

CALMS AIR INC.

# DATA SHEET CAL-EDGE-0

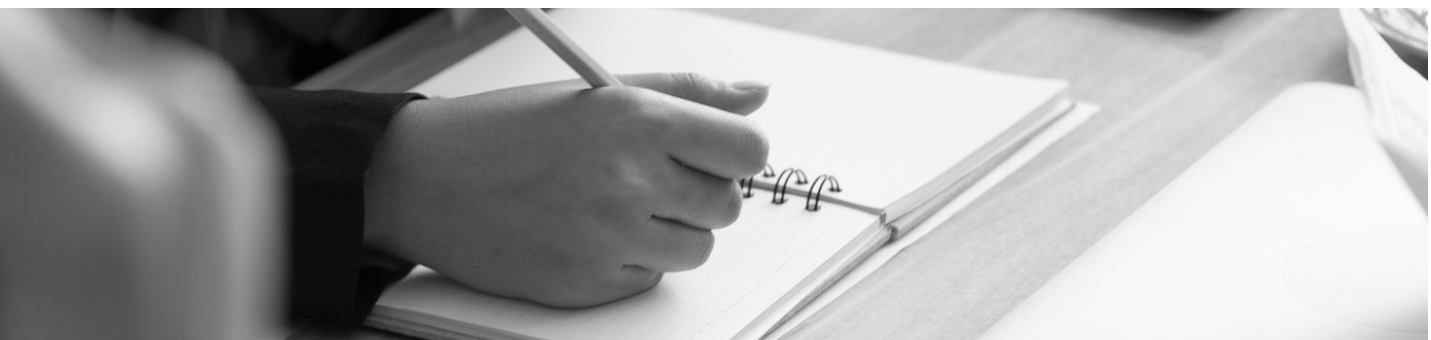


# CAL-EDGE-0

**is a highly sophisticated and affordable remote data logger with 4G LTE 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.



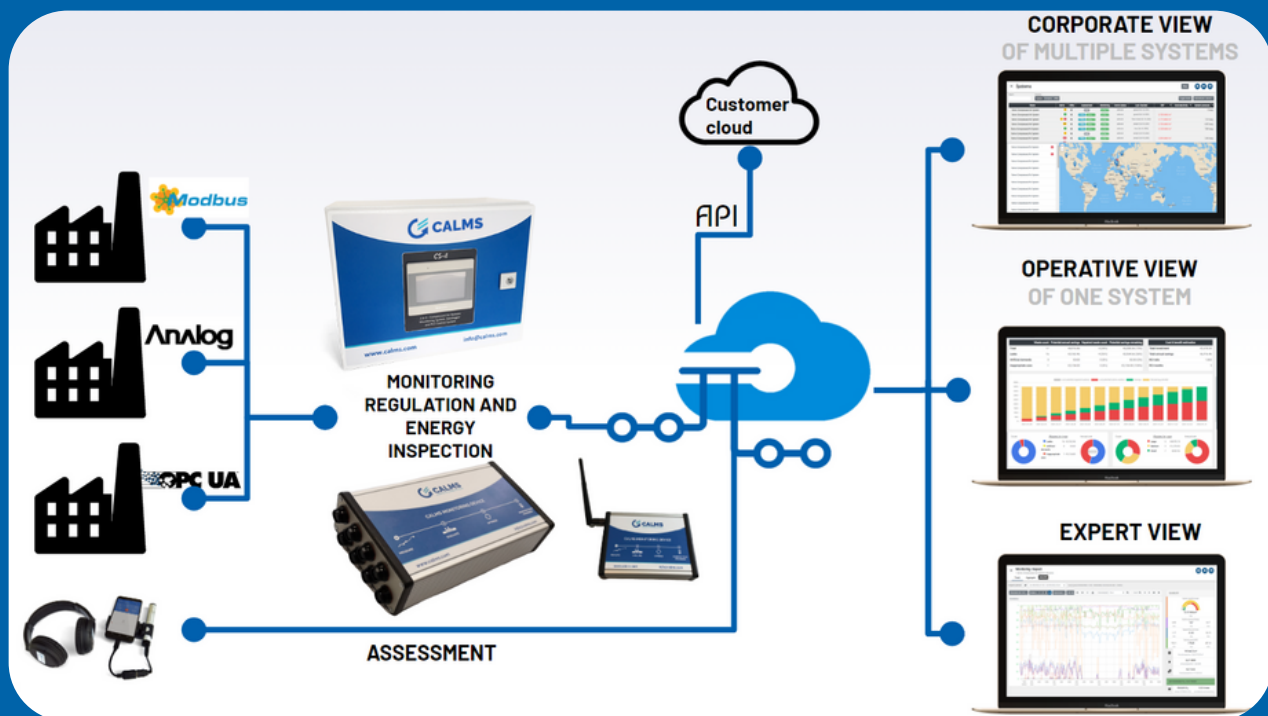
# FEATURES

- 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 4G;
- 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. 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:

Description		Remarks
Hardware	Quad core Cortex-A53 (ARM v7) 64-bit	
Processor Speed	SoC @ 1.5GHz	
RAM	1GB DDR2 RAM	
Protocol	MODBUS RTU, MODBUS TCP/IP, ADS, OPC UA, Database queries	Up to 20 sensors per one device
Interface	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	
Cellular modem	LTE (LTE-M)	Recommended: <b>60W</b> . Depends on sensor usage
Antenna interface	Standard SMA interface-antenna included	
Size (mm)	H 30 x W 110 x L 130 mm	
Size (Inches)	H 1.18 x W 4.33 x L 5.12 Inches	
Weight	511 g / 1,13 lb	
Materials	Enclosure: Aluminum	
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:
<b>CAL-EDGE-0</b>	<p>CALMS-EDGE-0 survey device LTE 4G with Modbus RTU &amp; TCP/IP;</p> <p>Portable measurement device with Ethernet, RS485 and CAN interface connection</p> <p>Supported protocols: Modbus RTU, TCP/IP, ADS, OPC UA, HTML, MQTT; (without sensors)</p> <p>3G/4G Modem SMA with external antenna (with SIM card provided EU/Global);</p> <p>1 x Ethernet port 10/100 Base-T (LAN);</p> <p>1x RS485 port and 1x CAN port;</p> <p>1x mPCIe: optional: WiFi, Bluetooth, LoRa, Zigbee, XBEE, enOcean RF IO...</p> <p>Internal memory eMMC 8GB, optional <math>\mu</math>SD 256 GB</p> <p>Ambient temperature range: -25°C to +60°C</p> <p>Power Supply 24VDC, 2,5A, 60W;</p> <p>Approval UL / CE / FCC Class A</p>

Accessories	Description
<b>CAL - SIM</b>	SIM LTE (3G/4G) subscription per audit device - charged annually
<b>CAL-W-MOD</b>	<p>CALMS RADIO mesh transceiver for Wireless-Modbus RTU signals , for wireless sensor connection;</p> <p>External power supply 24VDC;</p> <p>Wall mounted;</p> <p>Dimensions: 85x85x25 [mm]</p>
<b>CAL-EXP</b>	Explorer case CA - carrying case -water proof 30lit (7.7 gal); Dimensions: 474x415x214 [mm] (18,7x16,3x8,5 [inches]); prepared for CALMS CAL-lite installation; Weight: 4,7kg (10,4lbs).
<b>CAL-SENSORS</b>	<p>Cable 4-wire with connector on one side and open wires on the other side for custom sensor connection;</p> <p>Length 0.5m</p>
<b>SENSORS</b>	Measuring equipment

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# LET'S WORK TOGETHER

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