

The Mark VIe for Gas Turbines is GE Energy's latest control solution for gas turbine control upgrades, including GE, Pratt & Whitney*, Westinghouse*, and other original equipment manufacturers. Designed to enhance the performance of your turbine and plant, the Mark VIe delivers fast, accurate control. Additionally, the Mark VIe provides data to multiple operator stations and supporting data to acquisition systems, enabling a comprehensive understanding of your turbine and plant. Thorough and reliable data can then provide guidance relative to where modifications and adjustments can be targeted for enhanced operation and profitability.

Improve the performance of your gas turbine power plant with GE Energy's Mark VIe for Gas Turbines.

Reduced Costs to Enhance Your Profitability

GE Energy's Mark VIe provides a common control and software platform for improved control dynamics, while reducing supplier interfaces, minimizing installation costs, and eliminating the need for engineering gateways and hard-wired interfaces. The use of either central or networked I/O further decreases retrofit expense by providing design flexibility, without compromising data quality and speed. Networked I/O boards communicate information instantly through high-speed fiber optic Ethernet connections (up to 2.5 kilometers away), removing the risk of outages due to aging wires, ground faults, and environmental factors.

GE Energy's Mark VIe also provides plant control from a single source, enabling versatility in maintenance and repair, spare parts, and training. Single configuration and diagnostic tools allow simplified programming and troubleshooting, decreasing operator training and upkeep expenses. From turbine to plant control, GE Energy's Mark VIe is the solution for all of your power control needs.

Improved Plant Operation with Reduced Operating Costs

- Increased availability and decreased downtime
- Performance optimization and maintenance management software
- Single configuration and diagnostic tool improves programming and troubleshooting, decreasing operator and maintenance training expenses
- Central or networked IO options provide flexibility in plant design and reduces installation costs
- Single vendor responsibility for gas turbine, plant-wide, and BOP control
- Common hardware minimizes spare parts

Flexible Solution Tailored to Your Turbine and Plant

The Mark VIe can be customized to specifically meet the needs of your gas turbine plant. Controllers, central or networked I/O, and power supplies can all be configured for simplex, duplex, or triplex redundancy. Networked I/O also provides distributed processing, allowing the expansion of system functionality, with minimal incremental cost, and without the need to re-program the main controller. Additionally, our industry-leading execution rate of 10ms is available for all levels of redundancy.

Better Data and Tools to Improve Operations

Fast, accurate data, and the software tools to perform proper analysis, are the keys to successful plant operation. ToolboxST*, GE Energy's robust suite of software tools, enables advanced diagnostics, analytics, and corrective actions through networked, common interfaces, allowing you to obtain the data you need, when you need it, to get the most out of your turbine and your plant.



fact sheet

Specifications

Controllers (Main Processors)

Type	QNX* operating system
Redundancy	Simplex, dual, or triple; on-line repair
Frame rate	10ms in any configuration
Networks	
IONet	100MB Ethernet; simplex, dual, or triple 199 I/O blocks max. per redundant network Distance from Controller to I/O boards: 2,200m max with fiber
Unit Data Highways	10/100MB Ethernet; simplex or dual
Plant Data Highway	10/100MB Ethernet; simplex or dual

I/O Electronics

I/O Processor	32 Bit RISC CPU 266MHz; QNX operating system
Redundancy	Simplex, dual, or triple; on-line repair
LEDs	Power status, attention, link status, application-specific
Ambient temperature sensor	Diagnostic alarm
Infrared transceiver	Low level diagnostics, monitor I/O, set host/function names
Operating Temperature	-30°C to +65°C; accuracy specified for entire range

Terminations

Barrier type	Full set of boards
Box type	Subset of boards
Distance to field devices	300m max

Power

Sources for electronics	24Vdc, 125Vdc, 115/230Vac
Sources for I/O wetting	24Vdc, 48Vdc, 125Vdc, 115/230Vac

Software

Format	32-bit IEEE-854 floating point
Graphic representation	Function blocks and ladder diagrams; multiple block libraries
Programmability	Fully programmable with password protection
On-line downloads	Supported in all configurations

For complete product specifications and ordering information, contact your GE Energy sales representative:

GE Energy
3800 North Wilson Avenue
Loveland, CO 80538
800.835.5182
970.461.5420

gepower.com/controlsystems

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