

DATA SHEET

CAL-EDGE-0

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CAL-EDGE-0

Device is a highly sophisticated and affordable remote data logger with 3G/4G communication for compressed air systems. Device connects directly to CALMS web application which provides real time access to data from any web browser for any end user and their service partner. It can be configured for majority of compressors and sensors on the market.

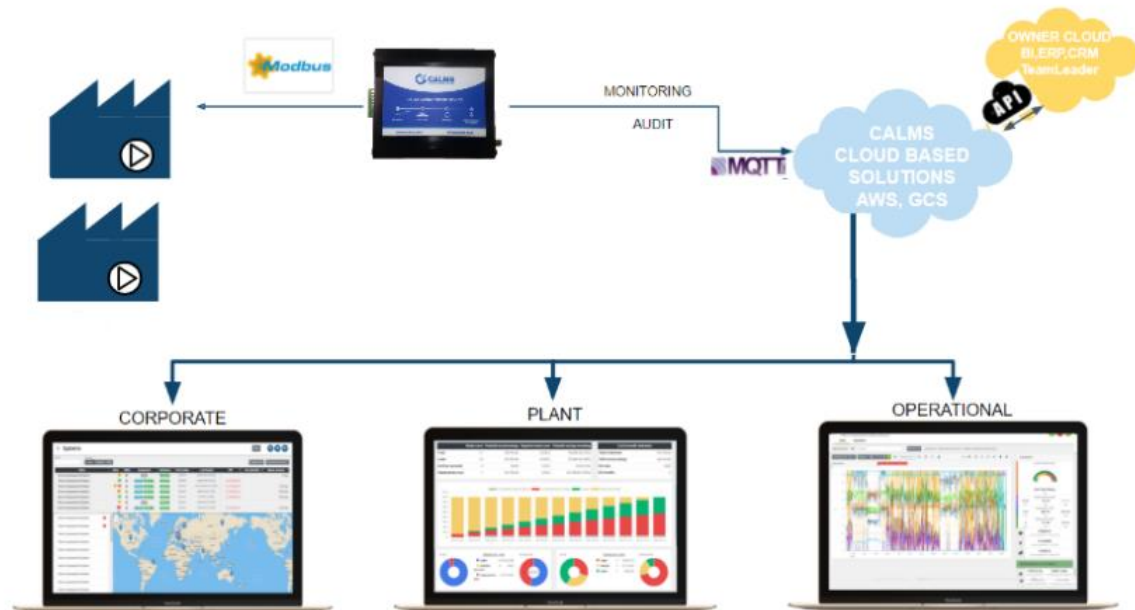
Benefits:

- > The easiest and cheapest solution for doing air audit online with independent experts;
- > Shows where to save on energy costs;
- > Helps improve your energy efficiency;
- > Save your time and improve the organization;
- > Calculates costs in relation to actual consumption;
- > Increases the reliability of your equipment;
- > Creates forecast of energy consumption;
- > Increases your environmental image;
- > Improves the investment process (energy equipment);
- > [ISO 50001:2011, Energy management systems compliant.](#)

Features:

- > Plug & Play device, remote monitoring / alarming / reporting / auditing, designed for compressed air systems;
- > WEB based application for total compressed air management;
- > Connect with config to almost any compressor and sensor;
- > Data logger for compressed air system provides readings for web based detailed analysis and simulation tools – 1 sec sample rate;
- > Energy management tools – Specific power, M/T, CUSUM analysis;
- > Detailed analysis of compressed air system with auto generated reporting, warning of poor efficiency with potential savings calculation compared to best in class efficiency from CALMS knowledge database;
- > SIMULATION module integrated;
- > Compressed Air Performance Scorecards;
- > Expandable;
- > Secure internet connection between device and CALMS web application;
- > Multiple data export options (CSV, XML), and easy online printing;
- > Automated monthly reports send by email;
- > Alarms & Warnings email or SMS notification including analysis data;
- > Multiple access for end users and experienced CA service providers;
- > Remote software upgrade capability;
- > LTE cellular modem 3G;
- > No need for local operator panels – access from anywhere with tablet or smartphone;
- > Robust industrial design.

CALMS Process diagram





Sensors inside the factory are connected to the CAL-EDGE-0 via MODBUS RS485. CAL-EDGE-0 is reading all values from sensors and sending them to the CALMS virtual cloud, if connection is established. All data inside the cloud will be sent to the CALMS platform, where data are shown. That allows you to analyze your compressed air system.

Specifications: CAL-EDGE-0

Description		Remarks
Hardware	Quad core Cortex-A53 (ARM v7) 64-bit SoC @ 1.5GHz, 1GB DDR2 RAM	
Protocol	MODBUS RTU, MODBUS TCP/IP, ADS, OPC UA, Database queries	Up to 20 sensor per one device
Interfaces	1x 10/100 Ethernet adapter	
Analog inputs 4...20mA	0	
RS485	Standard: 1x	2-wire RS485 (half duplex)
WEB management	Yes	
Min logging interval	1sec (configurable)	
CAL to CALMS web upload interval	1 sec to 24 h (configurable)	
Data Storage	eMMC 8 GB	
Cloud connection	Mobile 3G/4G / LAN	
Operating Range	0 – 50 C (32 F – 131 F)	
Power supply	9-24VDC	Recommended: 60W . Depends on sensor usage
Cellular modem	LTE (LTE-M)	Depends on network coverage
Antenna interface	Standard SMA interface-antenna included	
Size	H 30 x W 110 x L 130 mm H 1.18 x W 4.33 x L 5.12 Inches	
Weight	511 g / 1,13 lb	
Materials	Enclosure: Aluminium	
Mounting	DIN rail or wall mounting	
EMC	EN 61000-6-2/EN 61000-6-4	
IP rating	IP54	
Approvals	CE,UL	

Order codes and information

Order code	Description
 <p data-bbox="403 510 552 539">CAL-EDGE-0</p>	<p data-bbox="794 315 1380 365">CALMS-EDGE-0 survey device LTE 4G with Modbus RTU & TCP/IP;</p> <p data-bbox="794 365 1380 414">Portable measurement device with Ethernet, RS485 and CAN interface connection</p> <p data-bbox="794 414 1380 488">Supported protocols: Modbus RTU, TCP/IP, ADS, OPC UA, HTML, MQTT; (without sensors)</p> <p data-bbox="794 488 1380 539">3G/4G Modem SMA with external antenna (with SIM card provided EU/Global);</p> <p data-bbox="794 539 1177 566">1 x Ethernet port 10/100 Base-T (LAN);</p> <p data-bbox="794 566 1106 593">1x RS485 port and 1x CAN port;</p> <p data-bbox="794 593 1380 642">1x mPCIe: optional: WiFi, Bluetooth, LoRa, Zigbee, XBEE, enOcean RF IO...</p> <p data-bbox="794 642 1283 669">Internal memory eMMC 8GB, optional µSD 256 GB</p> <p data-bbox="794 669 1214 696">Ambient temperature range: -25°C to +60°C</p> <p data-bbox="794 696 1123 723">Power Supply 24VDC, 2,5A, 60W;</p> <p data-bbox="794 723 1102 750">Approval UL / CE / FCC Class A</p>
Accessories	Accessories for CAL-EDGE-0
<p data-bbox="419 842 536 869">CAL - SIM</p>	<p data-bbox="794 815 1380 864">SIM LTE (3G/4G) subscription per audit device - charged annually</p>
<p data-bbox="403 925 552 952">CAL-W-MOD</p>	<p data-bbox="794 869 1380 918">CALMS RADIO mesh transceiver for Wireless-Modbus RTU signals , for wireless sensor connection;</p> <p data-bbox="794 918 1090 945">External power supply 24VDC;</p> <p data-bbox="794 945 935 972">Wall mounted;</p> <p data-bbox="794 972 1067 999">Dimensions: 85x85x25 [mm]</p>
 <p data-bbox="424 1048 531 1075">CAL-EXP</p>	<p data-bbox="794 994 1380 1043">Explorer case CA - carrying case -water proof 30lit (7.7 gal);</p> <p data-bbox="794 1043 1380 1093">Dimensions: 474x415x214 [mm] (18,7x16,3x8,5 [inches]);</p> <p data-bbox="794 1093 1187 1120">prepared for CALMS CAL-lite installation;</p> <p data-bbox="794 1120 1023 1146">Weight: 4,7kg (10,4lbs).</p>
<p data-bbox="389 1131 568 1158">CAL-SENSORS</p>	<p data-bbox="794 1097 1380 1146">Cable 4-wire with connector on one side and open wires on the other side for custom sensor connection;</p> <p data-bbox="794 1146 916 1173">Length 0.5m</p>
<p data-bbox="419 1178 536 1205">SENSORS</p>	<p data-bbox="794 1173 1003 1200">Measuring equipment</p>



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