Site Sentinel Aeos®

Battery powered, ultra-compact Satellite Data Logger

- INDUSTRIAL/MINING ASSET MONTORING
- INTERNAL WORLDWIDE SATELLITE MODEM
- REMOTE ASSET MONITORING
- TANK LEVEL MONITORING
- PIPELINE PRESSURE AND CATHODIC PROTECTION MONITORING
- USER REPLACEABLE BATTERIES
- PULSE METER

S1-001

The Site Sentinel Aeos® S1 is latest addition to the Site Sentinel data logger family, providing highly-reliable, direct-to-host data monitoring in a single package, aimed at the utility, mining and environmental sector. The Site Sentinel Aeos® S1's compact design is aimed at the large-scale low deployed cost remote monitoring market where connectivity via terrestrial cellular or radio is not possible. This product variant is ideal for new deployments or retrofitting onto existing remote sites.

Upstream communications is provided using an internal L-Band Satellite modem operating on the Globalstar Simplex network. The Site Sentinel Aeos® S1 Remote Data Logger is equipped with the latest generation of low-cost Satellite IoT connectivity, permitting world-wide use almost anywhere with a view to the sky.

Complete control is handed to the user to allow custom data reporting and wake-from-sleep regimes to be configured to balance battery life against data reporting requirements. Easily access all device diagnostics and user payload data via automatic data export from the ProcessrIO Cloud platform or use the direct API Connection to ProcessrIO cloud platform.

The S1 is an ultra-low powered device, powered purely from internal batteries, the batteries are user replaceable in the field.

Equipped with a single Analog Input, two Digital Inputs (one with 32-bit counter) and Sensor power supply output, the Site Sentinel Aeos® S1 satellite RTU is ideal for remote deployment applications with minimal I/O requirements.

The device is housed in a low profile, robust ABS-plastic enclosure, UV stabilised and rated at IP67, allowing for direct outdoor installation, ideal for direct vertical / horizontal surface mounting on existing cabinets or structures, or mounting directly to existing poles or walls, the robust enclosure is equipped with integrated flange mounting holes.

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Technical Specifications

General

Supply Voltage	3.6 Volts DC Supply (Nominal), powered from 2 x SAFT AA 3.6V Lithium thionyl chloride batteries
Current Draw	14µA sleep, 5mA active, 0.5A (peak) satellite TX
Real Time Clock	Internal: Year, month, day, hour, minute, second
Temperature	–20°C to +85°C
Humidity	0 to 90% relative humidity, non-condensing
Programming	Local programming/diagnostics port for device configuration and firmware upgrade. Windows based Configurator M+ software application. Local (live) programming/diagnostics via Configurator M+ software application, configuration wizard for common deployment scenarios
Mounting/Enclosure	Thermoplastic (TP) Material, UL 94 V-0 Flammability Rating, 105mm (wide) x 133mm (high) x 34mm (deep), 2 x 7.4mm Integrated mounting holes for securing using screws / bolts up to max. 6mm diameter, Integrated Atmospheric Pressure Equalization Vent on I/O Cable entry gland. Optional stainless steel combination mounting bracket for pole mounting using stainless steel hose clamps
Environmental	IP67, not designed for continuous submersion

IO Interfaces

Digital Input	2 x Low-current dry-contact binary inputs, Inputs are overvoltage protected and non-isolated. Digital input 1 supports pulse counting up to 3Khz, Totaliser with 32-bit roll-over Digital Input 1 – Configure as Counter, Alarm Input (unsolicited in one or both directions) or Status Input Digital Input 2 – Configure as Alarm Input (unsolicited in one or both directions), Status Input or as Tamper Detection on pulse input flowmeter cables
Analogue Input	1 x Analog Input 0–5V DC, 15-bit resolution (non-isolated), 4 x user-configurable alarm limits on analog Input
Accelerometer	built in Accelerometer function, reports X-Y position, ideal for 'tilt' or 'slope' monitoring applications. Configurable tilt alarm limits per axis.
System Input/Diagnostics	Internal measurement of Device Temperature, Device Battery Voltage and Remote Reporting of Device Battery Voltage and Reporting Mode Status Flags
Switched DC Out	User configured, switched sensor power output, choose from regulated 3.0 DC or Battery Volts ranging from 3.0 to 3.6 Volt DC. Supplies up to 50 mA to power external sensors

Telemetry

Satellite Communications	Globalstar® Simplex LEO Satellite Network Constellation, Unidirectional data communications, L-Band Operation, 1615 MHz, Output power (+18.5dBm)
Antenna	Internal ceramic patch antenna, Left Hand Circular Polarisation (LHCP), Uplink Gain 5 dBi (peak), 80% Efficiency at 1615 Mhz. Centre Frequency
User Data Payload	User Payload – 9 Bytes per message, Fixed data format
Host Support	Automatic data export from ProcessrIO Cloud portal, Direct API Connection to ProcessrIO for end user data access. Automated device provisioning via ProcessrIO, optional "SCADA Connector" for legacy SCADA systems.
Security	Encrypted uni-directional data communication, Globalstar proprietary network security, Unique device electronic serial number (ESN), Local Configuration Password Security

Approvals

Build	RoHs
Standards	RCM (Aust/NZ), FCC, IC and CE Compliance, Anatel® (pending), Globalstar® Gold Certified and approved Network Device
Production	Proudly Designed and Manufactured in Australia

Factory Accessories

Accessories	A comprehensive range of factory manufactured or sourced accessories to ensure reliable and swift solution deployment. Visit **37s.com.au**

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