centralizes fault data from relays and meters for fault analysis
- Supports integration of third-party (non-GE) Modbus devices into OPC compliant monitoring systems



EnerVista Integrator will efficiently link the information from GE Multlin and non-GE devices to monitoring, control and data collection systems

Key Features

- Easy device setup through device communications
- Rapid retrieval of device, event and waveform data from GE Multilin devices for communication to OPC clients
- Comprehensive, factory tested memory maps for GE Multilin devices
- Scalable communication options for high device or point counts - up to 1000 Devices or up to 65000 points respectively
- Reliable aggregation of event records from multiple GE Multilin devices into a single system wide Sequence-of-Event (SOE) record

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Powerful Pre-Configured OPC Server

EnerVista Integrator is designed to provide seamless integration of GE Multilin devices into any new or existing monitoring or control system. With tested, pre-configured memory maps for GE Multilin devices, EnerVista Integrator eliminates significant effort required for programming all of the mnemonics associated with HMI, SCADA and DCS system integration, significantly reducing the commissioning time and cost.

Pre-Configured Memory Maps and Intelligence

EnerVista Integrator's pre-configured and verified memory maps for most GE Multilin Devices, reduces commissioning effort by over 90% compared with traditional configuration methods:

With Other Communication Servers

1 Hour	+	10 Hours	+	2 Hour	+	16 Hours	+	1 Hour	+	2 Hours	= 32 Hours per Relay x 10 Devices
Select system data points for use		Enter required mnemonics		Scale the values		Test memory map to ensure accuracy		Connect to device		Verify retrieved values from device	= 320 Hours

With EnerVista Integrator

1 Hour	*EnerVista Integrator contains pre-configured memory maps and intelligence to automatically retrieve supported device values, events and waveforms*	= 1 Hour per Relay x 10 Devices
Connect to device		= 10 Hours

Time/Commissioning Effort Savings

Over 90% in Time/ Commission Effort Savings.

For a sample configuration of 10 Devices:

320 Hours
- 10 Hours
= 310 Hours

Communication Based Device Setup

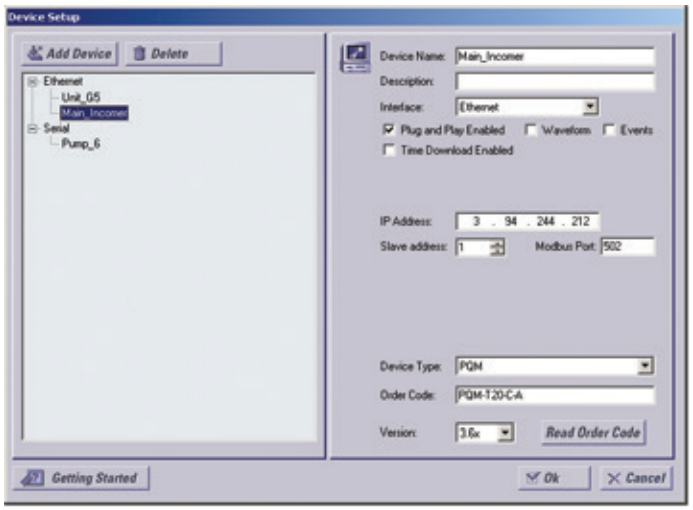
Configuring GE Multilin devices in EnerVista Integrator is achieved through establishing communication with the device.

- Supports user-friendly, intuitive configuration of devices similar to EnerVista Viewpoint Monitoring and EnerVista Setup software
- Provides configuration settings for both serial or Ethernet communications
- Tests communications to ensure accurate device configuration

Third-Party Devices

EnerVista Integrator supports third-party (non-GE) devices that utilize Modbus RTU or Modbus TCP/IP, providing a simple way to incorporate all devices into a monitoring and control system.

- Supports addition of Modbus RTU or Modbus TCP/IP third-party devices
- Provides direct configuration of Modbus mnemonics
- Results in reduced integration time for multiple installations of EnerVista Integrator by importing and exporting mnemonics files



User-friendly, intuitive setup similar to Enervista ViewPoint Monitoring/Setup software to connect devices via OPC

Automatic Event and Waveform Retrieval

Automated archiving of event and waveform data from GE Multilin devices ensures that there is always comprehensive data available for diagnosing power system events.

Event Logging

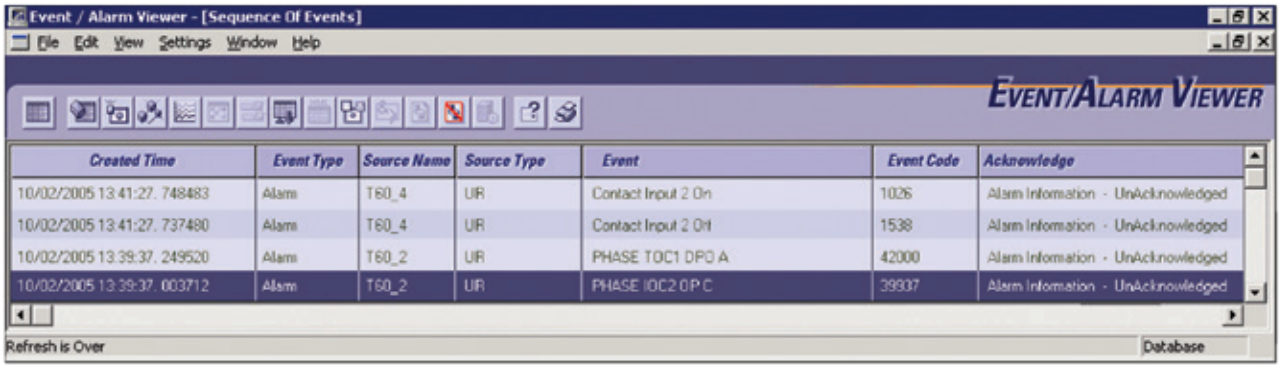
The event records from GE Multilin devices can be automatically downloaded from each device and stored in a system wide sequence of events record. EnerVista Integrator will continually poll each GE Multilin device to see if any new events have been added to that device's event record. Once a new event has been detected, the event record will be downloaded from the device to the system wide sequence of events record.

Event Viewing

The Event Viewer centrally stores and displays information about preset and configured systems events. Each event in the record contains the following information:

- Event Time
- Event Type
- Source Name
- Source Type
- Event Cause

This data can be sorted by any of the fields indicated above.



Create a comprehensive, centralized, system wide sequence of event records for analysis of power system faults.

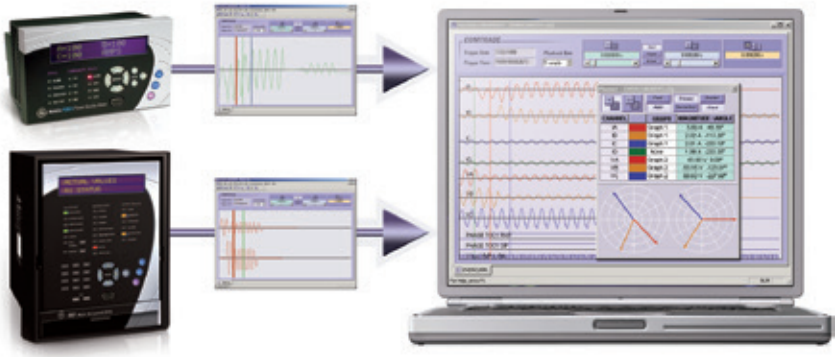
Waveform Archiving

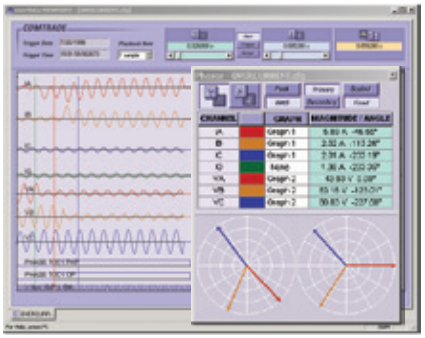
The waveform (oscillography) files from GE Multilin devices can be automatically downloaded from each device and stored in a central data repository using Integrator. Similar to Event Logging, EnerVista Integrator will continually poll each GE Multilin device to see if any new waveform files have been created. Once a new waveform has been detected by EnerVista Integrator, the file will be downloaded from the device to the centralized data repository.

Waveform Viewing

View and analyze waveform fault data that has been recorded from a power system device in a time-based, phasor quantity or tabular view. This Waveform View utility provides functionality to:

- Convert waveforms that were stored in Comma Separated Value (.CSV) format to COMTRADE compatible files (e.g. SR Family, PQM)
- Merge and overlay waveforms that were recorded from multiple devices
- Identify the harmonic content in the monitored parameters





View and analyze waveform fault data retrieved from devices.

Technical Specifications

System Requirements - EnerVista Integrator

COMPONENT	REQUIREMENT
Supported Operating Systems	• Windows 7 (SP1 or later) – 32 or 64 bit • Windows Server 2008 R2 (SP1 or later) - 64 bit
Supported Databases	• SQL Server 2012 • SQL Server 2012 Express
Computer and Processor	Recommended workstation: • Intel® Core™ 2 Duo CPU or higher • CD-ROM drive • Mouse (minimum two buttons) • Keyboard • Speakers (to support audible alarms)
Memory	2 GB of RAM (minimum)
Hard Disk	500 MB of free hard disk space for installation (additional space required for project configuration)
Display	17" monitor, minimum resolution 1280 x 1024, minimum 16-bit color
Connectivity	Ethernet (10BASE-T)
Other	N/A

Please visit our website for a full list of Multilin devices supported by EnerVista Integrator **www.GEDigitalEnergy.com/Intergrator**

EnerVista Integrator Software Selection Guide

EnerVista Integrator Licenses

EVINT	*	License Option
	0100	100 Devices/5000 Points License OPC Server with Event and Waveform Server
	0300	300 Devices/30000 Points License OPC Server with Event and Waveform Server
	0500	500 Devices/65000 Points License OPC Server with Event and Waveform Server
	1000	1000 Devices/20000 Points License OPC Server with Event and Waveform Server

EnerVista Integrator Device/Point Count License Upgrades

EVINT-UPG	*	Upgrade option
	1-3	Upgrade from 100 Devices/5000 Points to 300 Devices/30000 Points
	1-5	Upgrade from 100 Devices/5000 Points to 500 Devices/65000 Points
	1-10	Upgrade from 100 Devices/5000 Points to 1000 Devices/20000 Points
	3-5	Upgrade from 300 Devices/30000 Points to 500 Devices/65000 Points
	3-10	Upgrade from 300 Devices/30000 Points to 1000 Devices/20000 Points
	5-10	Upgrade from 500 Devices/65000 Points to 1000 Devices/20000 Points

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