

VIVAVIS

DECODING THE FUTURE



enQube II

This is the revolution in submetering

Use enQube II to read meters, sensors or measuring instruments of your property by means of automated remote transmission via secure communication routes.

With the integrated GSM module, enQube II is able to use GPRS, EDGE, and LTE (2.5G, 2.75G and 4G) for remote communication and guarantees maximum bandwidth and availability by using the optimum data service.

In detail

- IP-based data transfer via mobile network (LTE, GPRS or EDGE)
- Secure data transmission via OpenVPN, IPsec or TLS
- Reading of wireless M-Bus devices in accordance with OMS standard
- Gateway functions for LoRa®

General

Housing

Material:	moulded insulation case (UV resistant) for wall mounting
Dimensions:	L x W x H = 186.5 x 180 x 50 mm

Operation and storage conditions

Degree of protection:	IP44
Storage temperature:	- 40 °C ... + 70 °C
Operating temperature:	- 25 °C ... + 55 °C

Voltage supply

Nominal voltage:	230V AC +/- 10 %
Nominal frequency:	50 Hz
Average power consumption:	3 W

Connection technology

Power supply:	flat non-wirable two-pole plug with cord
Antennae:	SMA (female) for OMS SMA (female) for GSM
Ethernet interfaces:	RJ45 (8P8C) internal

µC System

Operating system:	embedded Linux
Program memory:	256 MB Flash
Data storage:	2 GB Flash
Real time clock	
Accuracy:	+/- 5 ppm over complete operating temperature range
Power reserve:	at least 6 days, typical 16 days

Information security

Cryptography

Standard:	in accordance with technical guideline BSI TR-02102
Key lengths:	AES: AES-128, AES-192, AES-256, RSA: 2048 bit

Optional

Open VPN/IPsec/TLS:	in accordance with BSI catalogue M5.148 (IT Grundschutz/IT communication)
---------------------	--

Protocols

Data transmission protocols for local communication

- EN 13757-2, EN 13757-3 (EN 1434/M-Bus)
- EN 13757-4 wireless M-Bus; range up to 1000 metres (LOS)

Optional

- IEC 62056-21, IEC 61107 (VDEW 2.1)
- IEC 13757-2
- IEC 62056-5-3, IEC 62056-6-1, IEC 62056-6-2, IEC 62056-7-6 (DLMS/COSEM)

Data transmission protocols for remote communication

- FTP(S), NTP, HTTP(S), DNS, PPP, SMTP(S)

Optional

- OpenVPN, IPsec, TLS

Data transmission protocols for LoRa®

- UDP (User Datagram Protocol)
- LNS (LoRaWAN® Network Server)

Interfaces

Wireless M-Bus

OMS standard:	EN 13757-4
Number of supported devices (meters, sensors and measuring instruments):	1000
Communication modes:	S, T and C

M-Bus (optional)

Standard:	M-Bus (not galvanically isolated) up to 4 Devices M-Bus Master according to DIN EN 13757-2 (DIN EN 1434)
-----------	---

LoRa® (optional)

Communication mode:	Device takes over function of a LoRa®-Gateways Caching of data packets in case of remote connection failure
---------------------	--

Service interface

Type:	Ethernet interface
Standards:	10BASE-T / 100BASE-TX in accordance with IEEE 802.3 Clause 14 and 15, auto-crossover

USB service interface

Type:	USB device interface
-------	----------------------

Serial interface

Type:	RS232/485 (H) galvanically isolated
-------	-------------------------------------

WAN interfaces

Mobile service

Supported services and frequency ranges:	GPRS/EDGE 900/1800 MHz LTE 800/900/1800/2100/2600 MHz
Data rates:	GPRS class 12, CS1-4, up to 86.5 kbps EDGE class 12, MCS1-9, up to 236.8 kbps LTE Cat. 1 uplink up to 4 Mbps, downlink up to 10 Mbps
Reception sensitivity:	better than -108 dBm
SIM card format:	integrated micro SIM card reader for SIM cards with 1.8 V and 3 V

Ethernet

Type:	Ethernet-Schnittstelle
Standards:	10BASE-T / 100BASE-TX nach IEEE 802.3 Clause 14 und 15, Auto-Crossover

Indicators

Operation:	bicoloured LED below the terminal cover
Status:	bicoloured LED below the terminal cover

Conformity/Standards