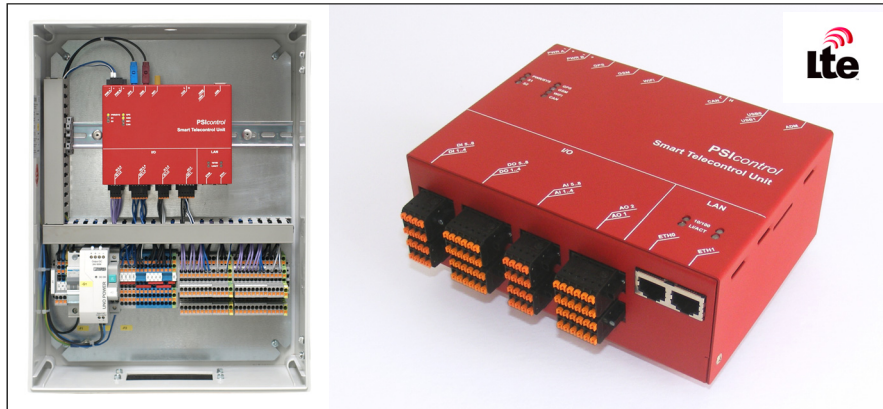


Smart Telecontrol Unit VPP-Box

Communication Solution for Virtual Power Plants



The Smart Telecontrol Unit VPP-Box (STU VPP-Box) offers a complete communication solution for the connection of local producers and consumers to build-up virtual power plants (VPP).

Flexible connection

Via fixed network or mobile communication network the STU VPP-Box allows the remote connection of controllable producers such as photovoltaic, biogas or water power systems and controllable consumers to a superior VPP control system. Different systems can be connected via digital or analog input and output interfaces. Software modules for the controlling of these systems make them available within the VPP control system using a standardized data model.

A comfortable Web interface supports the definition of the software module as well as interface settings. Additionally a configuration file can be uploaded to the device. An integrated Soft SPS interface according to IEC 61131 allows a flexible system extension for the controlling and monitoring of VPP systems.

Security

Extensive security features as well as integrated controlling and alarm functions ensure the system and data security. Among others these features cover a central user management, a hardened system, the encrypted communication via VPN tunnels and an integrated firewall.

STU MGC-L

Interfaces

- 2 LAN interfaces
- 1 RS-232 interface
- 2 USB host interfaces
- 1 CAN bus interface
- Digital and analogue I/O interfaces
- 1 LTE/GPRS/UMTS antenna*
- Digital and analogue I/O extensions*
- xDSL, TETRA, Powerline*

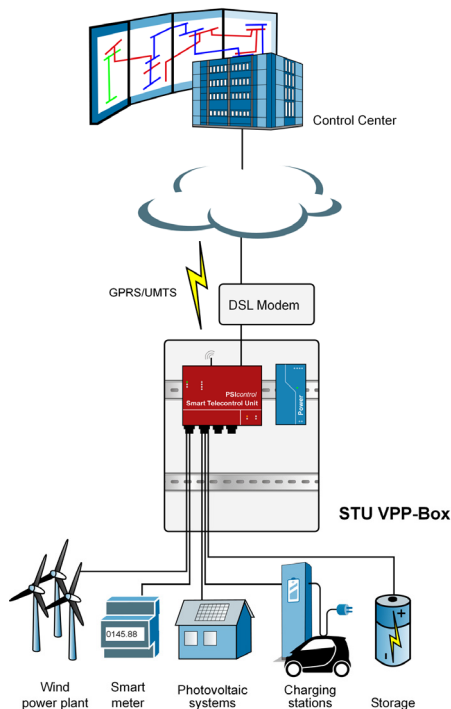
*(option)

Protocols

- Telecontrol protocols: IEC 60870-5-104
Optional: IEC 61850, IEC 60870-5-101
- Time synchronisation protocols: NTP, GPS
- Field bus protocols: CANopen, Modbus (RTU/TCP)

Software

- Embedded Linux Distribution „NENUX“
- Soft SPS according to IEC 61131



STU VPP-Box

System components

- STU MGC-L
 - Basic edition
 - Soft SPS runtime licence
 - VPN licence
- Power supply unit (230 VAC/24 VDC 30 W)
- Housing (Fibox) with mounting plate
- Cable feedthrough, sealing frame, snap-up frame incl. 8 cable sleeves, cable clamps, cable channel and DIN rail
- Thermomagnetic circuit breaker
- Automatic cutout

Applications

- Local control and monitoring of flexible producers and consumers
- Connection of energy systems to control systems for virtual power plants
- Demand Side Management Controller
- Micro Grid Controller

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