PROLog AWOS data logger

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Flexibility of Multiple Analog and Digital Inputs

PROLog wireless GSM AWOS/AWS data logger

The big brother of EasyLogGSM, PROLog features more than double the number of analog and digital inputs including quadruple the number of serial RS-232 ports. It is based on the proven ultra-low power architecture of EasyLogGSM and industry leading high precision analog-to-digital converter with temperature compensation on all analog inputs. ProLOG offers a stable and reliable data logging platform for professional outdoor applications requiring reliable continuous operation with long battery life and high system uptime availability.

Analog Inputs **20**

• Single Ended (12bit)	8x 0 ... 2.5V
• Differential (24bit)	12x ±19mV ... ±2.5V
Accuracy	0.1% SE | 0.05% DIFF
Input Noise	cca 0.1µVef
Input Offset	<1µV max
Statistics	Avg, Min, Max, StDev

Digital Inputs **8**

Input Range	0...2kHz

Configurable to:

- Frequency (wind speed)
- Time period (sunshine duration)
- Counter (rain gauge)
- Statistics Avg, Min, Max, StDev

PT100 Inputs **10** (+ 2 reference)

- Ratiometric measurements (for 4 wire PT100 precision connection)
- Excitation for PT100 cca 0.5mA
- Statistics Avg, Min, Max, StDev

Serial Sensors **8** (RS-485 or RS-232)

• RS-485 sensor port	1
• RS-232 sensor ports	4
• Baud Rate	300...115kBaud
• Measurement Interval	1...3600 s
• Logging Interval	1...3600 s
• Statistics	Avg, Min, Max, StDev

- Built-in watchdog timers and low-level intelligence ensure reliable operation verified over many years of use.
- Analog sensor front end offers 12 inputs with 24 bit resolution for precision measurements (temperature, solar radiation, pressure...) and 8 inputs with 12 bit resolution (relative humidity, wind direction...).
- Each of the 8 configurable digital inputs can be user defined to measure frequency (wind speed), time period (sunshine duration) or as a counter (rain gauge).
- 4 serial RS-232 data ports offer connection flexibility and expandability for digital and smart sensors.
- User selectable RS485/232 port for connecting smart sensors and other intelligent devices offers RS485 reliability for operation in challenging environments.
- All inputs are software configurable and offer basic statistics - average, minimum, maximum and standard deviation. 16 user defined polynomes (polynomials) are used for calculation to convert raw sensor values to engineering units.
- 12V Lead Acid (Pb) battery management is provided on board. Overcharge and deep discharge protection is ensured. Power source choices include a 12VDC power supply, solar or any DC source in the range of 4-20V.
- Internal 4MB memory and SD memory card are used for data logging.
- Real time clock with 3V lithium backup battery. Extra time precision is achieved by synchronization once a day over GPRS network with worldwide time zones.
- Remote data transfer is supported by software via email or FTP using integrated quad-band GSM/GPRS modem.

Applications of use

- Meteorological networks AWOS & AWS weather station
- Solar power systems analyses and evaluation
- Hydrological stations & flood early warning systems
- Calibration systems
- Airports Aerodromes and Heliports

For complex installations where ease-of-use and reliability is important

UPGRADE TO SIMPLE-TO-USE HARDWARE

10+ years of precision data logging experience

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PC/SCADA/PLC port 1

- RS232 data connection

Memory

Internal Memory	4MB
Data Storage Medium	SD card (FAT32)

Realtime Clock

Time Synchronization	via GPRS
Time synchronization frequency	1/day
Time Zone worldwide	
Backup Battery	3V lithium
Indication	2 LEDs

Remote Data Transfer

Full support for GPRS email and FTP data transfer

Power Consumption

Sleep	40µA max
Measuring	7mA typ
Transmitting	signal strength dependent

Battery Management

Battery type	12V Pb (lead acid)
Deep discharge protection	
Overcharge protection	

Power Options

DC source with battery charging	5V ...12VDC
DC source without battery	4V... 20VDC
Solar power	12V system
Portable battery power	6xAA batteries

Environmental Operating Range

Temperature Range	-30°C ...+60°C
Protection	IP65

Customization (available per request)

New sensor drivers for	RS485 or RS232
MODBUS configuration of	registers, data types, units

FTP and Email communication and .CSV data format

OUTPUT DATA FORMAT:

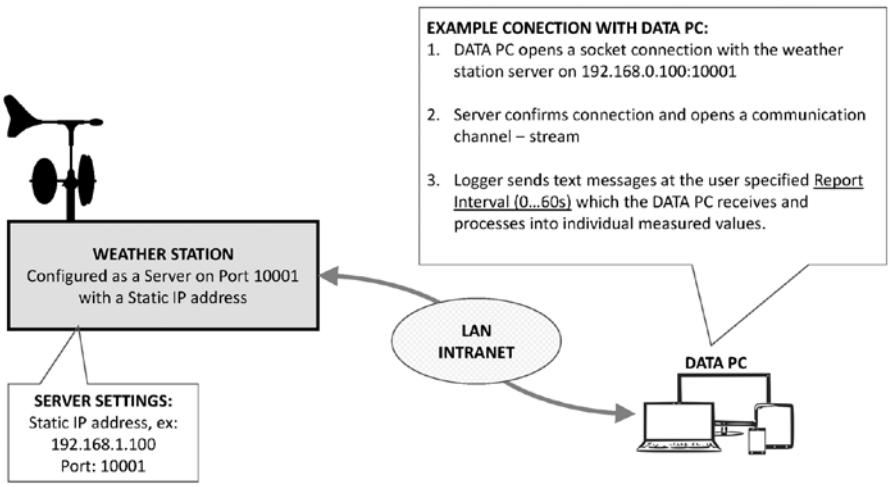
Date Time Data1 Data2 Data3... CRLF

Example: (space delimited format)

07.06.2017 04:43:39 3.117 13.839 99.043 -61.000
07.06.2017 04:43:39 3.117 13.839 99.043 -61.000
07.06.2017 04:43:39 3.117 13.839 99.043 -61.000
...

If required, CSV data format can be set:

07.06.2017,04:43:39,3.117,13.839,99.043,-61.000
07.06.2017,04:43:39,3.117,13.839,99.043,-61.000
07.06.2017,04:43:39,3.117,13.839,99.043,-61.000
...



Ethernet connectivity

HOW TO CONNECT A PC TO THE WEATHER STATION VIA ETHERNET:

1. The RS-232 to Ethernet converter inside the weather station is configured as a Server, which is listening on Port 10001. It has a fixed IP address. IP address and port are both user configurable. (Example:192.168.0.100:10001)
2. The internal Ethernet converter starts actively listening on Port 10001 immediately after the weather station is turned on.
3. When it receives a request to connect from a DataPC via the Ethernet connection, together they create an open bi-directional data stream. (This connection can be verified by setting up a connection on 192.168.0.100:10001 in HyperTerminal on the DataPC.)
4. Weather station and DataPC are connected and sending live data. (In HyperTerminal you should see text messages is measured values.)
5. DataPC must collect the data that it receives.
6. In case of an interruption in the connection with the weather station, the connection will remain closed until it receives a request to connect from a DataPC.

Reach your Gold Standard of measurement with BARANI sensors. ISO:9001 quality.