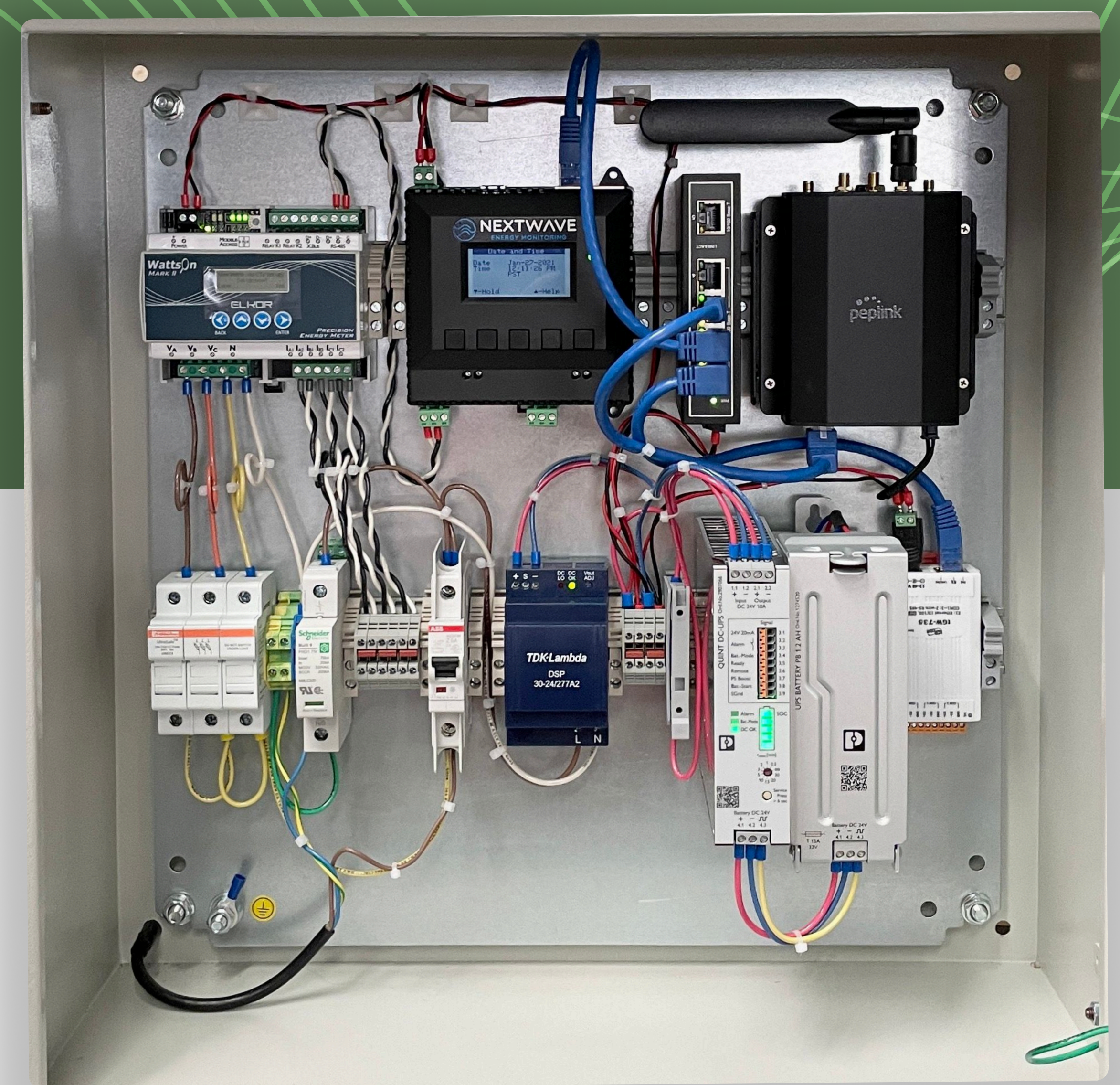


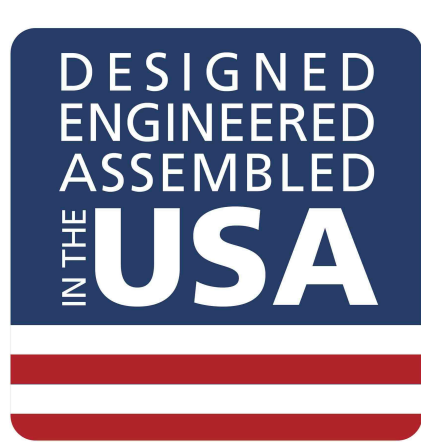
NextWave Pro DATASHEET



Data Acquisition Solution

NextWave Energy Monitoring is a turnkey renewable energy performance monitoring solution designed by power quality & network engineers to deliver substantial energy vitals and system analytics to solar asset owners/managers. NextWave's turnkey Data Acquisition System ("DAS") extends a customer-first expectation focused on state-of-the-art manufacturing at our California-based ISO-9001 facility, quality workmanship & hardware, and market-leading customer support and Infield Network Engineering from our US - Based teams to streamline system energization and DAS retrofit needs.

Turnkey Solution



SOFTWARE

- Data granularity with ranges including 1 min / 5 min / 15 min / 1hr / 1 day / 1 week / 1 month / 1 year / Lifetime
- Cellular or Ethernet connectivity
- Full Support + Integration with NWEM PVPulse™
- Sun-Spec Alliance Certified
- VPN Access / Port Forwarding capabilities for secured remote access
- Automated Report Generation & Distribution
- Diagnostics-Level Charting and Metrics
- Intuitive & Flexible UX/UI Solution

HARDWARE

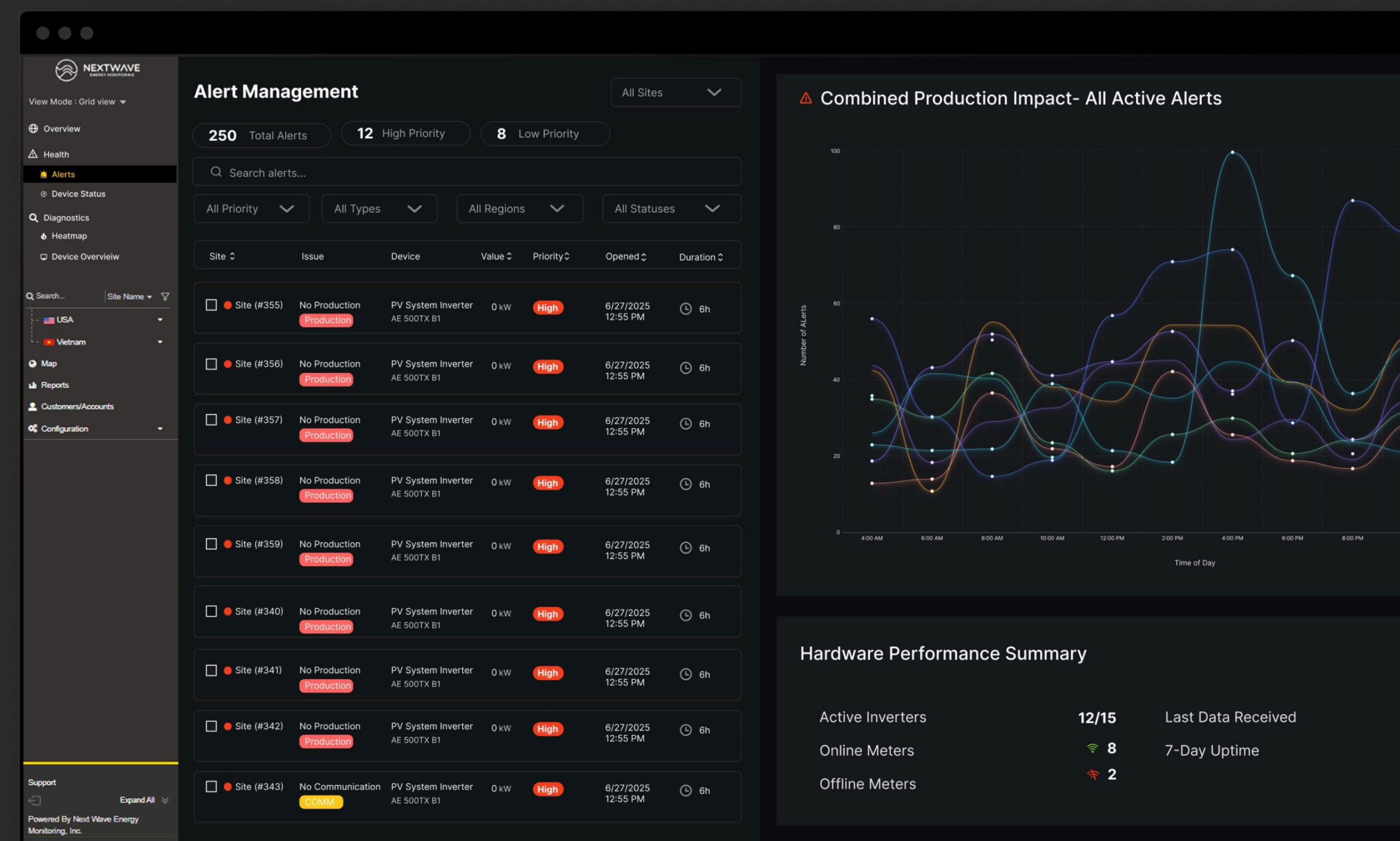
- Compliant with IRA Domestic Content Requirements
- Next Wave Industrial Datalogger
- Revenue-grade Energy Meter
- Metal NEMA4 Weatherproof Enclosure
- 4G/LTE Industrial-Grade Cell Modem (requires a cellular plan)
- Supplemental Battery + UPS Options
- Modbus Communication via RS-485 or TCP
- 8-year Material Warranty Included
- Non-Proprietary, Off-the-Shelf Components

NextWave PVPulse™ Performance Monitoring

NextWave Energy Monitoring's PVPulse™ is a solar performance monitoring and data analytics platform with a mission to simplify the high volume of data and focus on meaningful analytics which will lead to root-cause and will reduce the Mean Time to Repair (MTTR).

PVPulse™ intuitive DAS platform is geared towards commercial & industrial, enterprise/portfolio, and utility-scale applications, offering anomaly detection, performance trending, plant or fleet-level interface/data, and troubleshooting capabilities while aggregating data from all interactive equipment and translating it into meaningful power and energy vitals for both highly technical and non-technical end-users.

NextWave Energy Monitoring is certified & compliant with requirements of ISO/IEC 27001:2022 Information Security Management Systems.



ASSEMBLY	Operating Humidity	10% to 90% non-condensing
	Operating Temperature	-40°F to 122°F / -40°C to 50°C
	Operating Altitude	Maximum 1000m or 3280ft above sea level
	Weight	38.00lbs / 17.24kg
	Line Input Voltage Range	200 – 500 VAC ± 10%
	Frequency	50Hz – 60Hz ± 1%
	Rated Insulation	1000VAC / 1500VDC
	Overvoltage Category	III
	Standards / Compliance	UL Listed 508A Type 4, RoHs Compliant, cUL Listed per CSA C22.2 No. 94.1, 94.2, 14 / IEC 62208 / ISO9001 (2008)
ENCLOSURE	Enclosure Dimensions	20" x 20" x 8" / 48.26cm x 48.26cm x 20.32cm
	Enclosure Inner Depth	6.69" / 17cm
	Enclosure Rating	Metal NEMA4
	Weight	7.56 lbs / 3.43 kg
	Base Material	Metal
	Standards / Compliance	EN 62208.UL 508A / E189312
	Degrees of Protection	IP66/IP67
	Flammability Rating	UL 746C 5 inch flame test
DATALOGGER	Interval Recording	1 to 60 minutes, user selectable (default 15 minutes)
	Processor / OS / Memory	i.MX 6UltraLite / Linux 4.x / x512 MB RAM
	Storage	4GB NOR Flash
	Devices Supported	Up to 64 connected Modbus RTU enabled devices
	Primary Protocols	Modbus/RTU, Modbus/TCP, TCP/IP, PPP, HTTP/HTML, FTP, NTP, XML, SNMP-Trap
	Serial Ports	2 x RS-485 Modbus, supports 32 external devices per port
	LAN	2 x RJ45 10/100 Ethernet, full half duplex, auto polarity
	Security / Compliance	SSL & TLS / FCC CFR 47 Part 15, Class A, EN 6100, EN 61326, CE, UL61010 Recognized
REVENUE GRADE ENERGY METER	Modbus/RTU Output	RS-485 2-wire, 9600 to 230400 baud
	BACnet MS/TP Output	RS-485 2-wire, 9600 to 115200 baud
	Relay	2x Solid-State Relay Outputs (100mA @ 50V max), User Programmable for alarm, status or pulse output
	Accuracy	0.2% Max
	Standards / Compliance	ANSI C12.20 Class 0.2 Accuracy Certified / FCC Part 15 Class B, UL Listed #E250395
CELLULAR MODEM	WAN Interface	1 x Embedded LTE Modem with Redundant SIM Slot
	LAN Interface	2 x 10/100/1000 M Ethernet Port
	Router Throughput	300 Mbps
	Load Balancing	Intelligent Failover, Session Persistence, Per-Service Load Distribution, Multiple Algorithms
	Networking	NAT and IP Forwarding, Static Routes, Port Forwarding, UPnP, NAT-PMP
	Security	128-bit WEP, WPA, & WPA2, Stateful Firewall, DoS Prevention, Web Blocking
	Standards / Compliance	FCC, CE, IC, RoHs, E-Mark, EN 61373, EN50155, EN61000
ETHERNET SWITCH	Ports	5 x 10M/100M BASE-T Ethernet Port (RJ45) connectors
	Packet Forwarding Rate	0.74Mpps
	Switch Delay	< 5us
	Packet Buffer	448K
	Standards / Compliance	UL, cUL, IEC EN 62368-1, FCC (NA), CE (EU), PSE (JP)
POWER SUPPLY	AC Input Voltage Range	200 – 500 VAC ± 10%
	Input Frequency	47Hz – 63Hz
	Inrush Current (115/230VAC)	25 / 50A
	Power Factor	Meets EN6100-3-2, EN61000-3-3
	Line & Load Regulation	1%
	Standards / Compliance	UL508, UL1310 Class 2, IEC/UL/CSA/EN62368-1, EN60950-1, CE Mark
UPS	Input Voltage Range	18 VDC – 30VDC
	Case Material	Flame Retardant Polycarbonate (UL94 V-0)
	Operating Temperature	-25°C to +75°C
	Standards / Compliance	EN 61000-6-1/2/3/4, EN 60950-1, EN 50121-4, UL Listed UL 508, UL/C-UL Recognized UL 60950-1
TRANSIENT VOLTAGE SURGE SUPPRESSOR	Weight	25.86 g
	Dimensions (W x H x D)	6.2 x 92 x 69.5 mm
	Nominal Voltage UN	24 VDC
	Material	PBT
	Max. Continuous Voltage UC	30 VDC 21 VAC
	Rated Current	10 A (60°C)
CELLULAR ANTENNA	Cable Length/Type	2 x 5 meters / RG174
	Dimensions	9" x 2.5" x 2.5" / 23cm x 6.5cm x 6.5cm
	Gain	10 – 12 dBi
	Frequency Range	698 – 960 MHz / 1710 – 2170 MHz / 2300 – 27000MHz
WEATHER STATION	Irradiance (W/m2)	0 – 2000
	Uncertainty (Daily Total)	< 7%
	Calibration Uncertainty	± 3%
	PV Panel Temp. Sensor	-40°C to 100°C, ± 1°C
	Ambient Temp. Sensor	-40°C to +80°C
	Communication	RS-485 Modbus RTU