



# M4 Product Family

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## **1. Introduction**

The M4 product family consist of smart communication devices designed to provide flexible data communications solutions for industrial environments.

The M4 products are all software upgradable.

All the hardware in the M4 product family are equipped with a mobile modem with a flexible footprint. Therefore all the hardware can be shipped with a communication technologies that is best suited for the desired use case.

Current supported mobile network technologies are:

- 2G GPRS
- 3G UMTS (with 2G GPRS fallback)
- 4G LTE cat 1 (with 2G GPRS fallback)
- 4G LTE cat M1 (with 2G GPRS fallback)

More mobile network technologies can be supported on demand.

## **2. Products**

### **2.1 IB**



The IB hardware is equipped with an Ethernet interface and a mobile modem. It has galvanically isolated RS-232 and RS-485 interfaces. The hardware is built into a wall mountable and sealable housing with a separate terminal cover.

#### **2.1.1 IB\_GSM\_M4**

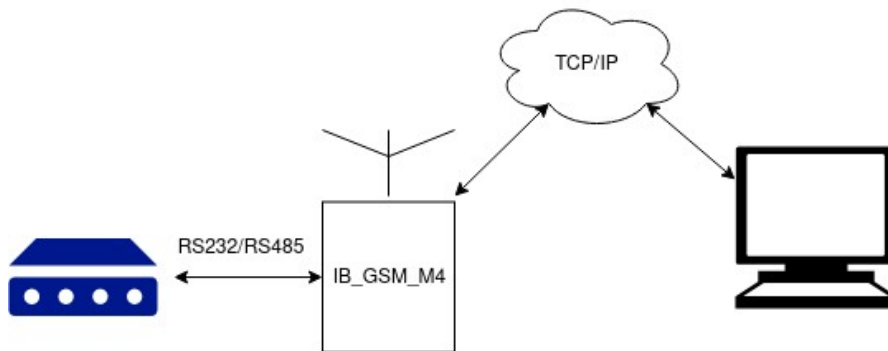
The IB\_GSM\_M4 software transforms the IB hardware in a multifunctional router with different working modes:

1. TCP server mode: The device will listen on a preconfigured port for incoming connections. Once connected, the device will provide transparent communications between the serial (RS232/RS485) interface and the network socket.
2. TCP client mode: The device will repeatedly try to connect to preconfigured server. Once connected, the device will provide transparent communications between the serial (RS232/RS485) interface and the network socket.

Besides the possible working modes, the device will act as a router with the following features:

- DHCP server (or client) on Ethernet interface
- NAT table

Example use cases are



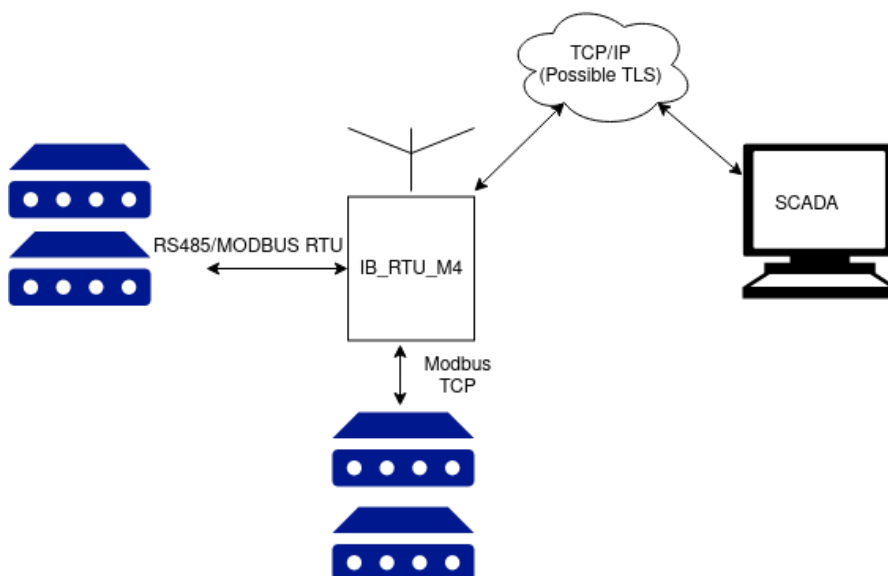
- Reading of an electricity meter (DLMS/COSEM) from a remote location
- Reading the log output of a device from a remote location
- Router
- ...

### 2.1.2 IB\_RTU\_M4

The IB\_RTU\_M4 software transforms the IB hardware into a remote terminal unit (RTU). The RTU will act as a protocol converter between a SCADA protocol and modbus (modbus RTU and/or modbus TCP). The following SCADA protocols are supported.

- IEC 60870-5-104
- MQTT

The TCP communications with the SCADA system can be secured with TLS (Transport layer Security).



***For this software solution the IB hardware needs to be equipped with additional memory.***

## 2.2 AB



The AB hardware is equipped with an Ethernet interface and a mobile modem. It has 1 active digital input and 1 digital output.

### 2.2.1 AB\_GSM\_M4

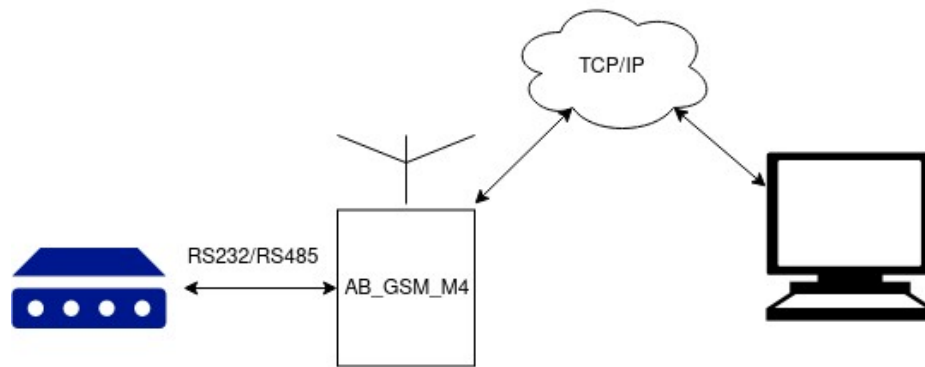
The AB\_GSM\_M4 software transforms the AB hardware in a multifunctional router with different working modes:

1. TCP server mode: The device will listen on a preconfigured port for incoming connections. Once connected, the device will provide transparent communications between the serial (RS232/RS485) interface and the network socket.
2. TCP client mode: The device will repeatedly try to connect to preconfigured server. Once connected, the device will provide transparent communications between the serial (RS232/RS485) interface and the network socket.

Besides the possible working modes, the device will act as a router with the following features:

- DHCP server (or client) on Ethernet interface
- NAT table

Example use cases are



- Reading of an electricity meter (DLMS/COSEM) from a remote location
- Reading the log output of a device from a remote location
- Router
- ...





