

Benefits:

- Investment protection for smart metering infrastructure
- Compliant with European standardization for Smart Metering Gateways (M/441)
 - Leverages common Internet technologies
- Flexible meter integration (electricity, gas, water, heat)
- Flexible communication with central sites (GSM/GPRS or LAN/DSL)
- Flexible integration with Smart Home (e.g. display, handheld)
- Proven and reliable hardware
- Easy installation, minimizing time and risk for customer appointments

Key Features:

- Modular architecture separating the gateway from meter and HAN
- Wired meter interface (RS485, RS232)
 - DLMS and 1107 protocol (EN62056-21)
- Wireless M-Bus interface
 - Open Metering Communication
 - EN 13757-3/4 (W-MBus)
- Two Ethernet interfaces
- Support for Internet- and security standards
 - TCP/IP, SSH, HTTP(S)/XML
 - HTTP(S) authentication, X.509 certificates
 - NTP, DHCP, PPPoE
 - DynDNS, STUN
 - AES encryption
- Push operation (ftp, http(s))
- Browser based configuration and administration
- Operating status signaled by LEDs
- Remote firmware update
- Alarm messages and logging



The gMUC-GPRS controller from Dr. Neuhaus Telekommunikation GmbH enables multi-line wireless remote data reading from domestic and industrial supply meters by means of GSM/GPRS network or DSL connections. Measurement values for electricity, gas, water and heat are automatically transmitted to one or more central locations using common Internet standards.

Meters are connected by wire (RS485, RS232) or via short-range radio (wireless M-Bus). Other technologies and interfaces, such as ZigBee or wired M-Bus, are available upon request. The device can be configured and administered remotely. A local interface enables direct access to measurement values for end customers (e.g. PC, display solutions, mobile devices).

The gMUC-GPRS controller meets all requirements of large-scale deployments. When mounting the gateways locally in households, only cables need to be connected.

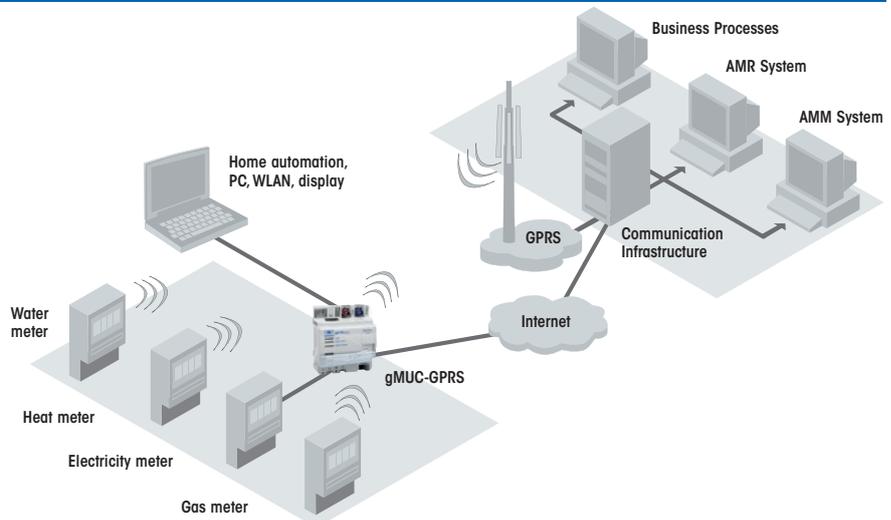
The gMUC-GPRS controller is a state-of-the-art communication module based on proven hardware, and it complies with European Smart Metering standardization activities.



System components

- gMUC-GPRS
- Antenna
- SIM card for WAN communication via GPRS
- DSL modem or DSL router (only needed for WAN communication via DSL)

Topology



Technical data

INTERFACE

Meter Interface Wired	RS485 – RJ10 (jack) for elec. supply meter: Speed: 300 to 115,200 baud (adjustable) data format: Adjustable;
Meter Interface Wireless	Wireless M-Bus: S mode, T mode; bidirectional communication; meter and sensor connection;
Customer Interface	Ethernet interface 10/100 Base T as RJ45; auto crossover; communication: XML/HTTP(S)
WAN Interface	GSM/GPRS or Ethernet interface; communication: XML/HTTP; authentication via HTTP digest; encryption via HTTPS (X.509 certificates)
Power supply	Device input voltage: Un 195 – 253 VAC (single-phase connection, spring terminals), Fn 50 Hz; power consumption: 2.5 watts (typical), 5 watts (peak)

RADIO

Connection	GPRS: Class 12, up to 4 uplinks / up to 4 downlinks, max. 5 slots; coding schemes CS-1, CS-2, CS-3, CS-4;
Transmitting Power	Quadband GSM 850/ 900/1800/1900 MHz;
Antenna Port	GSM: nominal impedanz: 50 Ohm; Fakra connector; W-MBUS: nominal impedanz: 50 Ohm; Fakra connector;

FUNCTIONALITY

Configuration	Browser based, via Customer- or WAN interface
Meter Reading	Local recording in gMUC controller, flexibly configurable. Data available through Customer- and WAN interface
Clock	Real time clock; 48h power reserve; time synchronization via NTP or locally
Firmware Update	Local or remote

APPROVALS

Environmental Conditions	Operation –20 °C to +65°C (>55 °C derating); humidity 0-95 %, non-condensing
Approvals	CE Conformity: Telecommunications End Devices (1999/5/EC): EN301419-1, EN301511, Module with GCF Approval; Electromagnetic Security (1995/5/EG): EN 55022 Class B, EN 55024, EN 61036, ETSE EN 301 489-1 & -7; Electrical Safety (73/23/EEC): EN 60950

MECHANICS

Mechanics	Housing: Standard switching cabinet housing for mounting the top hat rail, IP2x, ignitability according to UL94-V0, dimensions: approx. 70 x 60 x 90 mm (L x W x H); weight: approx. 180 g; SIM card accessible from the exterior, sealable opening, SIM card can only be exchanged once the MUC has been deinstalled; operational securing via mounting behind sealed cover in switching cabinet (applies to all elements except the customer interface, service sensor & LED)
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MISCELLANEOUS

Accessories	Various antennas
Scope of delivery	Device; installation guide; access to download area
Order number	gMUC-GPRS, item no. 819004 (RS485), item no. 819028 (RS232)

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