

# Product description

## Q-loud EnergyCam 1.0 cSP

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The EnergyCam 1.0 is used to take readings on analogue electricity meters (Ferraris meters) and send them to the IoT platform with the cSP radio protocol.

### Taking readings

The camera on the optical sensor unit takes a photo of the meter. LEDs provide sufficient light even in a dark meter cabinet. The OCR recognition algorithm converts the graphical image into a numerical meter reading. The EnergyCam 1.0 recognises up to 8 digits, of which one can be a decimal place. The reading interval is preconfigured to 15 minutes. For more information on the sensor, please visit:

[https://q-loud.de/solucon/q-loud\\_energycam/](https://q-loud.de/solucon/q-loud_energycam/)

### Transferring the meter readings

The meter reading is sent over the Q-loud gateway to the IoT platform where it is then available for enhancement.

Specifications Q-loud EnergyCam 1.0 cSP	
Specialisation electricity	Reading and recording meter readings on Ferraris meters Standard send interval 15 minutes *Specialisation and interval can be configured with the ECWin software.
Network connectivity to the Q-loud IoT-Platform	cSP (cospace Sensor Protocol)
Interfaces for communication with Q-loud assemblies	868 MHz Rx /Tx Proprietary transmission protocol AES 128 encoding 50 kbit/s data transmission speed
Transmitting power	Up to 10 dBm
Radio range (Line-of-sight)	Internal aerial up to 300 m/optional external MMCX magnetic foot aerial up to 1500 m
Power supply	External 3.6 V, 1600 mAh, 2/3 AA lithium thionyl battery, up to 15 years' lifetime (included)
Current consumption	15-100 mA or 3 µA standby current within Power-Down Mode
Supply voltage	3.0 to 3.6 V DC
Optical sensor unit	Camera module, mirror optics, LED lighting for reading meters of up to a 50-mm width, min. digit height 5 mm

Q-loud EnergyCam 1.0 cSP Product description V1.1, *This document replaces all former versions*

# Product description

## Q-loud EnergyCam 1.0 cSP

Display	8 digits, of which 1 is a decimal place, shows current meter reading at the press of a button
Scope of delivery	1 x Q-loud EnergyCam 1.0 cSP 1 x 3M cleaning cloth 1 x 3M replacement adhesive tape 1 x Quick Start Guide 1 x External 3.6 V, 1600 mAh, 2/3 AA lithium thionyl battery
Software	ECWin software for EnergyCam configuration, data readout and firmware. Update per download available over Windows PC, languages: German/English <a href="https://q-loud.de/solucon/q-loud_energycam/">https://q-loud.de/solucon/q-loud_energycam/</a> in the "Download and Software" section
EC1 USB interface	Optional interface for EnergyCam to the Windows PC for configuration over the ECWin software.
Positioning function	High-performance adhesive tape (residue-free)
Metrology	Non-reactive to the metrological characteristics of the meter
Operating conditions	-10 to +50°C ambient temperature
Dimensions L/W/H	15 mm / 47 mm / 55 mm
Protection class	IP 40

Q-loud EnergyCam 1.0 cSP Product description V1.1, *This document replaces all former versions*

# Product description

## Q-loud EnergyCam 1.0 Wireless M-Bus

### Q-loud EnergyCam 1.0 Wireless M-Bus

The EnergyCam 1.0 is used to take readings on analogue electricity meters (Ferraris meters) and sends them via the Wireless M-Bus radio protocol.

### Taking readings

The camera on the optical sensor unit takes a photo of the meter. LEDs provide sufficient light even in a dark meter cabinet. The OCR recognition algorithm converts the graphical image into a numerical meter reading. The EnergyCam 1.0 recognises up to 8 digits, of which one can be a decimal place. The reading interval is preconfigured to 15 minutes. For more information on the sensor, please visit:

[https://q-loud.de/solucon/q-loud\\_energycam/](https://q-loud.de/solucon/q-loud_energycam/)

### Transferring the meter readings

The meter reading is sent over the Wireless M-Bus protocol to the central M-Bus Network where it is then available for enhancement.

Specifications Q-loud EnergyCam 1.0 Wireless M-Bus	
Specialisation electricity	Reading and recording meter readings on Ferraris meters Standard send interval 15 minutes *Specialisation and interval can be configured with the ECWin software.
Data transfer	Wireless M-Bus
Transmitting power	Up to 10 dBm
Radio range (Line-of-sight)	Internal aerial up to 300 m/optional external MMCX magnetic foot aerial up to 1500 m
Power supply	External 3.6 V, 1600 mAh, 2/3 AA lithium thionyl battery, up to 15 years' lifetime (included)
Current consumption	15-100 mA or 3 µA standby current within Power-Down Mode
Supply voltage	3.0 to 3.6 V DC
Optical sensor unit	Camera module, mirror optics, LED lighting for reading meters of up to a 50-mm width, min. digit height 5 mm
Display	8 digits, of which 1 is a decimal place, shows current meter reading at the press of a button

Q-loud EnergyCam 1.0 Wireless M-Bus Product description V1.1, *This document replaces all former versions*

# Product description

## Q-loud EnergyCam 1.0 Wireless M-Bus

Scope of delivery	<p>1 x Q-loud EnergyCam 1.0 Wireless M-Bus</p> <p>1 x 3M cleaning cloth</p> <p>1 x 3M replacement adhesive tape</p> <p>1 x Quick Start Guide</p> <p>1 x External 3.6 V, 1600 mAh, 2/3 AA lithium thionyl battery</p>
Software	<p>ECWin software for EnergyCam configuration, data readout and firmware. Update per download available over Windows PC, languages: German/English</p> <p><a href="https://q-loud.de/solucon/q-loud_energycam/">https://q-loud.de/solucon/q-loud_energycam/</a></p> <p>in the "Download and Software" section</p>
EC1 USB interface	Optional interface for EnergyCam to the Windows PC for configuration over the ECWin software.
Positioning function	High-performance adhesive tape (residue-free)
Metrology	Non-reactive to the metrological characteristics of the meter
Operating conditions	-10 to +50°C ambient temperature
Dimensions L/W/H	15 mm / 47 mm / 55 mm
Protection class	IP 40

Q-loud EnergyCam 1.0 Wireless M-Bus Product description V1.1, *This document replaces all former versions*