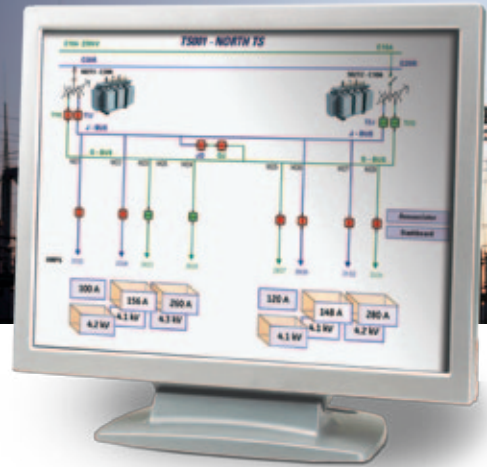


EnerVista™ Integrator



Comprehensive Communication Engine for Rapid Integration

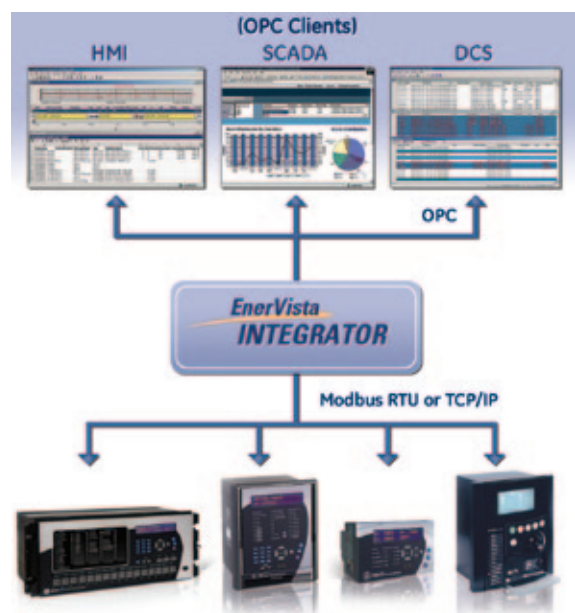
EnerVista™ Integrator enables seamless integration with GE Multilin devices for new or existing automation systems through tested, pre-configured memory maps. Integrator significantly reduces the time and effort required to obtain device, event and waveform data for integration with an HMI, SCADA or 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 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

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 with up to 300 devices/30000 data tags (points)
- Reliable aggregation of event records from multiple GE Multilin devices into a single system wide Sequence-of-Event (SOE) record



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

Powerful 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, greatly reducing the commissioning time and cost.

Device Setup

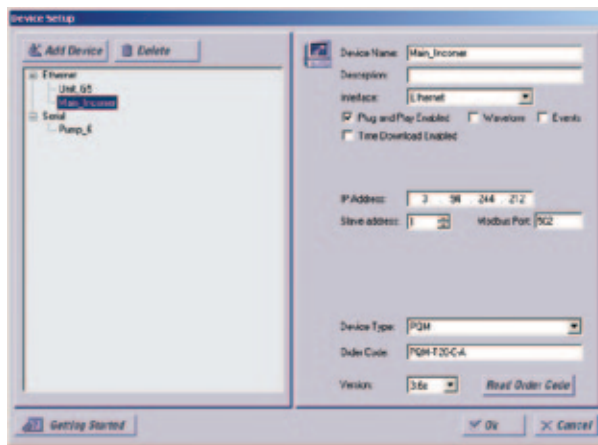
Configuring GE Multilin devices in EnerVista Integrator is achieved through establishing communication with the device.

- 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.

Created Time	Event Type	Source Name	Source Type	Event	Event Code	Acknowledge
10/02/2005 13:41:27.748483	Alarm	T60_4	UR	Contact Input 2 On	1026	Alarm Information - UnAcknowledged
10/02/2005 13:41:27.737480	Alarm	T60_4	UR	Contact Input 2 Off	1538	Alarm Information - UnAcknowledged
10/02/2005 13:39:37.249520	Alarm	T60_2	UR	PHASE TDC1 DPO A	42000	Alarm Information - UnAcknowledged
10/02/2005 13:39:37.003712	Alarm	T60_2	UR	PHASE IDC2 DPO C	39937	Alarm Information - UnAcknowledged

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.

EnerVista Integrator Software Selection Guide

EVI	*	EnerVista Integrator
1000		1000 Point License OPC Server with Waveform and Event Server
5000		5000 Point License OPC Server with Waveform and Event Server
30000		30000 Point License OPC Server with Waveform and Event Server

EnerVista Integrator Add-On Packages

Cimplicity HMI	
PLCMCSWCMPG01	EnerVista Integrator 30,000 Point License and GE Device Wizard Screens
PLCMPLMODBRTG01	EnerVista Integrator 30,000 Point License, GE Device Wizard Screens and Cimplicity Runtime License
PLCMPLWIZG01	EnerVista Integrator 30,000 Point License, GE Device Wizard Screens and Cimplicity Development License
PLCMPLVIEWERG01	EnerVista Integrator Waveform Viewer and Event Logger with Cimplicity ViewNode

WonderWare InTouch HMI	
PL50PMCSMWWG01	EnerVista Integrator 30,000 points and GE Device Wizard Screens for InTouch
PL50MODBRTG01	EnerVista Integrator 30,000 points and InTouch Runtime License
PL50PMCSWIZG01	EnerVista Integrator 30,000 points, GE Device Wizard Screens and InTouch Development License
PL50PMCSVIEWG01	InTouch Viewnode Waveform Viewer and Event Logger

Technical Specifications

System Requirements - EnerVista Integrator

COMPONENT	REQUIREMENT
Supported Operating Systems	<ul style="list-style-type: none"> Windows® XP (Service Pack 3) Windows® 7 -32 bit
Computer and Processor	<ul style="list-style-type: none"> Pentium® IV 3 GHz processor or higher CD-ROM drive Mouse (minimum two buttons) Keyboard Speakers (to support audible alarms)
Memory	2 GB of RAM (minimum)
Hard Disk	400 MB of free hard disk space for installation (additional space required for project configuration). A SCSI hard drive is recommended. If more serial ports are required that what are available on the PC, then a port expander will be required.
Display	Minimum 17" monitor, with 1280 x 1024 resolution, 16-bit color
Connectivity	Ethernet (10BASE-T)
Other	N/A

System Requirements - EnerVista Integrator Add-On Packages

COMPONENT	REQUIREMENT
Supported Operating Systems	<ul style="list-style-type: none"> Windows® 7 -32 bit Windows® Server 2008 SP2 - 32 bit
Computer and Processor	<p>Minimum:</p> <ul style="list-style-type: none"> Pentium® IV 3 GHz processor or higher CD-ROM drive Mouse (minimum two buttons) Keyboard Speakers (to support audible alarms) <p>Recommended (Server):</p> <ul style="list-style-type: none"> Single processor: AMD Opteron™ 4122, 4C 2.2GHz, 3M L2/6M L3, 1333 MHz Max Memory Additional processor: AMD Opteron™ 4122, 4C 2.2GHz, 3M L2/6M L3, 1333 MHz Max Memory 8 GB Memory (8x1 GB),1333MHz Single Ranked UDIMM for 2 Procs, Sparing 500 GB 7.2K RPM SATA 3.5" Hot Plug Hard Drive RAID 1 for PERC H200 and H700 Controllers, x8 Chassis PERC H200 Integrated RAID Controller, 8HD 750 Watt Redundant Power Supply 2x NEMA 5-15P to C13 Wall Plug, 125 Volt, 15 AMP, 10 Feet (3m), Power Cord Baseboard Management Controller Network Adapter: 2x Intel PRO 1000PT 1GbE Single Port NIC, PCI USB Keyboard and Optical Mouse
Memory	2 GB of RAM (minimum), 8 GB (recommended)
Hard Disk	1 GB of free hard disk space for installation (additional space required for project configuration)
Display	Minimum 17" monitor, with 1280 x 1024 resolution, 16-bit color
Connectivity	Ethernet (10BASE-T)
Other	N/A

Supported Devices

DEVICE FAMILY	DEVICE	FIRMWARE
ATS	MX150	5.4x, 6.0x
	MX250	5.4x, 6.0x
	MX350	1.1x
UPS	UPS, UPS LP, UPS SG	1.0
Trip Units/Switchgear	Spectra MicroVersa Trip	5.1x
	Enhanced MicroVersa Trip C	4.1x
	Enhanced MicroVersa Trip D	4.1x
	GTU (EntelliGuard TU Trip Unit)	1.0
	Entellisys	4.0x
Meters/Switches	PQM	3.3x to 3.6x
	PQMII	1.0x to 2.2x
	EPM1000	3.8x
	EPM2000	1.0x
	EPM4000	3.8x
	EPM5000P	3.9x
	EPM5200P	2.4x
	EPM5300P	2.4x
	EPM5350P	2.4x
	EPM6000	1.0x
	EPM9450Q	2.1x
	EPM9650Q	6.1x
	EPM9800	6.1x
	ML2400	3.0x
	Distribution Feeder	350
F35		2.6x to 5.7x
F60		2.6x to 5.7x
F650		1.6x to 5.0x
MIF 2		4.0
735/737		1.5x
750/760		3.6x to 7.2x
G30		4.4x to 5.7x
G60		2.6x to 5.7x

DEVICE FAMILY	DEVICE	FIRMWARE
Generator	489	1.3x to 4.0x
Distance Protection	D30	3.0x to 5.7x
	D60	2.6x to 5.7x
	D90Plus	1.6x
Line Current Differential Protection	L30	5.6x to 5.7x
	L60	2.6x to 5.7x
	L90	2.6x to 5.7x
Transformer	745	2.4x to 5.1x
	T35	2.6x to 5.7x
	T60	2.6x to 5.7x
Motor	239	2.3x to 2.7x
	269+	6.0x
	369	1.6x to 3.3x
	469	2.5x to 5.0x
	MM200	1.0x to 1.2x
	MM300	1.2x to 1.4x
	MMII	4.0x to 5.2x
	MMIII	1.0x to 1.2x
	RRTD	1.4x, 1.5x
	SPM	2.0x, 2.1x
	M60	2.6x to 5.7x
Network	N60	3.4x to 5.7x
Bus	B30	2.6x to 5.7x
	B90	4.8x to 5.7x
Specialized	C30	2.6x to 5.7x
	C60	2.6x to 5.7x
	C90Plus	1.6x
Misc.	MRPO	1.0
	FIRETRACER	1.0
	VERSAMAX	1.0

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