

Wireless M-Bus (wM-Bus) & BUP to NB-IoT

The Wireless M-Bus (wM-Bus) to NB-IoT bridge is mainly used by water utilities to connect the remaining 20% of wM-Bus or Sensus BUP meters that are not able to join the network directly.

wM-Bus bridge to NB-IoT



Illustrative picture

- Cost optimized solution to bridge the last 20% of your meters into the online world with a focus on wM-Bus and Sensus BUP protocol.
- Fully potted enclosure means true IP68 protection against any environmental threat. You don't need to be afraid to install our device in the water metering shaft, the device was designed for it.
- Configuration doesn't require any technical training. We use the NFC configuration with the Android app for a quick and easy to install approach. You are probably already familiar with the NFC configuration from your water meters.
- The main use case is a 1:1 installation - so 1 meter to 1 bridge, but the device can support up to 3 meters if needed.
- The device can be supplied with our own SIM card and managed connectivity, so it works out of the box, or you can use your own SIM card and use your existing mobile operator contract.

Installation, Operation and Lifespan without any Concerns

Designed for utilities finishing the last stretch of their AMI rollout, the bridge closes the gap left by meters that can't join the network on their own. By translating wM-Bus and Sensus BUP telegrams into NB-IoT messages, it lets you integrate legacy or third-party meters using existing cellular coverage, without building or maintaining any gateway infrastructure of your own.

The potted IP68 housing and NFC commissioning mean any field technician can install it in minutes, even in a wet or confined metering shaft, without RF or networking expertise. Whether deployed 1:1 or bridging up to three meters from a single point, it offers a low-maintenance path to full network coverage.

Technical Specifications

General Specification

Dimension	88 x 68 x 31 mm
Weight	220 g with battery
IP rating	IP68
Mounting	6 fixation points for mounting to the wall, tube or collar
Mounting holes	4x M4 pan screw and 2x oval hole for zip-tie fixation
HS code	85269200

Operating Conditions

Operational temperature	-15 to +60 °C
Humidity	0 to 100% RH (non-condensing)

Regulations and Certifications

Standard	CE, RoHS
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Device Configuration

Local device configuration	NFC through Android configuration app
Remote device configuration	Downlink via network or ACRIOS backend
FUOTA support	Yes, over the NB-IoT network
Configuration options	OMS meter whitelist, Sensus BUP meter whitelist, reading interval, transmission interval, archive readout, time synchronization, confirmed messages, new meter scan, wake-up margin, AES key configuration

NB-IoT

Bands	B3 / B8 / B20
NB module	SIM7022
Supported protocols	UDP
Antenna	Internal
TX Power	23 dBm
SIM form factor	chip SIM
Supported NB-IoT features	PSM, eDRX
Maximum payload length	512 B uplink, 1024B downlink*

* might be dependent on the network. Tested with Vodafone network

Ordering Codes

ACR-MC-100NI-WI-C	wM-Bus OMS & Sensus BUP to NB-IoT bridge
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wM-Bus Interface

Communication protocol	M-Bus EN 13757-4, M-Bus EN 13757-3
Device type	Master
Supported modes	T1, C1, Sensus BUP 868MHz and 433MHz
Maximum connected devices	3
Compatibility	wM-Bus OMS, Sensus BUP

Battery Specifications

Battery size	C-Cell
Capacity	8 500 mAh
Self- discharge	<1%
Rechargeable	No
Replacable by the customer	No

Battery Life-time

Hourly reading with daily sending	10 years with a possible extension to 13 years, ECL=0
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Packaging

1x wM-Bus & Sensus BUP to NB-IoT bridge
1x installation manual



Illustrative picture