

# Data Acquisition Systems

## Modbus Protocols, Datalogging and Server Capabilities

### APPLICATIONS

- Aggregating energy and operational information from remote sites
- Gathering “near real-time” performance data
- Developing load profiles for energy purchases
- Measurement and verification

### FEATURES

#### Easy installation saves time and money

- Simple plug-and-play connectivity...install and configure in minutes
- Hardware and software provide data in flexible, industry-standard formats for databases, spreadsheets, etc.
- LCD display for easy installation and troubleshooting
- Integrated web server provides setup and configuration using any standard web browser (e.g. Safari™ or Internet Explorer™)



### DESCRIPTION

The H8803 AcquiLite™ and H8822 AcquiSuite™ data acquisition systems are the perfect do-it-yourself solutions for your energy logging needs. These servers combine the flexibility of Ethernet LAN, WAN, or internet communication paths with the lowest total installed cost on the market. They are the ideal devices for recording electrical, natural gas, water, and other building energy usages.

The AcquiLite has four pulse inputs, and the AcquiSuite has eight flexible I/O inputs. After installation, data from a connected device is time-stamped and stored in nonvolatile memory at user-selected intervals until the next scheduled upload to the SQL database server. Using the built-in phone modem, Ethernet port, or cellular modem, the AcquiLite/AcquiSuite sends data to the Building Manager Online™ server or to other third party software providers (cellular modem is only available on the H8822GSM model).

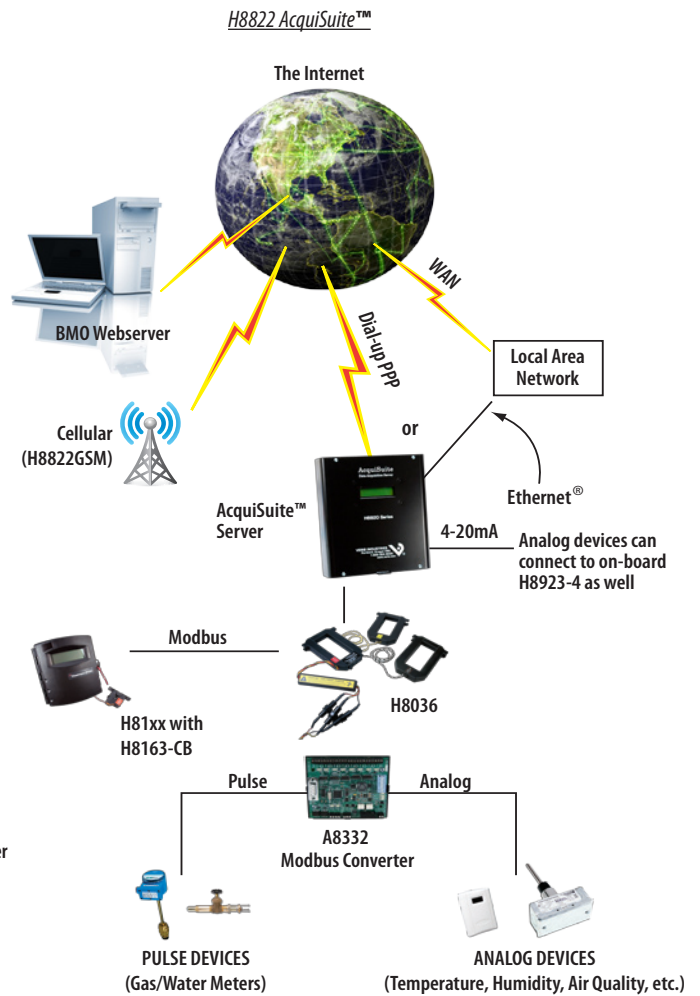
### SPECIFICATIONS (H8803)

<b>Input Power</b>	120-240V 50/60Hz transformer included, 9VDC, Class 2
<b>Processor</b>	R2000 - 8-bit embedded CPU, 22MHz
<b>Memory</b>	512kB flash, 512kB SRAM
<b>LEDs</b>	4x pulse input, 4 modem activity, Modem activity power, alive, Ethernet
<b>Console</b>	2 x 16 LCD, two pushbuttons
<b>Communications</b>	33,600 bps modem, 10base-T half duplex Ethernet
<b>Protocols</b>	TCP/IP, PPP, HTTP/HTML, FTP
<b>Pulse Inputs</b>	4x dry contact (consumption rate/min/max)
<b>Utility Sync Input</b>	1x dry contact

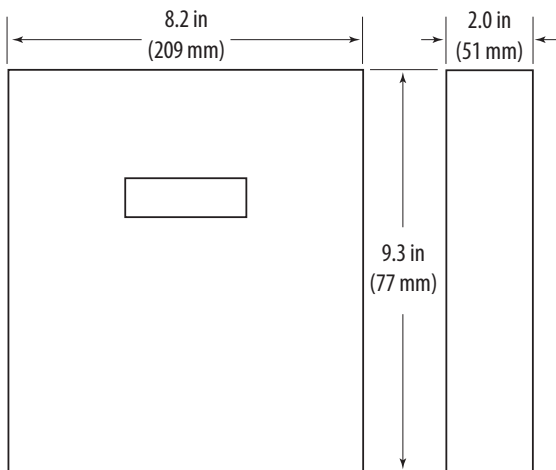
### SPECIFICATIONS (H8822)

<b>Input Power</b>	120-240V 50/60Hz transformer to 24VDC, included
<i>Processors:</i>	
<b>Main Processor</b>	ARM 9
<b>I/O Co-Processor</b>	ARM 7
<b>Operating System</b>	Linux
<b>Flash ROM</b>	16MB NOR Flash (expandable with USB memory device)
<b>Memory</b>	32MB RAM
<b>LEDs</b>	8x pulse input, 4 modem activity, Modbus TX/RX, power status
<b>LCD</b>	2 x 16 LCD Character, two buttons
<b>LAN</b>	10/100, Auto crossover detection
<i>Modem:</i>	
<b>Phone</b>	V.34 bis, 33,600 bps (H8822)
<b>Cellular</b>	GSM/GPRS Class 10, 85 kbps (H8822GSM)
<b>Protocols</b>	Modbus/RTU, Modbus/TCP, TCP/IP, PPP, HTTP/HTML, FTP, SNMP, SMTP, XML
<b>Serial Port</b>	RS-485 Modbus
<b>Interval Recording</b>	User selectable 1-60 minutes. Default 15 minute interval
<b>Inputs</b>	8x, user selectable: 0-10V - Min/Max/Ave/Instantaneous; 4-20mA- Min/Max/Ave/Instantaneous; Pulse - Consumption, Rate; Resistance - Min/Max/Ave/Instantaneous; Runtime - Runtime, Status
<b>Approvals</b>	CE; FCC Part 15, Class A
<b>USB Port</b>	USB memory expansion port
<b>Outputs</b>	2x, Dry contact 30VDC, 150mA max.

APPLICATION/WIRING EXAMPLES



DIMENSIONAL DRAWING



THE ACQUISUITE SYSTEM ALLOWS...	
...Internet Display of Data Using the BMO Website	View performance data in an easy graphical format. Store, display, and download historical data in a secure SQL database. Design custom views of data from one or more buildings or systems.
...Security and Flexibility	Store data on board in nonvolatile memory. Protect information in the event of a power failure. Time-stamp all interval data with an on-board real-time clock.
...Compatibility with Existing Systems	Use the I/O module to connect to existing sensors and meters. Use TCP/IP protocols to interface with spreadsheets, databases, text files, etc.

ORDERING INFORMATION

MODEL	DESCRIPTION
<b>H8803</b>	AcquiLite Data Acquisition System: 4 Pulse Inputs
<b>H8822</b>	AcquiSuite Demand Response System: 8 Flexible I/O Inputs
<b>H8822GSM</b>	AcquiSuite Demand Response System; GSM/GPRS cellular modem

NETWORK INTEGRATION