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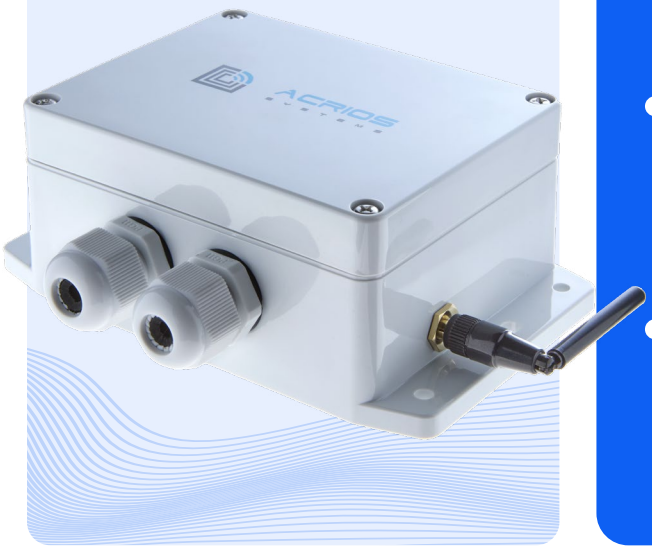
Wired M-Bus to NB-IoT

The converter is designed for efficient readings of any wired M-Bus meters—typically electricity meters, water meters and heat meters, particularly in a heating and water industries.
The device enables integration of the traditional M-Bus meters into the NB-IoT wireless network, facilitating the data collection on consumption in the intervals as short as fifteen minutes.

Wired M-Bus to NB-IoT



- With our hardware, you can read any wired M-Bus device on the market while making it a perfect tool for retrofitting.
- Configure the primary or the secondary addressing of the meters over the NB-IoT network, determine which and how many meters are connected or change the reading interval directly from your system without the need for local configuration.
- We forward the data as a standard M-Bus frame, whether shortened with the desired VIF DIF values or in full. Any M-Bus parser can be used for the data interpretation, but we can provide a parser for the easiest onboarding possible.
- Read up to 15 connected devices with a single converter while maximizing the installation flexibility and avoiding the need to add a converter to each meter, thereby reducing the project costs.

Installation, Operation and Longevity without Worries

ACRIOS Systems converters can read any meter with the wired M-Bus standard using primary or secondary addressing. Our solution is suitable for small businesses as well as large heating plants for an online device readings and a distribution network optimization.

We offer the battery-powered versions as well as models with an external power supply. During manufacturing, we can insert your SIM card and upload your configuration while manufacturing the device fully prepared for the installation.

Technical Specifications

General Specification

Dimension	145 x 90 x 55 mm
Weight	336 g with single battery / 475g with double battery
IP rating	IP67
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	-30 to +60 °C
Humidity	0 to 85% RH (non-condensing)

Regulations and Certifications

Standard	CE, RoHS

Device Configuration

Local device configuration	Over the cable via ACR-CONFIG and the configuration app
Remote device configuration	Optional via downlink
FUOTA support	Yes, over the NB-IoT network
Configuration options	Configuration via Lua scripting interface

NB-IoT

Bands	B3 / B8 / B20
NB module	SIM7022
Supported protocols	UDP
Antenna	External
TX Power	23 dBm
SIM form factor	3FF, chip SIM on demand
Supported NB-IoT features	PSM, eDRX
Maximum payload length	512 B uplink, 1024B downlink*

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

M-Bus Interface

Communication protocol	M-Bus EN 13757-3
Physical layer	M-Bus EN 13757-2
Device type	Master
Communication speed	300 - 9600 Bd
Maximum connected devices	16 UL or 24 mA
Compatibility	With the M-Bus interface
Functionality	Transparent mode, VIF/DIF filtering, secondary addressing, primary addressing, wildcards, broadcast polling
Connector	WAGO 2604 CAGE CLAMP®

Device Power Supply

Voltage	85 - 305 V AC
Frequency	47 - 63 Hz
Energy consumption	Max 4 W
Connector	WAGO 2604 CAGE CLAMP®

Packaging

1x M-Bus to NB-IoT converter	1x installation manual 1x NB-IoT 2JW1024 antenna; 4G LTE

Optional Accessories

ACR-CONFIG	Configuration cable

Ordering Codes

ACR-CV-102N-M-EAC*	M-Bus to NB-IoT externally powered

* Under MOQ

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