PowerTrack™ Logger

Advanced Edge Data Gateway for Commercial and Utility-Scale Solar

Stem's vertically integrated, edge-to-cloud platform integrates advanced Data Acquisition System (DAS) capabilities through the PowerTrack Logger, a next-generation gateway device engineered for commercial and industrial (C&I) to utility-scale installations. This solution greatly increases datalogging capabilities while serving as a backwards compatible drop-in replacement for the PowerLogger 1000. The compact datalogger delivers better performance, futureproof local AI processing, and the same plug-and-play configuration methodology that drove the PowerLogger 1000 and PowerTrack to C&I market dominance. PowerTrack Logger is designed for DIN rail mounting and integrates with essential infrastructure components including power supplies, cellular modems, network switches, inverters, and revenue-grade meters to deliver a comprehensive monitoring solution.

Improvement Highlights

- 100% backwards compatible drop-in replacement for PowerLogger 1000
- Modern, high-performance, high-efficiency chipset allows you to monitor and control more assets without sacrificing power budget in the panel
- Two gigabit Ethernet ports enable seamless integration with BESS, third-party systems, network segregation, and complex network topologies without additional firewalls or managed switches
- CE certified for EU/EEA deployments

Real-time Data & Diagnostics

- Sends real-time field data and diagnostics information to PowerTrack software
- User-adjustable sampling rates down to one minute
- Local data storage eliminates data gaps from lost network connectivity events

Rapid Configuration

- Interactive RGB touchscreen for field troubleshooting and commissioning
- Pre-configured to your site from the factory
- Built-In network diagnostic tools
- DIN rail mountable metal chassis for easy installation

Remote Control Capabilities

- Seamless onsite configuration without a laptop
- Manual remote control for inverter shutdown and restart
- Remote firmware, OS patches, and upgrades

Proven Reliability

- Extensively tested, certified to global standards, and standard 5-year warranty
- Designed with protection against transients and ESD for use in harsh environments
- Built on proven technology with 500+ million field hours of real world operation

PowerTrack™ Logger Specifications

General	Devices Supported	Up to 100 devices
	Storage	32 GB internal eMMC Up to 2 TB removable industrial micro SD card
	Logging Interval	Configurable down to 60 seconds
	Offline Storage	Internal storage: approx. 180 days of data storage, 100 devices @ 60s intervals (varies per site)
	User Interfaces	Capacitive RGB MIPI touchscreen
	AI Processing	2.3 TOPS Dedicated NPU
	Configuration	Remote automated configuration; local network setup
	Firmware Management	OTA remote OS and application updates Fleet-wide rollouts or individual device
	Security	Secure Boot enabled hardware Encrypted edge-to-cloud communications
Interfaces	Ethernet	Two 10/100/1000 auto-switch Ethernet ports
	Serial	Two 2-wire RS485 ports, each with integrated 120 ohm termination resistor
	Primary Protocols	Modbus TCP, Modbus RTU, proprietary inverter protocols
Mechanical	Dimensions	3" H x 2" W x 1" D
	Construction (Chassis)	DIN rail mountable metal enclosure 3" H x 2" W x 1" D
Environmental Rating	Operating Temperature	-40 to 80°C (-40 to 176°F), 10 – 90% relative humidity non-condensing
	Storage Temperature	-40 to 85°C (-40 to 185°F)
Electrical	Input Voltage	24 VDC nominal (8-31 VDC)
	Power Consumption	< 6 W
	Surge Protection	Designed with protection against transients and ESD for use in harsh environments
Regulatory	Warranty	Standard 5-year warranty
	Safety Listings	UL 62368-1 IEC 62368-1 CSA C22.2#62368-1
	EMC Compliance	CISPR 32 EN 61000-6-2 (Immunity - Industrial environments) EN 61000-6-4 (Emission - Industrial environments) EN 61000-3-2 (Harmonics) EN 61000-3-3 (Flicker) FCC Part 15 Subpart B Class A
	Regional	CES-003 Issue 6 (Canada) ETL Listed (North America) CB Certificate - IEC 62368-1 (IECEE Member Nations) J62368-1 (Japan) CE Marking (EU)
	Markings	cETLus, CE, RoHS, FCC

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