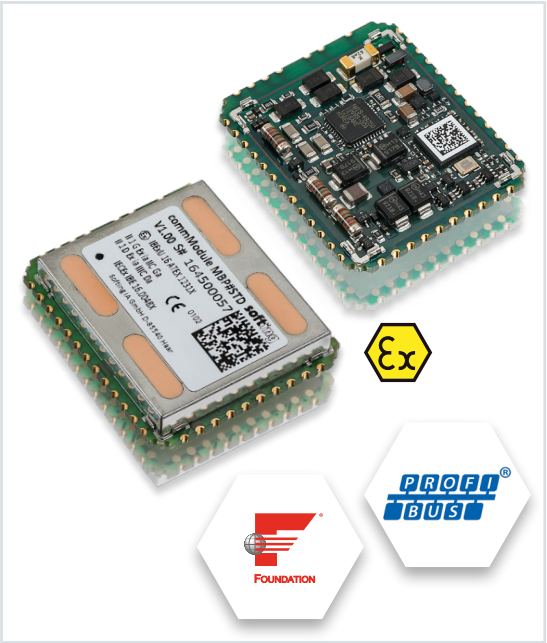
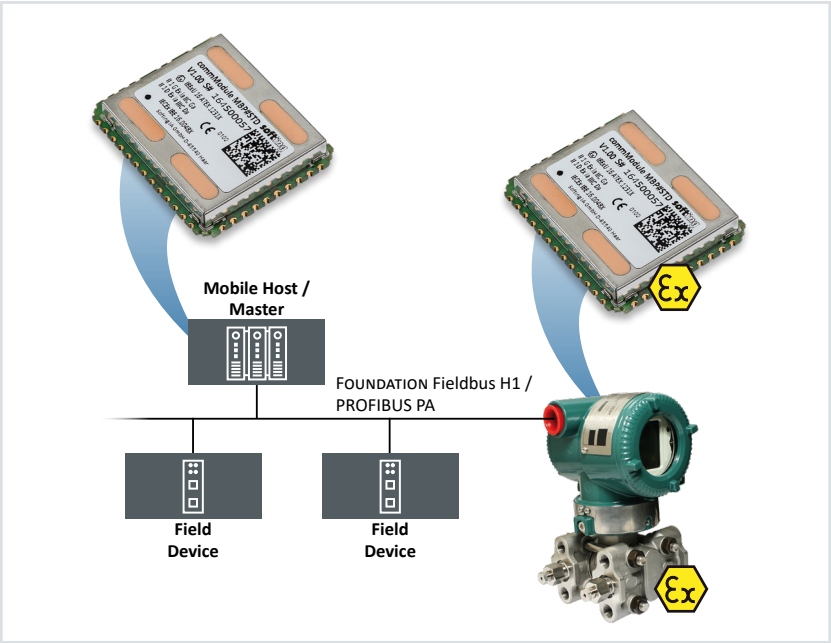
# commModule MBP

## Implementation of FOUNDATION Fieldbus and PROFIBUS PA Field Devices

- **Fast and cost-effective fieldbus implementation with a single hardware platform for FOUNDATION Fieldbus H1 and PROFIBUS PA instruments.**
- **Small footprint as well as the universal hardware are the main arguments in favor of commModule MBP.**
- **Easy integration into HART and Modbus devices by script-controlled mapping to HART or Modbus commands using commScripter tool.**






### Fast Implementation

- Fast implementation path to FOUNDATION Fieldbus H1 or PROFIBUS PA instruments
- Fully tested protocol stack, proven in ten thousands of field devices
- Only hardware integration to be implemented
- Meeting FF requirements for Physical Layer Test and Conformance Test as well as of PA specifications

### Cost Reduction by Universal Piggyback Solution

- Small footprint for use in majority of process equipment
- No expensive development of fieldbus hardware
- No stack porting, no application programming
- Components placed on one side only, automatic assembly on motherboard possible
- Potted and non-potted version for optimized ex design
- ATEX and IECEx approval for use in explosive environments
- Stack license included, FF or PA functionality selected by hardware pin

### Smart way to upgrade HART and Modbus Devices for Fieldbus and PROFIBUS

- Script-controlled mapping of fieldbus function block application to device specific HART or Modbus commands
- No need for C programming
- commScripter tool checks script and creates mapping table
- Off-the-shelf commModules are customized by downloading mapping table

# commModule MBP

## Technical Data

| | | |
|---|---|---|
| **Hardware** | Processor | Renesas RX64M |
| | RAM | 512 kByte |
| | Flash | 3 MByte (on chip) |
| | Non-volatile RAM | On chip for persistent storage of parameters |
| | Connectors | Solder pads on edge of PCB |
| | Current Consumption | 10 mA … 26 mA (adjustable by software) |
| | Power Supply to Device | 3.2 V (max. 70 mW) and 6.2 V (max. 90 mW) |
| | Operating Temperature | -40 °C … +80 °C |
| | Storage Temperature | -40 °C … +85 °C |
| | Relative Humidity | 10 % … 90% non condensing |
| | Mounting | Soldering (automatic assembly possible for non-potted version) |
| | Weight | 15 g (pottet), 6,2 g (non-potted) |
| | Dimensions | 32,00 x 38,71 x 6,50 mm (pottet), 32,00 x 38,71 x 4,50 mm (non-potted) |
| **Interfaces** | Fieldbus Interface | FOUNDATION Fieldbus H1 and PROFIBUS PA according to IEC61158-2, selectable by HW pin |
| | Interface to Field Device | UART (regular firmware for commScripter), UART, I2C, SPI (user specific firmware) |
| | Protocol to Field Device | Protocol to Field Device |
| **Certificates** | ATEX | Ex II 1G Ex ia IIC Ga |
| | IBEXU17ATEX1135U | Ex II 1D Ex ia IIIC Da |
| | IECEx IBE 17.0038U | Ex ia IIC Ga, Ex ia IIIC Da |
| | FF Physical Layer | Passed |
| | FF Conformance | Passed (CT1014FF) |

## Scope of Delivery

| | |
|---|---|
| Hardware | Packaging Unit: 90 pieces in tray (sealed dry pack) |
| Firmware | FF and PA device stack plus commKit mapping application flashed on board |
| Documentation | Hardware Manual |

## Order Numbers

| | |
|---|---|
| EIA-KS-022200 | **commModule MBP** potted, 90 pieces in tray |
| EIA-KS-022220 | **commModule MBP** non-potted, 90 pieces in tray |
| EIA-KS-022400 | **commModule MBP** potted, 5 samples in tray, potted |
| EIA-KS-022420 | **commModule MBP** non-potted, 5 samples in tray |

## Additional Products and Services

| | |
|---|---|
| EVA-MK-022210 | **commModule Evaluation Kit** (commModule MBP in housing with connectors) |
| DXA-KL-020620 | Renesas E1 Flasher |
| LDA-KM-022451 | **commScripter** Single Seat Developer License FF to HART |
| LDA-LM-022452 | **commScripter** Single Seat Developer License PA to HART |
| LDA-KS-022453 | **commScripter** Single Seat Developer License FF to Modbus |
| LDA-LS-022454 | **commScripter** Single Seat Developer License PA to Modbus |
| HUA-AA-001012 | USB Hardlock for commScripter Licenses |
| SIA-KS-022470 | commScripter Workshop (per day) |
| SIA-KL-020100 | Integration Support (per hour) |

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