

# DATA SHEET

## CAL-EDGE-PM

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## CAL-EDGE-PM

**CAL-EDGE-PM** is a highly sophisticated and affordable remote data logger for compressed air systems. This is wall mounted cabinet with CAL-EDGE-0 with Ethernet and LTE 4G with SIM card provided by EU or global. Device connects directly to the CALMS web application which provides real time access to data from any web browser for any end user and their service partner.

**CAL-EDGE-PM** is used for small systems for **permanent monitoring only**, without options like local HMI display, control, scada.. CAL-EDGE-PM accepts AI and DI inputs.

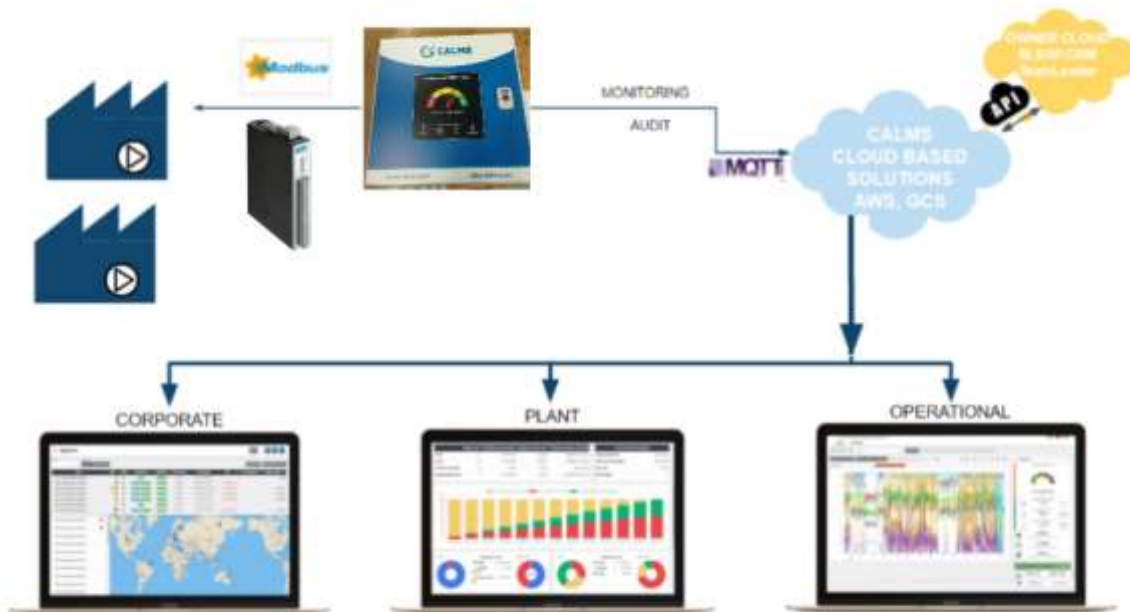
### Benefits:

- > 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




Every CAL-EDGE-PM has a module with 8 AI terminals (4...20mA), a module with DI terminals (24VDC) and also MODBUS. Device CAL-EDGE-0 inside the cabinet is reading all measured values and sending them to the CALMS virtual cloud, if connection is established. All data inside the cloud will be sent to the CALMS application, where data are shown. That allows you to monitor your compressed air system.

## Specifications: CAL-EDGE-PM

Base module CAL-EDGE-PM is for **permanent monitoring ONLY!** With LTE 4G, SIM card provided by EU or global. CAL-EDGE-PM is designed for small systems monitoring only, HMI & control and other options are not possible.

Description:		Remarks:
<b>Computer</b>	Quad core Cortex-A53 (ARM v7) 64-bit SoC @ 1.5GHz, 1GB DDR2 RAM	
<b>Protocol</b>	MODBUS RTU, MODBUS TCP/IP, ADS, OPC UA, Database queries	
<b>Interfaces</b>	1x 10/100 Ethernet adapter	
<b>Analog inputs (4...20mA)</b>	8	Passive or active connection 12bit, 8x2-wire system
<b>Digital inputs (24VDC)</b>	16	Filter 3.0ms, 2-wire system
<b>RS485</b>	1x	Isolated 2 wire RS485
<b>WEB Management</b>	Yes	
<b>Logging interval</b>	5 sec (configurable)	
<b>CAL-EDGE to CALMS web upload interval</b>	5 min (configurable)	
<b>Data storage</b>	eMMC 8GB	
<b>Cloud connection</b>	MQTT	
<b>Operating temperature range</b>	-25°C to 60°C (-13°F to 140°F)	
<b>Power supply</b>	230VAC	
<b>Cellular modem</b>	2G/3G/LTE (LTE-M)	Depends on network coverage
<b>Antenna interface</b>	Standard SMA interface-antenna included	
<b>Size</b>	H210 x W380 x L380 mm	
<b>Materials</b>	Enclosure: Stainless steel	
<b>Mounting</b>	Wall mounting	
<b>IP rating</b>	IP55	

## Order codes and information:

Order code:	Description:
<b>CAL-EDGE-PM</b> 	Base module CAL-EDGE-PM for Permanent monitoring ONLY! with LTE 4G (designed for small systems monitoring only, HMI & control not possible ) Wall mounted Cabinet with CAL-EDGE-0 with Ethernet and LTE 4G with SIM card provided EU or Global

Accessories:	Description:
<b>CAL-SIM</b>	SIM LTE (3G/4G) subscription per audit device – charged annually
<b>CAL-DI16 RTU</b>	Expansion 16 channel digital input terminal 24VDC, filter 3.0ms, 2-wire system, MODBUS RTU RS485 – with CALMS config file
<b>CAL-AI8 RTU</b>	Expansion 8-channel analog input terminal 4...20mA, 12bit, 8x 1-wire system, MODBUS RTU RS485 – with CALMS config file



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