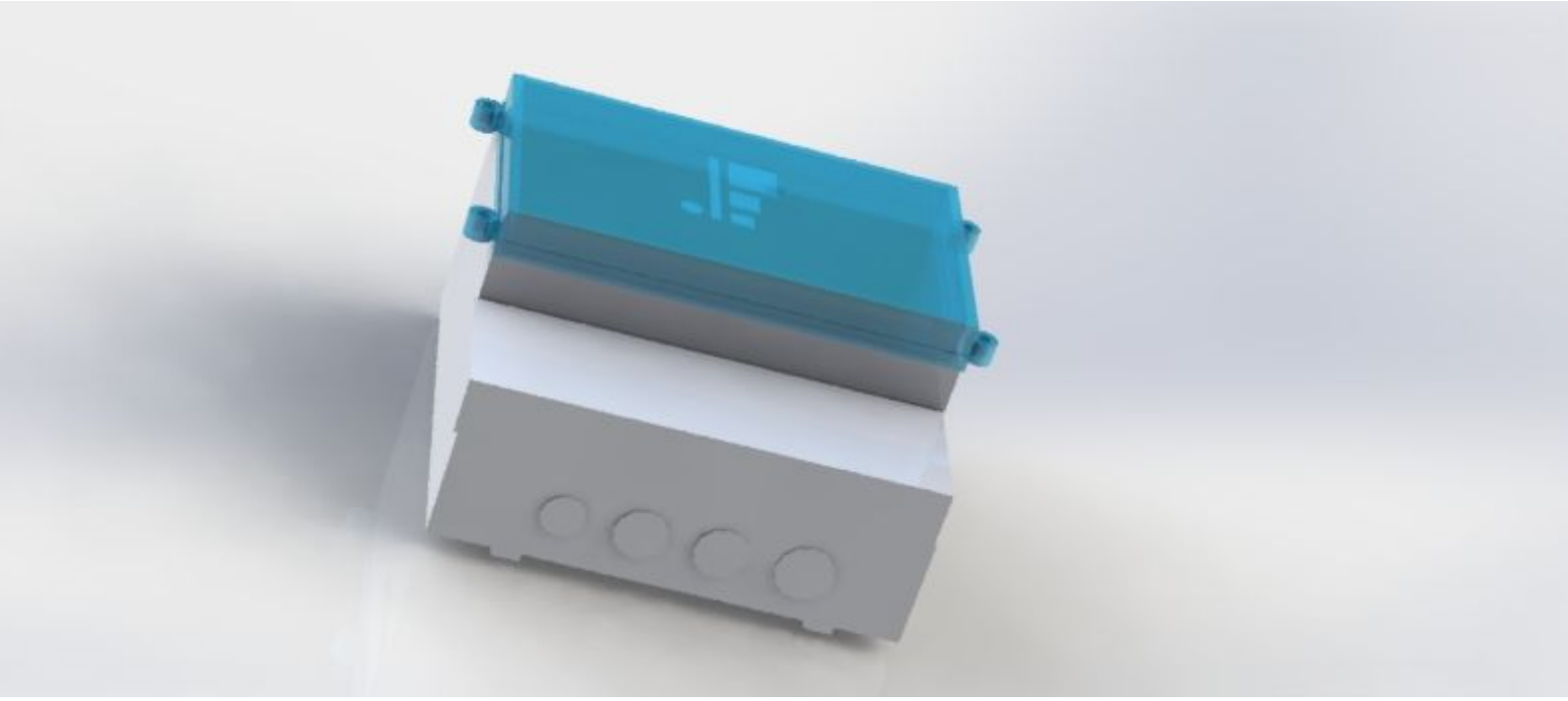
METR.systems

M-Gate | DATA SHEET

KEY FEATURES

- Open system gateway for wired and wireless M-Bus/ OMS
- Reads common submetering network nodes via wired/wireless M-Bus
- Error monitoring and remote device manager for M-Gate and network nodes
- Over-the-air updates
- Data transmission only encrypted (end-2-end)
- Data transmission at any desired time
- Connects up to 3000 meters



TECHNICAL SPECIFICATIONS

Feature	Description
Type	Metering gateway device
Communication interfaces	Wired M-Bus Wireless M-Bus PLC Ethernet Micro USB-B (OTG mode) USB-A (Host mode) UART I2C, I2S, SPI, JTAG, GPIO
Connectivity requirements	Internet connection via Ethernet, no static IP required Web application for administration, remote device control and data control
Remote control	Status monitoring of M-Gate and connected submetering network nodes Remote restart of M-Gates Control modes of submetering network nodes
Metering data	Data export in XML, CSV formats according to AMR specification
Update mechanism	Remote updates for security and desired functionality extensions
Security	On-device firewall Secure and encrypted data transmission via HTTPS (TLS, SSL) Automatic firmware security updates Data access only for authorized users Data export via IP whitelist (if desired)
Power supply	230 VAC, typical 3.5W. Standby power: > 1W
Power connection	2 screw terminals 2.5 mm²
Backup power supply	TC Real time clock with Goldcap super capacitor backup
System-LEDs	Internal to casing: Power, Process/Data out, LAN, Mode
Dimensions HxWxD	161 x 166 x 93 mm, designed for wall mounting
Protection rating	IP65
Weight	1,1Kg
Temperature range	-25°...to +75°C
Allowed air humidity	5...95% relative humidity, not betaken
Conformity	CE Safety: EN60950 EMV: EN55022 (9:2003), EN55024 (10:2003)

	WEEE

MAIN BOARD

Speed	528 Mhz
RAM	256 Mb
Flash	128 Mb
MicroSD slot	1 x 32 Gb
OS	Linux Distro Yocto

M-BUS

Standards	**DIN EN 13757-2, DIN EN 13757-3**
Type	Wired M-Bus
Physical connection	Wire / bus length up to 1km, standard twin copper twisted pair cable 2x 0.8mm diameter wire M-Bus voltage: 36 V
Data rate	300 to 9600 Baud
Data format	8 data bits, 1 start bit, 1 stopp bit and 1 parity bit (even parity)
Connection	Up to 10 slaves, then 2,500 devices over network nodes
Galvanic isolation	1500 V

WIRELESS M-BUS

Standards	Wireless M-Bus for OMS. EN13757 - 4 : 2013 OMS V3.0 / 4.0 Module is Pre-certified and conforms to CE and R&TTE regulations
Range	Up to 50m
Data rate	Up to 500 kb/s
Frequency band	868 MHz
Channel spacing	12,5 kHz min.

Modulation	Modulation: 2-FSK, GFSK, MSK, GMSK, OOK and ASK. C,S and T Mode.
Encryption	Mode 5 and 7 (AES128-CMAC) Wireless M-Bus, EN13757 – 4:2013
Output power	Max +11 dBm in default mode (up to +15.5 dBm in boost mode)
Addressing	1-250 Wireless slave devices

ETHERNET

Connector	10/100 Base-T IEEE 802.3, RJ45 socket(8P8C with 2 LEDs), shielded
Operating mode	Auto negotiation, Auto-MDI-X (Crossover cable not requiered)
Status lights	LED in yellow and green, blinking
Galvanic isolation	1500 V

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