Product Information

VaultGard™ Gateway

The VaultGard ™ Gateway from Eaton is certain to be the next generation communications product for Network Protectors, providing monitoring and remote control for vault systems. Certain to be your number one preventive maintenance tool, the VaultGard ™ Gateway will discover network issues before they cause costly system-wide problems.

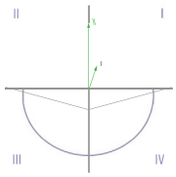
Incorporating the latest in Eaton's innovative technology, the VaultGard™ Gateway can connect up to 32 network protector relays through existing shielded twisted pair (STP) cable, and is rated for the harsh environmental stresses typically found in underground vaults.

With easy to navigate on-board web pages accessible through Wi-Fi, cellular or Ethernet connectivity, the VaultGard™ Gateway can efficiently interact with a variety of network relays. Additionally, data can link to existing Supervisory Control and Data Acquisition (SCADA) systems via DNP 3.0 protocol.

The integrated graphics display provides expanded capabilities and enhanced functionality that tracks such vital network protector performance metrics as:

- Device address including status and MPCV relay reason codes
- Breaker position and alarms
- Phase Currents
- Network, Transformer, and Phasing voltages
- Operations counter
- Power metrics: Real (Kilowatts), Reactive (VAR), Power factor
- Positive sequence angle and positive sequence voltage
- Sensor input: captures wireless current sensor and temperature data
- Real time MPCV vector graphic display

The VaultGard™ Gateway also offers alarms, logging of captured relay data, and set point control. The user can view this MPCV data through a series of phasor plots that illustrate real-time load data along with set point trip and close boundary characteristics.



These plots automatically adjust to reflect the current relay state and curves, and can be used to detect errors, send alerts, and show where problems exist within the network. This functionality is pre-installed and no additional software is required.

Hardware

The VaultGard™ Gateway is housed in a secure enclosure with numerous input and output ports to support many applications. Some of these features include:

- Support for up to 32 devices on STP cable
- DNP 3.0 SCADA interface via RS-485 serial DNP
- DNP UDP/IP uplinks
- RS-485 DNP 3.0 sub-network for third party DNP communicating devices
- ZigBee functionality to capture sensor data
- Port for remote connectivity to the unit: Wi-Fi (WAP), Cellular
- Configurable threshold-based alarming with email notification
- Real-time clock for historical logging of captured and time-stamped data
- Monitoring of the remote digital inputs and outputs as well as third party devices on accepted protocols

Wireless Modem Options

The Gateway's RJ-45 output port provides a user-friendly interface for both local and long-range remote access, and control of network protector relays. Options for the wireless functionality include:

- Wi-Fi: This wireless technology uses the IEEE standard of 802.11b/g for the wireless local area network. For security, the wireless signal uses WPA encryption as well as a unique username and password. One can access the relays locally with a laptop with a standard wireless card. The ability to wirelessly connect to the network relays through the Gateway at a distance of nearly 100m from the vault provides safety and cost advantages over labor-intensive vault entry.
- Cellular: A cellular modem can be used to broadcast a signal to a local cellular tower. This signal can be transmitted over long distances to a main office or used to send email and phone alerts.

Power Xpert Software Compatibility

Power Xpert® is an optional application that provides a centralized program linking all Gateway units in a network. The Layout Manager software within Power Xpert® shows:

- Two-dimensional layouts of facilities
- Alarm and status indicators for specified channels
- Gauges/dials displaying values from specified channels and system behavior
- One-line diagrams showing the status of specified channels
- Import of GIS image(s) or existing topography for street/vault maps

Additional Functionality

The VaultGard™ Gateway can also capture data from other external sensors that transmit their signals wirelessly on the ZigBee protocol. The Gateway acts as a central hub for collecting vault data, controlling relays remotely, and communicating vital network data to the user.

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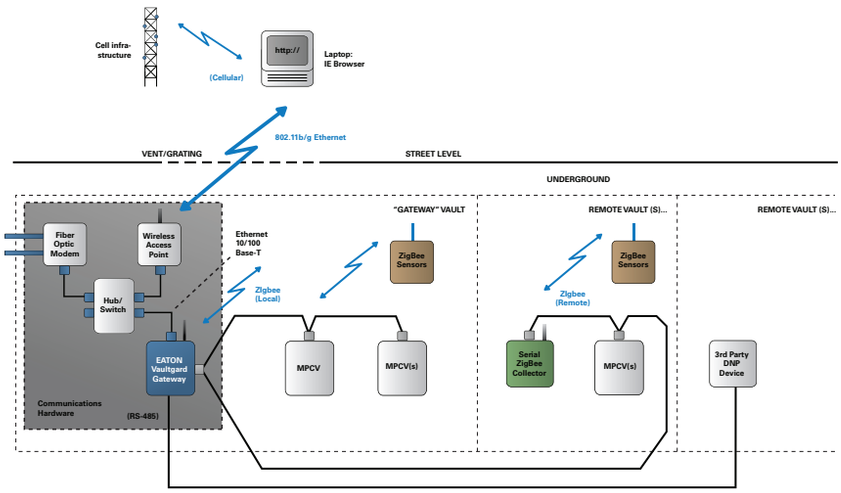
Below: The VaultGard™ Gateway and remote vaults are connected through the daisy chaining of relays.



Screenshot of VaultGard™ Gateway interface.

FEATURES

- Next generation communications product for Network Protectors
- Connect up to 32 MPCV relays on 1 unit
- Easy to navigate on-board web pages (no software needed)
- Comprehensive data monitoring (voltage, current, power metrics, etc.)
- Compatible with optional Power Xpert® software application to integrate entire network of VaultGard™ Gateway Units
- Compatible with wireless current sensors for vital cable loading data

FUNCTIONS

- Monitoring and remote control for a vault system
- Wi-Fi, Cellular, or Ethernet connectivity to on-board web pages through a web browser (ex. Internet Explorer)
- DNP3.0 protocol compatibility
- Configuration for master/slave topologies for integration with a local SCADA system
- Alarms, logging (live and historical)/ trending/graphing of captured data, set point control
- Email alert notification
- Captures wireless current sensor data
- Monitoring and control of accepted digital I/O devices

BENEFITS

- No software is required
- Central hub for collecting vault data, controlling relays remotely, and communicating vital network data to the user
- Acts as a preventive maintenance tool to discover issues before they cause system-wide and costly problems

For more information on Eaton's network protectors, **visit www.eaton.com/nwp.**

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