

2025 CALMS AIR INC.

# DATA SHEET

# CAL-EDGE-8

## WIRELESS MESH



# CAL-EDGE-8

## WIRELESS MESH NETWORK

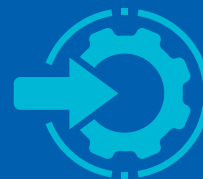
CAL-EDGE-8 device is a highly sophisticated and affordable portable measurement data logger for compressed air systems, designed for experts and auditors. The device connects directly to CALMS web application which provides real time access to data from any web browser for any end user and their service partner.



Plug & Play



Monitoring &  
Auditing



Analog &  
Digital Inputs



# BENEFITS OF USING CALMS



## ENERGY MANAGEMENT & EFFICIENCY

- **Energy tools:** Specific power, CUSUM analysis, M/T ratio, duration, threshold graphs
- Detailed efficiency analysis with:
  - **Auto-generated reports**
  - **Warnings on poor performance**
  - **Potential savings vs. best-in-class benchmarks** (CALMS DB)
- **Calculates actual energy costs** based on consumption
- Supports better energy **equipment investment decisions**
- Improves your environmental image
- **ISO 50001:2011 compliant** – energy management systems standard



## WEB-BASED PLATFORM

- **WEB-based application** for holistic compressed air management
- **Secure cloud connection** between device and web application
- **Multiple user access** – for end users and CA service providers
- **Accessible anytime, anywhere**



## MONITORING, LOGGING & VISUALIZATION

- Remote monitoring / alarming / reporting / auditing
- Data logger with **1-second sample rate**
- Detailed **web-based analysis and simulation tools**
- Compressed Air **Performance Scorecards**
- **SIMULATION module** integrated
- **Forecasting** of energy consumption



## DESIGNED FOR AUDITORS & PROFESSIONALS

- **The easiest and most affordable way to conduct online air audits**
- **Save time**, reduce planning complexity, and improve organization
- Increases **equipment reliability** and operational insight



## REPORTING & NOTIFICATIONS

- Automated monthly **email reports**
- Alarms and **warnings via email or SMS**, including analysis data
- **Multiple export options** – CSV, XML
- **Easy online exporting** for audits and documentation



## SCALABLE & INDUSTRIAL-READY

- **Expandable system** – scale as needed
- **Robust industrial design** for demanding environments

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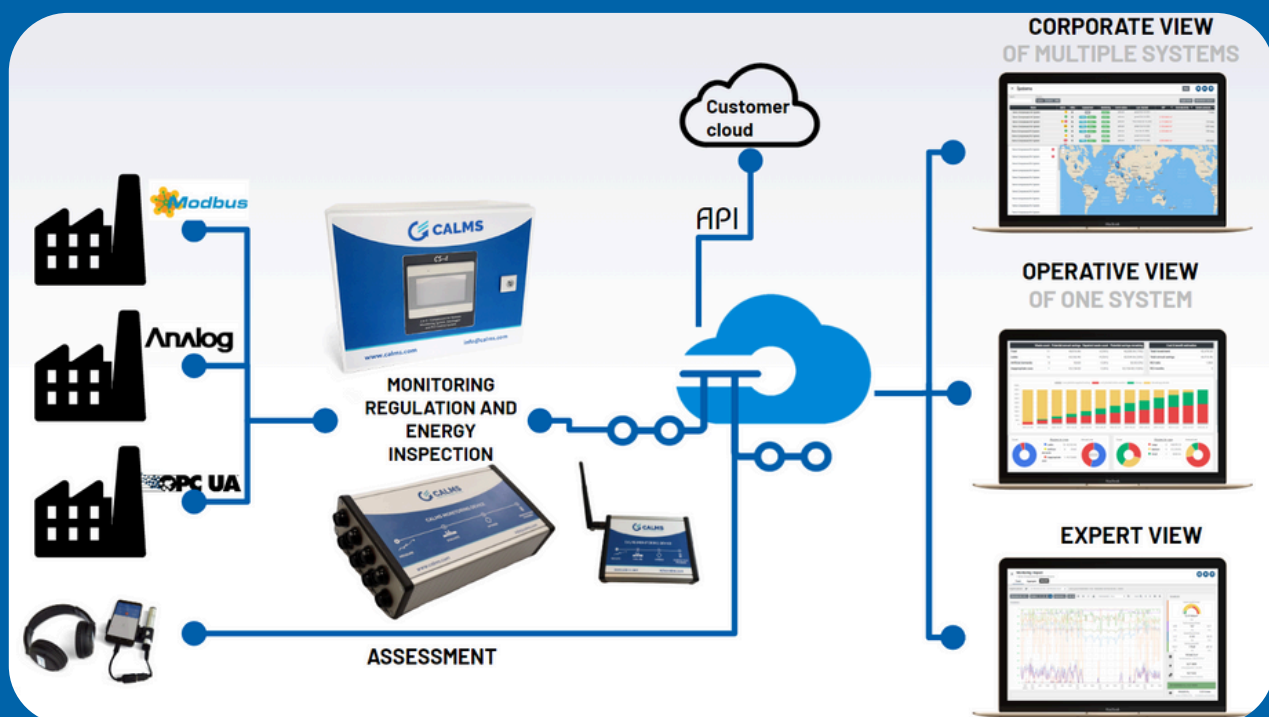
# WHY CHOOSE CALMS?

- **Developed by compressed air experts** – built on years of field experience and industry knowledge
- **Trusted worldwide** by manufacturers, energy auditors, and service providers
- **All-in-one solution** – from monitoring to simulation and reporting
- **Faster audits, smarter decisions** – transform raw data into clear, actionable insights
- **No hidden costs** or complexity – simple to install, easy to scale, and cost-effective
- **Future-ready platform** – continuously improved with remote upgrades and feature expansions
- **Supports your sustainability goals** – optimize energy use, reduce emissions, and improve ISO 50001 compliance

# CALMS – PROCESS DIAGRAM

Sensors inside the factory are connected to the **CAL-EDGE-8**. You can connect sensors with MODBUS output or analog 4...20 mA sensors via cable or wireless with sensorbox.

CAL-EDGE-8 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.



# CAL-EDGE-8 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	8	Passive or active connection with internal 24Vdc, 12bit resolution, with standard connectors
RS485	Standard: 1x	2-wire RS485
WEB Management	Yes	
Min logging interval	1 sec (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°C - 50°C (32 F - 131 F)	
Power supply	24VDC (power adapter included)	Recommended: <b>60W</b> . Depends on sensor usage.
Cellular modem	LTE (LTE-M)	Depends on network coverage.
Wireless Modbus	Frequency band: 2.45 GHz, ISM band (2402-2480 MHz)	w-modbus mesh
Antenna interface	2x Standard SMA interface-antenna included	
Size (mm)	H 56 x W 125 x L 250 mm	
Size (Inches)	H 2.20 x W 4.92 x L 9.84 inches	
Weight	865 g /1,91 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	

# SENSOR BOX SPECIFICATIONS:

Description		Remarks
Hardware	Cortex-M4, 32-bit SoC Cortex-M3, 32-bit RISC core	
Protocol	MODBUS RTU, W-Modbus	Up to 16 Modbus slave devices per node
Supported data rates-Wired	1,2 kbps to 1 Mbps	
Analog inputs 4...20mA	2	Passive or active connection with internal 24Vdc, 12-18 bit resolution, with standard connectors
Digital Inputs	2	Isolated inputs for 24Vdc. Insulation for up to 850V
Digital Outputs	2	Isolated outputs for 24Vdc. Max. switching current of 3A @ 230Vac
RS485	Standard: 1x	2-wire RS485
Operating Range	-40°C - 85°C (-40 F - 185 F)	
Power supply	24VDC (power adapter included) 5 VDC (via USB type C)	Recommended: <b>60W (power adapter)</b> <b>25 W (USB type C)</b> <i>(depends on sensor usage)</i>
Wireless Modbus	Frequency band: 2.45 GHz, ISM band (2402-2480 MHz)	w-modbus mesh
Number of wireless nodes	up to 100	
Range	Indoor: 10-40 meters Outdoor: 240 meters line-of-sight	For single node
Antenna interface	Standard SMA interface-antenna included	
Size (mm)	H 53 x W 103 x L 120 mm	
Size (Inches)	H 2.20 x W 4.92 x L 9.84 inches	
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-8</b>	CALMS EDGE 8 survey device LTE 4G with 8x AI, Modbus RTU & TCP/IP Portable measurement device with Ethernet, RS485 and CAN interface connection Supported protocols: Modbus RTU, TCP/IP, ADS, OPC UA, HTML, MQTT; (without sensors) 3G/4G Modem SMA with external antenna (with SIM card provided EU/Global)
<b>CAL-SENSOR-BOX</b>	CALMS RADIO mesh transceiver for Wireless-Modbus RTU signals , for wireless sensor connection; External power supply 24Vdc; Wall mounted; Dimensions: 85x85x25 mm
<b>CAL-KIT</b>	CAL-KIT includes: CAL-EDGE-8 with LTE 4G modern, Ethernet, RS485 - Modbus RTU and TCP, 8x analog Inputs 4-20mA with Explorer case CA, Free CALMS platform fee 1 year and accessories: CT Rogowski Amps 4x compressor (4x CT RS 500A / 20 mA) +Pressure transmitter (1x SML - 10) with connection cables + 5 x AI extension cables 10m + 3x AI open end short cable with connector for 4-20mA passive/active sensor)

Accessories	Description
<b>CAL - SIM</b>	SIM LTE (3G/4G) subscription per audit device - charged annually
<b>CAL-EXP</b>	Explorer case CA - carrying case - water proof 30l (7.7 gal); Dimensions: 474x415x214 mm (18,7x16,3x8,5 inches); prepared for CALMS CA-lite installation; Weight: 4,7kg (10,4lbs).
<b>CAL-AI</b>	Cable 4-wire with connectors for analog inputs, 10m, optional length
<b>CAL-SENSORS</b>	Cable 4-wire with connector on one side and open wires on the other side for custom sensor connection; length 0.5m
<b>SENSORS</b>	Measuring equipment



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# LET'S WORK TOGETHER

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