A7810 ACQUILITE™
& A8810 ACQUISUITE™
Flexible Data Servers for Embedded Applications

A8810

A7810

The A7810 AcquiLite™ and A8810 AcquiSuite™ data acquisition server for embedded applications allows users to collect energy data from meters and environmental sensors and send it via Modbus communication protocol (wired or wireless using the H8830) to IP-based applications. No software is required. Operation is plug-and-play, and information can be accessed using any web browser. The A7810 supports four pulse inputs, while the A8810 suppports Modbus serial input.

The compact housing and industrial temperature range make the A7810 and A8810 ideal for embedded applications. Reduce development time and speed up integration by collecting and distributing energy data directly from your equipment.

Track data in real time

Provides the right information for trending, planning, and identifying waste

Alarm notification

For data points above or below target levels…quick notification for optimal performance maintenance

Industrial temp. range

Industrial temperature range (-30 to 70 °C), perfect for embedded applications…speeds up development and integration of energy data

Communications

Compatible with multiple communication protocols… push or pull data to energy dashboards and software applications for easy system integration

Easy installation

DIN rail mounting

APPLICATIONS

- Measurement and verification (M&V)
- Reduce energy costs
- Access energy information from local and remote sites
- Benchmark building energy usage
- Demand response
- Renewable energy

SPECIFICATIONS

Input Power	24 Vdc, 500 mA*
Isolation A7810 A8810	RJ45 Ethernet isolated to 1500 Vdc from main board (power and pulse inputs not isolated) RJ45 Ethernet and RS-485 port isolated to 1500 Vdc from main board (power and USB not isolated)
Main Processor	ARM 9 embedded CPU
Operating System	Linux 2.6
Flash ROM	16 MB NOR Flash
Memory	32 MB RAM
LEDs A7810 A8810	Ethernet, pulse (x4), power, alarm Ethernet, Modbus TX/RX, power, alarm
Console	2 x 16 LCD character, two push buttons
Interval Recording	1 to 60 minutes, user selectable (default 15 minutes)
Pulse Inputs A7810	4 inputs, dry contact, standard or KYZ, closure threshold 100 Ω to 2.5 kΩ user selectable; max. rate 10 Hz; min. width 50 msec
Serial Port Input A8810	RS-485 Modbus, supports up to 32 external devices (expandable)

COMMUNICATION

Protocols A7810 A8810	Modbus/TCP, TCP/IP, PPP, HTTP/HTML, FTP, NTP, XML, SNMP-Trap Modbus/RTU, Modbus/TCP, TCP/IP, PPP, HTTP/HTML, FTP, NTP, XML, SNMP-Trap
LAN	RJ45 10/100 Ethernet, auto polarity

ENVIRONMENTAL

Operating Temp Range	-30 to 70 °C (-22 to 158 °F)
Operating Humidity Range	0 to 95% RH non-condensing; indoor use only

WARRANTY

Limited Warranty	2 years

AGENCY APPROVALS

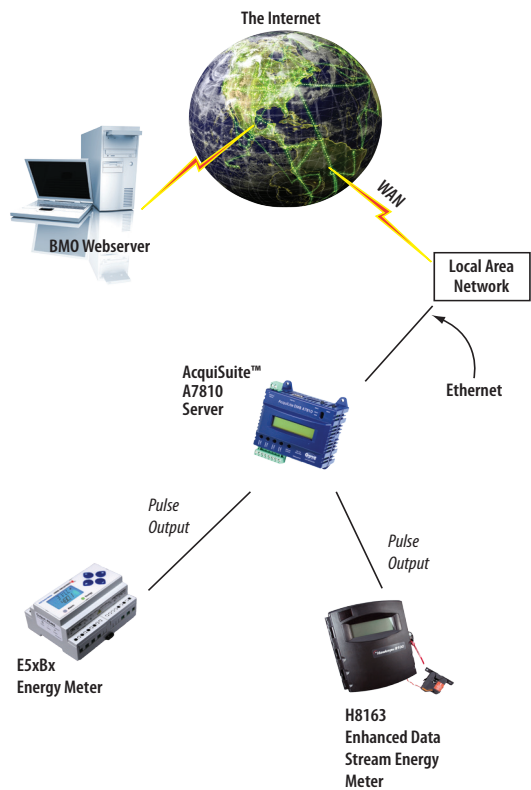|	
A7810 A8810	FCC CFR 47 Part 15, Class A; EN 61000; EN 61326; UL61010 recognized; EN 61010 CE; UKCA (UK); FCC Part 15, Class A; EN 61000; EN 61326; UL61010 recognized

c UL US   CE *A8810 only*   UKCA *A8810 only*

*This unit is to be sourced by a Class 2 power supply with the following output: 24 Vdc, 500 mA min. not to exceed 8 A.
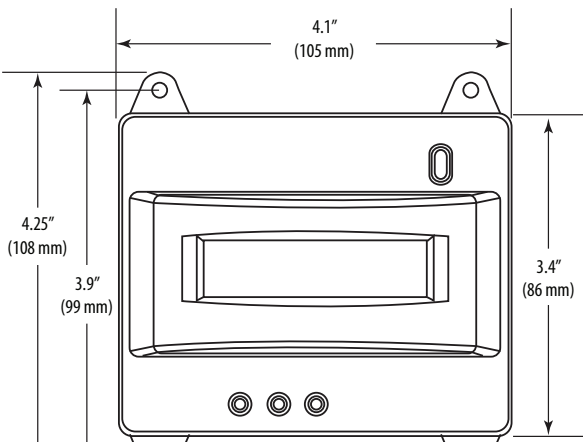
A7810
Application Example

The Internet

BMO Webserver

WAN

Local Area Network

Ethernet

AcquiSuite™ A7810 Server

Pulse Output

Pulse Output

E5xBx Energy Meter

H8163 Enhanced Data Stream Energy Meter

A8810
Application Example

The Internet

BMO Webserver

WAN

Local Area Network

Ethernet®

AcquiSuite™ A8810 Server

E5xCx

H8163

E2x

Pulse   **Analog**

A8332 Modbus Converter

E30

PULSE DEVICES (Gas/Water Meters)

ANALOG DEVICES (Temperature, Humidity, Air Quality, etc.)

A7810 & A8810
Dimensional Drawing

4.1" (105 mm)

4.25" (108 mm)

3.9" (99 mm)

3.4" (86 mm)

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 non-volatile 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. (A8810 only).
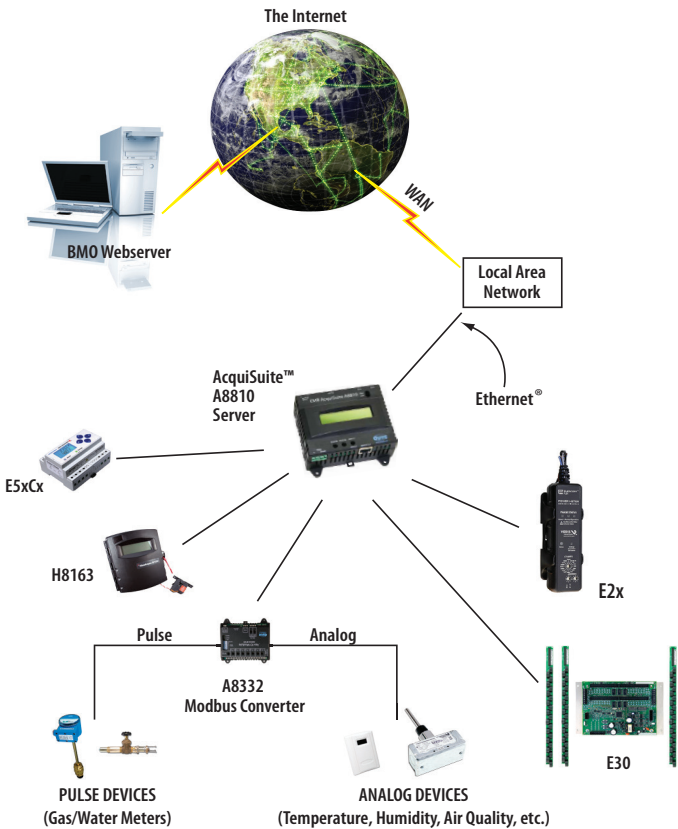
ORDERING INFORMATION

MODEL	DESCRIPTION
A7810	AcquiLite EMB data acquisition server, pulse input
A8810	AcquiSuite EMB data acquisition server, Modbus serial input