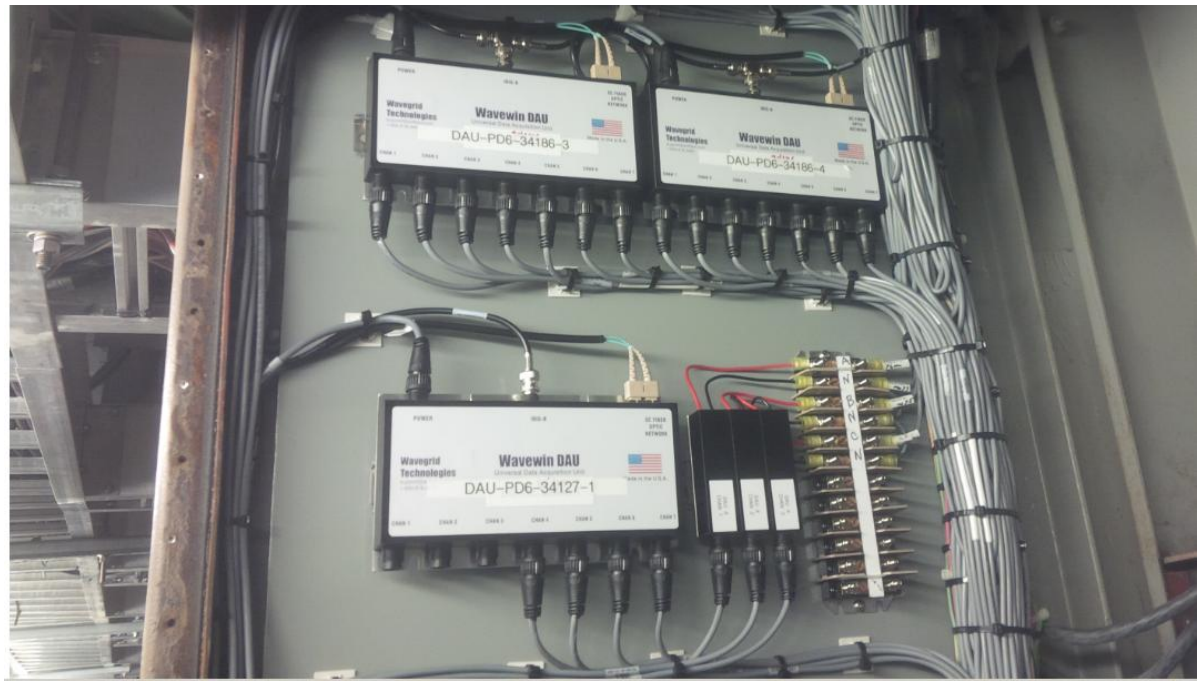


Product Specifications

Product Name:	Wavewin DAU (Universal Data Acquisition Unit)
Part Number:	CMS-DAU-08
Input Power:	1 Port (125 VDC Supply (110 – 370 VDC))
Communications:	1 Port (Fiber or RJ45, 10/100M TCPIP Server)
IRIG-B Time:	1 Port (BNC, Un-modulated IRIG-B Input)
Sensors:	7 Ports (Molded or RJ45, Universal ADC +/- 2.5 VAC/VDC)
Sampling Rate:	2340 Hz/Sensor, 16 Bits, Simultaneous Scanning
Dimensions:	L8.5” x H1.5” x W3.5”
Operating Temperature:	-20 to 65°C
Operating Humidity:	0 to 90% (Non-Condensing)
Power Consumption:	6 Watts Nominal, 15 Watts Fully Loaded

Product Description

Wavewin DAU: Is a small, high-speed analog to digital converter that scans sensor inputs and transmits continuously to a Data Concentrator over Ethernet (Figure-1). The DAU can connect up to 7 sensors (for monitoring AC/DC currents and voltages, temperature, dry contacts, and so forth). The DAU is capable of simultaneous sampling and has programmable gains for supporting both metering and fault current applications.

The Data Concentrator: Is a small, embedded computer running Wavewin. It receives continuous data streams from the DAU and triggers upon fault occurrence. The captured fault and disturbance records are in compliance with NERC PRC-002 data reporting requirements for disturbance monitoring equipment (DME).

Figure – 1: Photo of a Wavewin DAU and the Data Concentrator

The Data Concentrator is capable of processing data streams from multiple DAUs in real time. In a typical topology, multiple DAUs are connected to a switch and the switch is connected to the Concentrator's left Ethernet port. The right port is reserved for reporting captured data to the corporate side (including the use of transmitters for wireless connections). The maximum number of DAUs that can be supported with one Concentrator is 16. In other topologies, each DAU is mounted on a din rail with its own Concentrator and transmitter. This topology is highly effective for use with transformer and breaker monitoring applications.

The Data Concentrator triggers include over, under, and within settings. RMS, instantaneous, and rate of change triggers are provided with persistence and upper/lower boundaries. The captured data includes digital fault records (FR), sequence of events records (SER), disturbance records (DDR), metering logs, and health checks. The durations for the captured records are user settable including prefault and fault cycles. For FR data, the default duration is 1 second with 6 cycles of prefault data.

The Sensors: Are non intrusive. They can be safely connected to the DAU without circuit interruption. They are typically used for monitoring three phase feeder currents and voltages, DC control voltage, and breaker status. They support both AC and DC current and voltage inputs. Sensors for monitoring other quantities such as temperature, frequency, or dry contacts can be custom made. Descriptions of the basic sensors are provided in the next sections.

Split Core CT (AC Current Sensor Specifications)

Part Number:	CMS-DAU-CS-SC-60
Dimensions:	L1.16” x H1.64” x W1.04”
Operating Temperature:	-20 to 65°C
Humidity Range:	0 to 90% (Non-Condensing)
Monitored Conductor Size:	Window size is 0.4 inches (10.2 mm)
Rated Output:	333mV at 60 Amps RMS
Rated Voltage:	600 VAC
Monitoring Range:	1 to 60 Amps RMS
Operating Frequency:	50 to 1 kHz
Sensor Accuracy:	Within 0.5%
Sensor Cable Length:	10 ft /w 4 Pins connector to DAU
Sensor Options:	Monitoring ranges up to 75 or 202 Amps RMS (Figure-3)

Figure – 2: CS-SC-60

Figure – 3: CS-SC-202, 75 and 60

Hall Effect Transducer (AC/DC Current Sensor Specifications)

Part Number:	CMS-DAU-CS-HE-150 (Molded, Watertight Connectors)
Dimensions:	L4.25” x H1.5” x W1.0”
Operating Temperature:	-20 to 65°C
Humidity Range:	0 to 90% (Non-Condensing)
Monitored Conductor Size:	12 AWG
Monitoring Range:	1 to 150 Amps
Sensor Accuracy:	Within 2%
Sensor Output Range:	- 2.5 to +2.5 Volts
Bandwidth:	0 to 100 KHz (Supports both DC and AC)
Response Time:	10 Microseconds (Supports Large Order Harmonics)
Power Consumption:	0.1 Watts
Sensor Cable Length:	10 ft /w Connectors on Both Ends (4 Pins)

Figure – 4: CS-HE-150

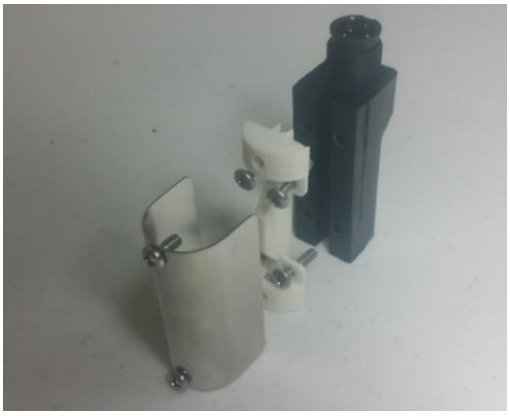


Figure – 5: CS-HE-150 assembly with Module, Stabilizer and Shield

AC/DC Voltage Sensor Specifications

Part Number:	CMS-DAU-VS-OA-600 (Molded, Watertight Connectors)
Dimensions:	L4.25” x H1.5” x W1.0”
Operating Temperature:	-20 to 65°C
Humidity Range:	0 to 90% (Non-Condensing)
Monitoring Range:	1 to 600 Volts
Sensor Accuracy:	Within 1%
Sensor Output Range:	- 2.5 to +2.5 Volts
Bandwidth:	0 to 100 KHz (Supports both DC and AC)
Response Time:	10 Microseconds (Supports High Order Harmonics)
Power Consumption:	0.15 Watts
Absolute Isolation:	750 VRMS, 375 Milliamps
Input Impedance:	1 MOHM / 10 pF
Sensor Cable Length:	10 ft (/w Connectors on Both Ends)
Connector Type:	4 Pins (Watertight) to DAU, 2 Lugs Fan Out to Source

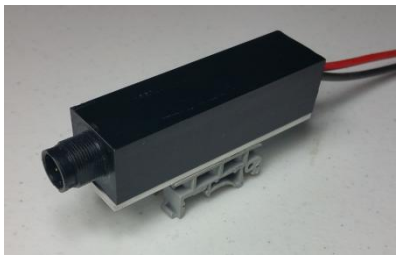


Figure – 6: VS-OA-600

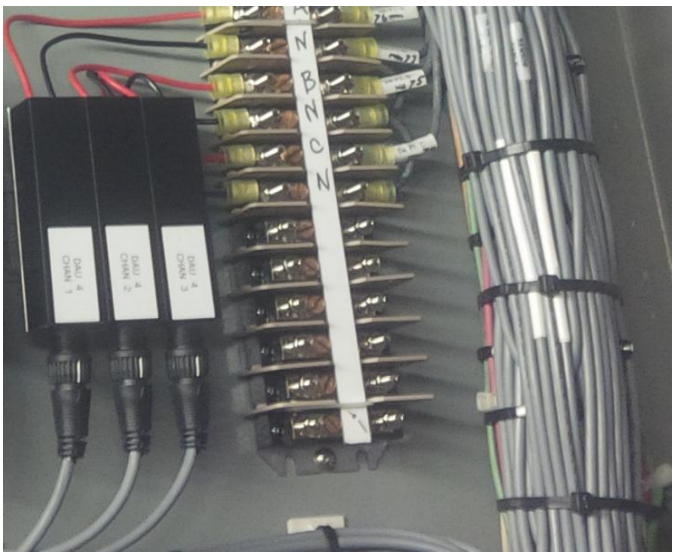
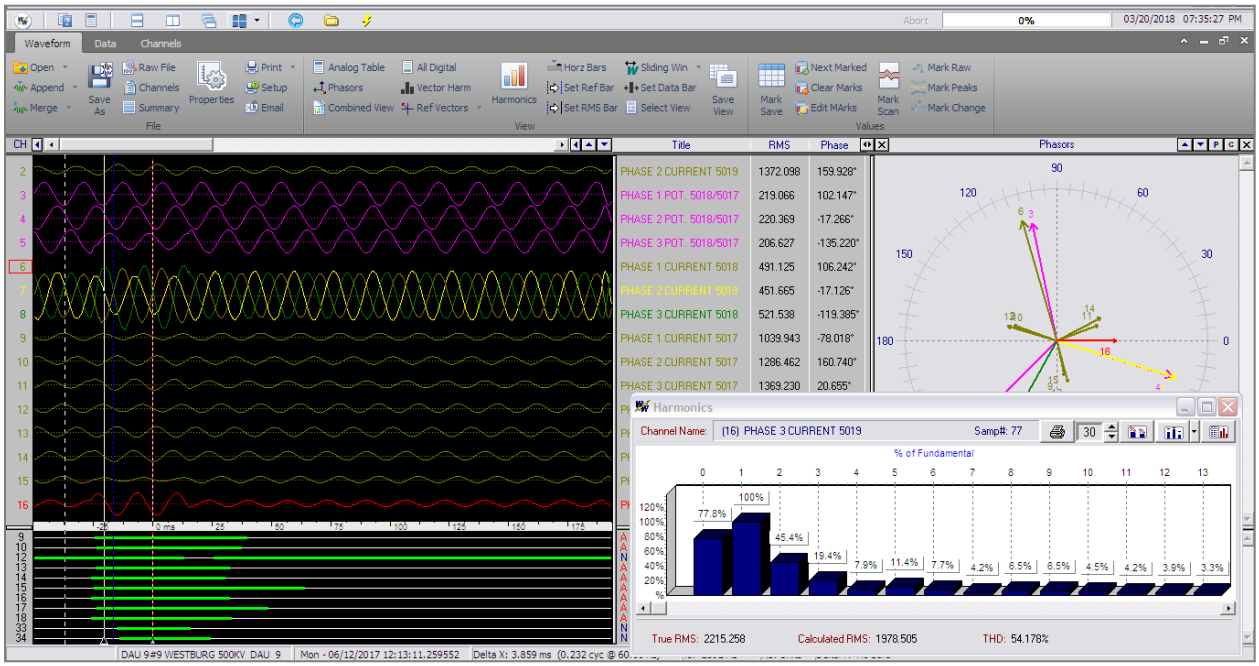


Figure – 7: VS-OA-600 with Connector to DAU and 2 Lugs to Source

Contact Information

Links: sales@softstuf.com and support@softstuf.com
Phone: 800.818.3463 and 215.922.6880
Hours: Monday thru Friday, 9:00 am to 5:00 pm EST



"DME Data Acquisition, Collection and Analysis are the Core Competency of Softstuf, Inc."