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Version 215 for the ION 8000 Series meters includes Internet connectivity and Modbus Master (8400/8500 meters with Ethernet only). All ION 8000 Series meters have Advanced security capability, Enhanced Modbus Registers, RegEdit functionality. The Power Harmonics module is now available on the 8300/8400 meters.

With this version the ION 8000 Series technical documentation is completely revised. Please consult this documentation for details on features in this release. You can order the printed binder, download the documentation from the web site or access the documentation on the Meter Shop or PEGASYS software CD.

Internet Connectivity

The ION 8400/8500 meter with the Ethernet option contains a web server that provides internet connectivity.

- ◆ New HTML pages allow you to view data and make limited configuration changes using a standard web browser.
- ◆ The Log Mail module sends email from data logs or when triggered by an Alert that is programmed in the Alert module.
- ◆ The BootP client allows automatic configuration of IP address, Subnet mask and Gateway address.
- ◆ Meter data is available in XML format.

ModbusRTU Master (8400/8500 only)

Modbus Master functionality allows an 8400/8500 meter to both read (import) and write (export) data from or to a Modbus network. The Modbus network can comprise of ION meters or other Modbus devices.

- ◆ **Modbus Import Module:** The Modbus Import module reads data from an ION meter or other Modbus device. This data can then be used by other ION devices.
- ◆ **Modbus Export Module:** The Modbus Export module writes data to a Modbus device.

Advanced Security

Advanced security allows multiple user defined security passwords with various access levels to prevent unauthorized programming of the meter.

- ◆ **Security Options Module:** allows you to enable and configure the behaviour of Advanced security. You can set broadcast time synchronization and access to the Modbus background map. You can also set the module so that a Factory user cannot read any parameter. The factory user is enabled by default in the event that a user has locked up a meter. You can configure the Factory user to have limited access to: reset peak demand, factory Time Synch, full meter configuration, test mode access and Security configuration. The output for this module is an Event.

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- ◆ Security User Module: allows you to configure access rights for users of Advanced security. You can define: Read, Peak Demand Reset, Time Synch, Full Meter Config, Test Mode and Security Configuration access for each user.

Enhanced Modbus Registers

The 8000 Series meter can now provide data to Modbus registers from ION Data Recorder modules. You can also now use the Modbus Meter UNIX Time set function.

RegEdit Capability

The RegEdit functionality lets you modify the energy values. For example, if you perform a firmware upgrade or replace a meter in the field you can enter the last recorded values (usually kWh, kVARh, kVAh) from the existing meter into the appropriate registers of the new meter. You can do this through the Integrator module using ION Designer or there is a pre configured screen in Meter Shop software that lets you easily enter these values.

Power Harmonics Module

The Power Harmonics module provides an in-depth analysis of power system parameters for a selected harmonic. The module measures voltage and current for the selected harmonic and derives kW, kVAR, kVA, Voltage Angle, Current Angle and Phase Angle values for each phase. Previously, this feature was only available on the ION 8500; in V215, the Power Harmonics module is available on all 8000 Series meters.