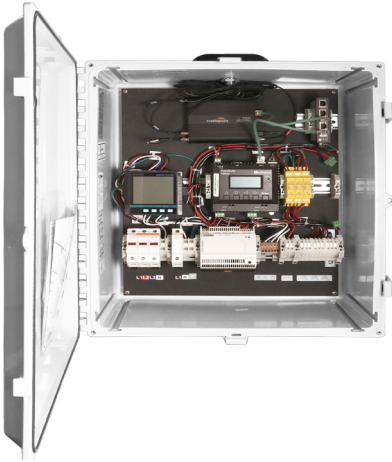LEVITON®

VerifEye™ 820DE-V00 (IDAS-A8820-4G-AVII-S)

Description

The VerifEye™ Integrated Meter panel combines an onboard revenue-grade power meter, a Leviton data acquisition server and 4G cellular modem in a flexible all-in-one package. This simple and effective energy solution can be used to meet energy codes and mandates and is ideal for new construction and commercial buildings. Installation is simple as the device draws power from the connected voltage sense lines - no external power supply required!

The panel uses an Ethernet (LAN) connection allowing end users to pull data via HTTP, XML, FTP.

The meter monitors three phase loads and can be easily expanded to support water, gas and steam monitoring applications for a comprehensive snapshot of a facility's total energy usage.

The integrated panel solution reduces installation time and costs and eliminates the need for an external power supply. CT amperages are field configurable with a range of CT options from 50A to 5000A.

Applications

Use the VerifEye panel in commercial, institutional, industrial and government applications for:
- Load profiling and benchmarking
- AMR/BAS/EMS integration
- Use aggregation
- Tenant cost allocation
- Measurement and verification
- Energy conservation and cost reduction
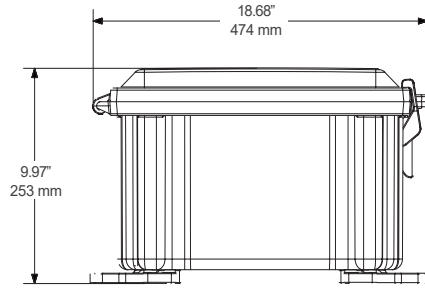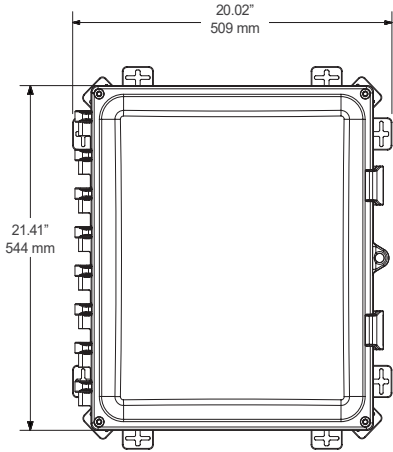- Green building initiatives and Government mandates

Features

- Data Collection
  - Logs and collects data on user selected intervals
  - Non-volatile memory stores data until the next scheduled upload or manual download
- Compatible with VerifEye BMO allowing users to quickly access energy consumption information from a web-based platform
- Tracks real-time energy usage for demand response programs
- Meter data can be transferred to energy dashboards, kiosks and software applications
- Expandable via ModBus RTU and ModBus TCP
- Supports BACNet and other protocols on one device
- Five year warranty

Measured Parameters

- kW
- kVA and kVAR
- Power factor: 3 phase average and per phase
- Import and export present power demand: Real (kW), reactive (kVAR) and apparent (kVA)
- Bidirectional energy measurements
- Current (3-phase average and per phase)
- Voltage L-L and L-N
- Frequency
- ANSI C12.20 0.2% accuracy, IEC 62053-22 Class 0.2S
- Accumulated net energy: Real (kWh), reactive (kVARh) and apparent (kVAh)
- Accumulated real energy by phase (kWh)
- Demand interval configuration: fixed or rolling block, external sync to communication

Dimension Diagrams

Specifications

A8820 Data Acquisition Server	
Processor	i.MX 6UltraLite
Operating System	Linux 4.x
Memory	512 MB RAM
Flash ROM	4 GB NOR Flash
Interval Recording	1 to 60 minutes, user selectable (default 15 minutes)
LEDs	Ethernet, Modbus TX/RX, power, alarm
Console	128 x 64 pixel LCD with 5 button interface
Power	
Power Supply	24VDC, 500mA *This unit is to be sourced by a Class 2 power supply with the following output: 24VDC, 500mA min not to exceed 8A
Isolation	RJ45 Ethernet and RS-485 port are isolated to 1500VDC from the main board. (Power an d USB non-isolated)
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
USB	USB expansion port
Inputs	
Serial Port	RS-485 ModBus, supports up to 32 external devices (expandable)
Environment	
North America	-22-158°F (-30-70°C), 95% RH, non-condensing
Altitude	2000M max
Pollution	Degree 2
Codes & Standards	
FCC CFR 47 Part 15, Class A, EN 61000, EN 61326, CE, UL61010 Recognized	

Specifications

AcuVim II Meter

Inputs

Pulse Outputs	10K ohms VAC/DC to 4 to 10 VDC
Control Power, AC	100~415Vac, 50/60Hz; 100~300Vdc
Control Power, DC	20~60Vdc, 5W
Input Voltage	UL: 90V L-N to 600V L-L CE: 90V L-N to 300V L-N
Input Current Scaling	Up to 32,000A
Input Range	0 to 0.333V or 0 to 1V (selectable) CTs must be rated for use with Class 1 voltage inputs **Split Core CTs:** 50, 100, 200, 400, 800A **Rogowski CTs:** (50-5000A) 12", 18" and 24" lengths available

Outputs

Serial Port	RS-485 2-wire ModBus RTU (1200 baud to 38.4 kbaud)

Environmental

Altitude	9843ft (3000m) maximum
Operating Temperature	-25 to 158°F (-32 to 70°C)
Storage Temperature	-40 to 185°F (-40 to 85°C)
Operating Humidity	<95% RH non-condensing
Pollution	Degree 2

Codes & Standards

Safety	UL508 (Open Type Device), cUL, EN61010-1
Accuracy	ANSI/C12.20 0.2 Class
Listings	CE compliant, cULus rated

Stride SE3-SW5U-T Ethernet Switch

Inputs

Input Voltage	12-48VDC, 1.2W max (provided)

Communication

LAN	RJ45 10/100, 5 ports

Environmental

Operating Temperature	14 to 149°F (-40 to 75°C)

Cradlepoint IBR600C / S700 Cellular Modem

Inputs

Input Voltage	9-33VDC (provided)

Communication

Modem	Dual SIM card, dual band (GSM/CDMA)
Ethernet	1 x GbE (LAN/WAN), 1 x FE (LAN/WAN)
WiFi	2.4 GHz, 300 Mbps

Environmental

Operating Temperature	-4 to 140°F (-20 to 60°C)

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Ordering Information

Enclosures	
Cat. No.	**Description**
820DE-V00 (IDAS-A8820-4G-AVII-S)	A8820/Modem/Switch/AcuVim II

Current Transformers (Sold Separately)		
Amps	**Description**	**Cat. No.**
100A	1.0" Split Core CTs	CTV01-KD0
200A	1.0" Split Core CTs	CTV02-KD0
400A	1.25" Split Core CTs	CTV04-KD1
800A	3.0x3.5" Split Core CTs	CTV08-KG1
50A	.40" Split Core CTs	CTV5X-WA4
100A	.94" Split Core CTs	CTV01-WC9
200A	.94" Split Core CTs	CTV02-WC9
400A	1.42" Split Core CTs	CTV04-WD5
50-5000	12" Rogowski Coil CTs	CRV50-K62
50-5000	18" Rogowski Coil CTs	CRV50-K93
50-5000	24" Rogowski Coil CTs	CRV50-KC2

LES-G-10778/I24-mm