

### Benefits:

- Investment protection for smart metering infrastructure
- Compliant with European standardization for Smart Metering Gateways (M/441)
- 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 or RS232)
  - DLMS and 1107 protocol (EN62056-21)
  - MODBUS RTU
- Wireless M-Bus interface
  - Open Metering Communication
  - EN 13757-3/4 (W-MBus)
- Irda Interface, wired M-Bus via optional module
- 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
- Logging



The gMUC-GPRS controller from Dr. Neuhaus Telekommunikation GmbH enables multi-line remote data reading from domestic and industrial supply meters and other sensors 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 or RS232 and wired M-Bus via optional module) or via short-range radio (wireless M-Bus). Other technologies and interfaces, such as ZigBee or RF169, 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.

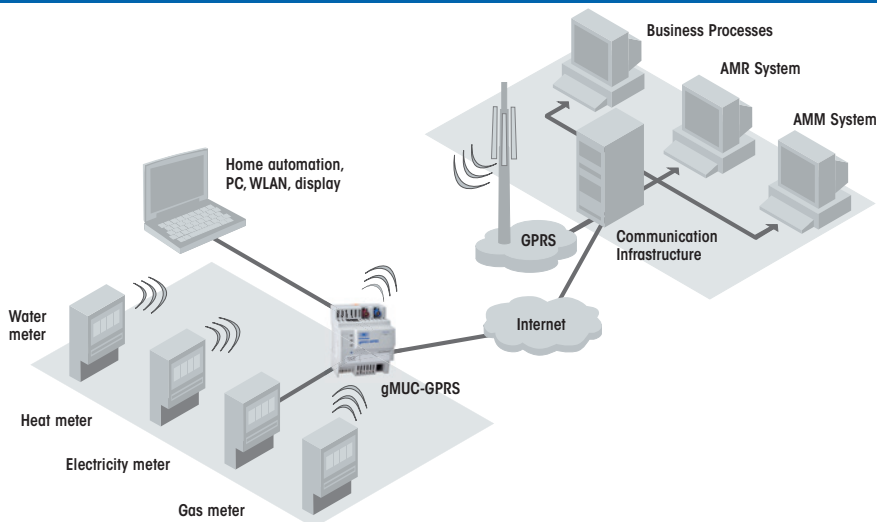
The gMUC-GPRS controller is a state-of-the-art communication module based on proven hardware, and it complies with European Smart Metering standardization activities.



## 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

<b>Meter Interface Wired</b>	RS485 - RJ10 (jack) for elec. supply meter: Speed: 300 to 115,200 baud (adjustable) data format: Adjustable; Wired M-Bus: Connection of wired M-Bus module(optional) via the IRDA-Interface on the left side of the gMUC
<b>Meter Interface Wireless</b>	Wireless M-Bus: S mode, T mode; bidirectional communication; meter and sensor connection;
<b>Customer Interface</b>	Ethernet interface 10/100 Base T as RJ45; auto crossover; communication: XML/HTTP(S)
<b>WAN Interface</b>	GSM/GPRS or Ethernet interface; communication: XML/HTTP; authentication via HTTP digest; encryption via HTTPS (X.509 certificates)
<b>Power supply</b>	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

<b>Connection</b>	GPRS: Class 10, up to 4 uplinks / up to 4 downlinks, max. 5 slots; coding schemes CS-1, CS-2, CS-3, CS-4;
<b>Transmitting Power</b>	Quadband GSM 850/ 900/1800/1900 MHz;
<b>Antenna Port</b>	GSM: nominal impedanz: 50 Ohm; Fakra connector; W-MBUS: nominal impedanz: 50 Ohm; Fakra connector;

### FUNCTIONALITY

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

### APPROVALS

<b>Environmental Conditions</b>	Operation -20 °C to +65°C (>55 °C derating); humidity 0-95 %, non-condensing
<b>Approvals</b>	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

<b>Mechanics</b>	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

<b>Accessories</b>	Various antennas, wired M-Bus module
<b>Scope of delivery</b>	Device; installation guide; access to download area
<b>Order number</b>	gMUC-GPRS, item no. 821304 (230 VAC), item no. 821342 (48 VDC); Versions without wireless M-Bus interface and/or RS232 interface available on request

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