

Benefits:

- Reliable and flexible WAN communication (PLC, LAN, GPRS, WiFi)
- Highest security based on proven standards and cryptographic hardware (HSM)
- Flexible meter integration, supporting a range of wired and wireless meter interfaces
- Compliant with European standardization for Smart Metering Gateways (M/441)
- Easy and automated installation, fully integrated into central processes.
- Minimizes time and risk for customer installations

Key Features:

- Modular architecture separating the gateway from meter and HAN
- Dynamic master-slave architecture; SCM can work stand-alone, as PLC router or as PLC gateway
- WAN communication - Built in via PLC or via Ethernet/LAN- Pluggable modules for GPRS- and WiFi communication
- Push- or Pull operation
- End-to-end TLS encryption (DES, Triple DES, AES algorithms)
- Tamper detection
- Wired meter communication (wired M-Bus, RS485, Ethernet interfaces; DLMS/Cosem HLS)
- Wireless M-Bus meter interface (868 MHz, OMS)
- Remote firmware update
- Remote or local configuration and meter provisioning
- Switching output
- HAN connectivity
- Operating status signaled by LEDs



The SMARTY SCM controller from Dr. Neuhaus Telekommunikation enables multi-line remote data reading from domestic supply meters. An SCM controller can work stand-alone, as PLC router or as PLC gateway: As a PLC gateway, it communicates with one or more central locations via GPRS or LAN. As a PLC router, it communicates with a PLC gateway via PLC.

Different meter protocols like DLMS/Cosem or wireless M-Bus are supported by the SCM and provide high flexibility for installations. Other technologies and interfaces, such as ZigBee, are available upon request.

The SMARTY SCM controller satisfied highest security requirements. It uses state-of-the-art technologies including a hardware security module (HSM) and cryptographic algorithms (e.g. end-to-end TLS). All access to the device is based on certificates.

The SMARTY SCM controller can be configured and administered locally or remotely. A local interface enables direct access to measurement values for end customer information.

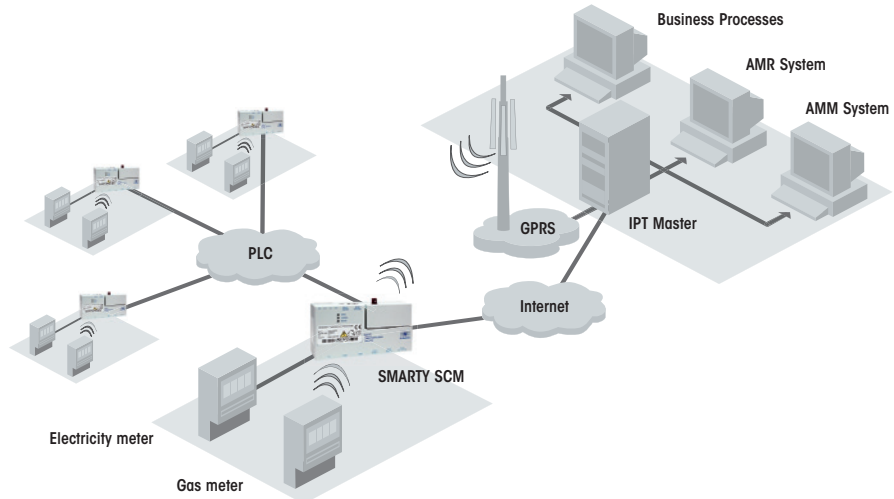
The SCM controller meets all requirements of large-scale deployments. It is a future-proof communication module which complies with European Smart Metering standardization activities.



System components

- SCM controller
- DSL modem or DSL router (for WAN communication via DSL)
- GPRS module, antenna and SIM card (for WAN communication via GPRS)
- WiFi module, antenna (for WAN communication via WiFi)

Topology



Technical data

LOCAL INTERFACES

Meter Interface Wired	RS-485(1x; up to 32 transceivers), Ethernet (1x; 10/100 Base T as RJ45), wired M-Bus (2x; up to 64 loads each)
Meter Interface Wireless	Bidirectional wireless Mbus (868 MHz), S1, S2, T1, T2 modes, OMS compliant
Antenna Port (wMBus)	Nominal impedanz: 50 Ohm; Fakra connector
Configuration Interface	Ethernet (10/100 Base T as RJ45)
Customer Interface	Ethernet (10/100 Base T as RJ45)
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)

WAN INTERFACE

Connection	TLS security, SML over IPT; PLC: FSK, PSK multi-mode, dynamic master-slave architecture; Ethernet interface: PPPoE for communication via DSL router; GPRS module: Class 10, up to 2 uplinks / up to 4 downlinks, max. 5 slots; WiFi module
Transmitting Power (GPRS Module)	Quad band; GSM 900 MHz: max. 2 watts, DCS 1800 MHz: max. 1 watt, GSM 850 MHz: max. 2 watts, PCS 1900 MHz: max. 1 watt;
Antenna Port (GPRS Module)	Nominal impedance: 50 ohms; jack: Fakra

FUNCTIONALITY

Configuration	Locally via configuration tool, or remote
Meter Reading	Local reading in controller, flexibly configurable. Data available through WAN- and HAN interface.
Clock	Internal Real time clock; 48h power reserve; time synchronization via NTP or locally
Firmware Update	Remote or local
LEDs	WAN connectivity, meter signal, mode

APPROVALS

Environmental Conditions	Operation –20 °C to +65 °C (>55 °C derating); humidity 0–95 %, non-condensing
Approvals	CE; R&TTE (GSM); GSM/GPRS module with GCF certification; EN 55024; EN 55022 Class A; EN 61000-6-2; EN 60950

MECHANIC

Mechanics	Housing: top hat rail mounting, IP2x, ignitability according to UL94-V0, dimensions: approx. 153 x 87 x 65 mm (L x W x H); weight: approx. 380 g;
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MISCELLANEOUS

Accessories	Various antennas, GPRS and WiFi module
Scope of Delivery	Device; installation guide; access to download area
Order Number	820635

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