elvaco

CM*i*2130G3

Integrated MCM for Itron ECHO II and CF 51/55, Gateway for Mobile Network

CMi2130 is mounted inside an Itron CF 51/55/ECHO II to act as a cost-effective M-Bus Metering Gateway. The CMi2130 uses standard open protocol for fast and easy integration with any existing system. The MCM is configurable by SMS and can receive software updates over the air. Its flexible and versatile design makes it simply the most powerful GSM/GPRS solution for district heating on the market.

READY TO USE

Mounted inside the Itron ECHO II/CF meters the CMi2130 can handle up to 8 external connected M-Bus slaves. The CMi2130 requires no configuration in the field, which reduces both installation costs and the risk of handling errors. The CMi2130 unit delivers immediate installation status and starts logging meter data directly after power up.

STANDARD OPEN PROTOCOLS

The standard open protocol design enables fast integration into existing billing and reporting systems. Transparent M-Bus communication with GSM and TCP works with any software supporting the M-Bus standard. The CMi2130 can send meter values using FTP, HTTP and email. The email report feature prevents firewall and IT-structure implementation problems.
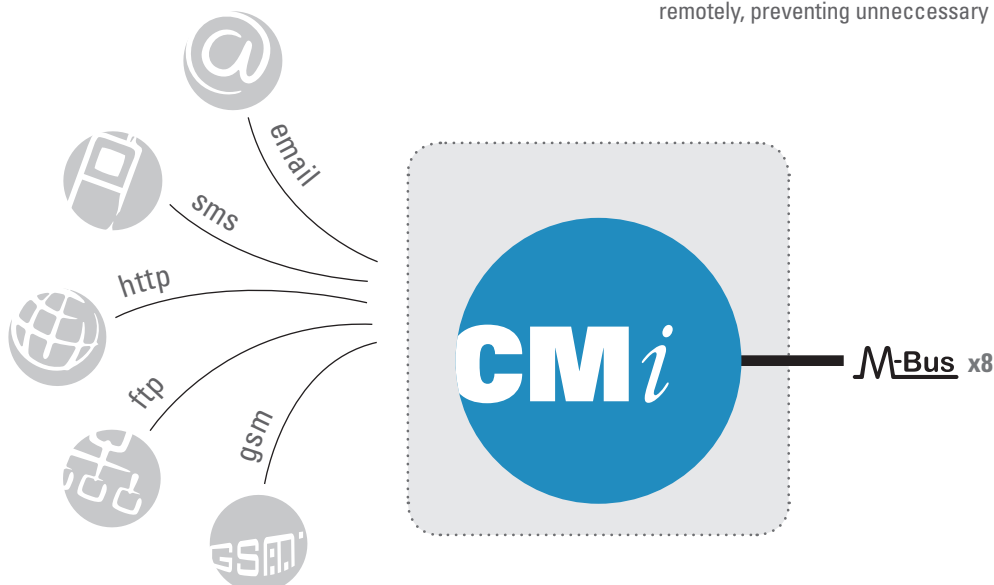
FLEXIBLE

The CMi2130 has a flexible design with many integration and communication possibilities, which allows a wide range of customer implementations. Special needs can be satisfied by adding new functionality to an existing installation using the remote update facility.

COST EFFECTIVE

The CMi2130 provides one of the most cost-effective solutions for district heating on the market. The integrated solution reduces the amount of equipment necessary in the field, which lowers both installation and initial setup costs. The quality and the number of options available serve to minimize the overall cost of the product over the course of its use.

FUTURE PROOF

The CMi2130 is built on standard SUN Java™ platform technology, a worldwide standard. Core platform and libraries are designed and tested by leading software companies. Updates and patches can easily be performed remotely, preventing unneccessary service calls or on site visits.

Mechanics

Protection class	IP64
Dimensions (w x h x d)	56 x 65 x 21 mm
Weight	40 g
Mounting	In Itron CF 51/55/ECHO II
Antenna	Built-in, or optionally external via SMA-f
SIM-card	Slide, standard size

Electrical connections

Supply voltage	Internal power supply
Connection M-Bus	Push-pull connector, cable area 0.2-0.75 mm²
Network	Mobile (Radio)

Electrical characteristics

Nominal voltage	100-240 VAC (+/- 10%)
Frequency	50/60 Hz
Power consumption (max)	<6 W
Power consumption (nom)	<1 W
Installation category	CAT 2

Environmental specifications

Operating temperature	-20 °C to +55 °C
Operating humidty max	5 % to 90 %, non-condensing
Operating altitude	0-2000 m
Pollution degree	Degree 2
Usage environment	Indoors
Storage temperature	-40 °C to +85 °C

User interface

Green LED	Power
Red LED	Error
Yellow LED	GSM status
Push button	Factory reset
Configuration	SMS, HTTP, GSM CSD, Telnet

M-Bus

Interfaces	Integrated M-Bus Master
M-Bus standard	EN 13757
Transparent M-Bus	GSM and TCP/IP (software limit does not apply to Transparent M-Bus mode)
Decryption	No

Integrated M-Bus Master

M-Bus baud rate	2400 and 9600 bit/s
Nominal voltage	28 VDC
Maximum number of M-Bus devices (software limit)	128
Maximum number of unit loads (hardware limit)	8T/12 mA (in addition to the meter in which the MCM is mounted)
M-Bus search modes	Primary, secondary
Maximum cable length	1000 m (100 nF/km, maximum 90 Ω)

General

Real time clock backup	12 h
Real time clock accuracy	<2 s/day
Script engine	Intelligent script engine for active content generation
Software/firmware update	GSM/GPRS/HTTP
Measurement reports	HTTP, HTP, SMTP (e-mail)

Data storage (examples)

Number of meters: 1	500 days
Number of meters: 8	63 days
Number of meters: 32	16 days
Number of meters: 64	8 days
Number of meters: 128	4 days

Mobile network

GPRS class	Up to 12
Band	850/900/1800/1900 MHz

Integration

Meter implementation	Itron CF 51/55/ECHO II

Approvals

EMC	EN 61000-6-2, EN 61000-6-3
Safety	EN 61010-1, CAT 2