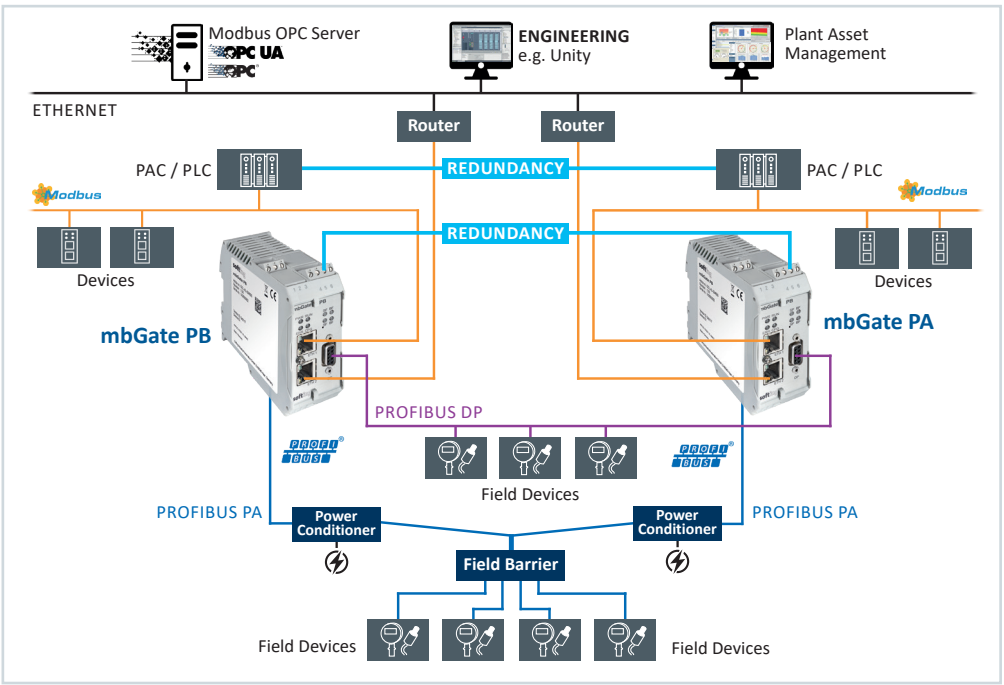
mbGate PB

Simple connection of PROFIBUS Slave Devices to Modbus Control Systems via Internal I/O Mapping

- **Re-use of Existing Power Conditioners in Technology Upgrade Projects**
- **Simple Configuration of Device Mapping via Built in Web Interface**
- **Prepared for Integration in Standard Engineering and Plant Asset Management Tools**
- **MODBUS/TCP Redundancy**



Key Component for Transition to State-of-the-Art Technology

- Simple replacement of installed PROFIBUS DP/PA segment couplers
- Re-use of existing PROFIBUS segments without requiring modification

Direct Connectivity to PROFIBUS Segments

- Single access point to PROFIBUS DP and PROFIBUS PA segments from Modbus TCP networks
- Acting as Modbus TCP Server and PROFIBUS PA and PROFIBUS DP Master
- Support of one PROFIBUS DP segment and up to two PROFIBUS PA segments

Configuration, Parameterization and Plant Asset Management Using Standard Industry Tools

- Supports major Modbus engineering tools such as Schneider Unity Pro or Siemens TIA Portal
- Included CommDTM allowing use in FDT/DTM frame applications
- EDD-based device parametrization using Siemens Simatic PDM

MODBUS/TCP Redundancy

- Supports the use of two redundant PLCs and two redundant gateways
- Easily enabled via licensing
- Full control of redundant operation mode via engineering and PLC

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Technical Data

Hardware	Processor	Altera Cyclone V SoC with dual-core ARM Cortex-A9
	Status LEDs (Gateway)	PWR (power supply), RUN (operation), ERR (error), CFG (configuration and update)
	Status LEDs (Fieldbus)	SF (system fault), BF (bus fault)
Interfaces and Connectors	Ethernet	2 * IEEE 802.3 100BASE-TX / 10BASE-T, managed Ethernet switch for daisy chain totpology Connectors: RJ45 Protocol: Modbus TCP Server RESTful API interface for device configuration
	PROFIBUS PA	2 * PROFIBUS PA (MBP) segments, Bus-powered Medium Attachment Unit (MAU): Fieldbus voltage range: 9 VDC ... 32 VDC, current consumption 10 mA, Connectors: 3-position screw connection, galvanically isolated
	PROFIBUS DP-V0 / V1	1 Segment with RS485 Physical Layer, Connector: 9-pin Sub-D socket
Physical Properties	Dimensions (H x W x D)	100 mm x 35 mm x 115 mm
	Weight	Approx. 0.25 kg
	Power Supply	18 VDC ... 32 VDC; SELV/PELV power supply mandatory Typical input current: 200 mA, maximum input current: 1 A (allowing for in-rush current at switch-on) No power supply to PROFIBUS PA segments through mbGate PB
	Typical Power Loss	6 W
	Operating / Storage Temperature	-40 °C ... +60 °C / -40 °C ... +85 °C (see detailed mounting description in user manual)
	Relative Humidity	10 % ... 95 %, non-condensing
	Cooling	Convection, no fan
	Coating	Conformal coating based on ANSI / ISA-S71.04 G3
	Mounting	DIN rail 35 mm
	Protection Class	IP20

Scope of Delivery

Hardware	mbGate PB Gateway
Documentation	On Website

Order Numbers

GCA-EN-024808	**mbGate PB**, Modbus TCP to PROFIBUS Gateway. Supports **2 PA segments** (up to 32 PA devices, MBP physical layer) and **1 PROFIBUS DP segment** (RS485).

Additional Products and Services

LRL-DY-134501	**dataFEED OPC Suite**, Version 4.01 and higher, including all supported PLC protocols, support for OPC UA, access for any number of dataFEED OPC Tunnel Clients, for simultaneous access to a total of up to 100 OPC UA Servers, OPC Servers and OPC Tunnel Servers, and many more Functionalities such as Database and File Access, Data Exchange, Optimizer, Concentrator and Bridge
GCA-EL-024802	**mbGate PA**, Modbus TCP to PROFIBUS PA Gateway. Supports **up to 2 PA segments** (up to 32 PA devices).
GCA-EL-024804	**mbGate PA**, Modbus TCP to PROFIBUS PA Gateway. Supports **up to 4 PA segments** (up to 64 PA devices).
GCA-EN-024806	**mbGate DP**, Modbus TCP to PROFIBUS DP Gateway. Supports **1 PROFIBUS DP segment** (RS485).

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