

Energy Monitoring Hub (EMH)



Basic Operation

The Energy Monitoring Hub (EMH) is an intelligent, flexible data acquisition server allowing users to collect energy data from meters and environmental sensors. Designed to connect to IP-based applications such as enterprise energy management, demand response and smart grid programs, the Energy Monitoring Hub lets you connect thousands of energy points, benchmark energy usage and reduce energy costs.

The Energy Monitoring Hub collects and logs data from connected (wired or wireless) devices based on user selected intervals. Data from downstream devices are time stamped and stored in non-volatile memory. This interval data is stored locally until the next scheduled upload or manual download. Using an integrated modem or Ethernet (LAN) connection you can push data via HTTP or FTP and pull data via XML or any custom protocol utilizing our Energy Monitoring Hub to build your own application.

Applications

- Electric submetering
- Measurement and verification (M&V)
- Reduce energy consumption
- Access energy information from local or remote sites
- Benchmark building energy usage
- View “real time” performance data
- Track energy use and peak demand for demand response programs
- Monitor performance of critical systems
- Alarm notification for data point above or below target levels (including SNMP Traps)
- Monitor renewable energy performance and production
- Create load profiles for energy purchases
- LEED/Energy Star certification

Features

- No special software required - easily access information through any web browser
- Eight (8) integrated flex I/O inputs - each field selectable input can measure resistive, analog (4/20mA /0-10V) and standard pulse/KYZ pulse output devices -- this simplifies installation
- Integrated meter drive library - speeds up installation and lowers integration costs through “plug-and-play” connectivity
- Alarm relays and backlit LCD
- Wireless diagnostics
- SNMP traps
- Network configuration (static IP or DHCP)
- Security provisions
- Five year warranty
- VerifEye™ BMO 3.0 Base Module software is included at no cost with the purchase of any VerifEye data acquisition hub

Specifications

Device	
Processor	ARM9 embedded CPU, ARM7 IO co-processor
Operating System	Linux 2.6
Memory	32MB RAM
Flash ROM	16MB NOR Flash
Interval Recording	1-60 minutes, user selectable
LEDs	8x input, 4 modem activity, Modbus TX/RX, power, system, IO status
Console	2 x 16 LCD character, two push buttons
Power	
North America	110-120VAC, 60Hz, primary
CE/Europe	100-240VAC, 50-60Hz, primary (interchangeable plug adapters optional)
Power Supply	24VDC, 1A, class 2 wall brick transformer included
Communication	
Protocols	Modbus/RTU, Modbus/TCP, TCP/IP, PPP, HTTP/HTML, FTP, NTP, XML, SNMP- Trap
LAN	RJ45 10/100 Ethernet, full half duplex, auto polarity
Cellular	GSM/GPRS Cellular (A8812-GSM only)
USB	USB expansion port
Inputs	
Serial Port	RS-485 Modbus, supports up to 32 external devices (expandable)
I/O	8x Flex IO inputs with user selectable modes: voltage, current, resistance, pulse and status
Outputs	
Relays	2x, dry contact 30 VDC, 150 mA max
Physical	
Weight	5lbs (2.3kg)
Size	8" x 9.25" x 2.5" (203mm x 235mm x 64mm)
Environment	
Operating Temperature (North America)	32-122°F (0-50°C), 0-90% RH, non-condensing
Operating Temperature (CE/Europe)	41-104°F (5-40°C) 0-90% RH, non-condensing
Codes & Standards	
FCC CFR 47 PART 15, Class A, EN 61000, EN 61326, CE	
Other	
NEMA enclosures available upon request	

Ordering Information

Energy Monitoring Hubs	
Cat. No.	Description
A8812-000	Energy Monitoring Hub - Non-Configured
A8812-001	Energy Monitoring Hub - Configured
YBM05-010	Power supply
YBM07-001	Replacement power supply

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