

**ACR-CV-101NI-W-D2**
**wM-Bus to NB-IoT with double battery cell, internal NB-IoT antenna and external wM-Bus antenna**
**General specification**

Dimensions:	145 x 90 x 55 mm
Weight:	475 g with battery
IP rating	IP65
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
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**Device configuration**

Local device configuration	Over the cable via ACR-CONFIG and the configuration app
Remote device configuration	Downlink via network or ACRIOS backend
FUOTA support	Yes, over the NB-IoT network
Configuration options	Configuration via LUA scripting interface
Can be supplied pre-configured	Yes

**NB-IoT**

Bands	B1, B3, B5, B8, B20, B28
NB module	SIM 7020E
Supported protocols	UDP
Antenna	Internal
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 dependant on the network. Tested with Vodafone network*

**wM-Bus interface**

Communication protocol	M-Bus EN 13757-4, M-Bus EN 13757-3
Device type	Master
Supported modes	T1, C1, S1
Maximum connected devices	800 unique ids in send-once mode
Compatibility	OMS, Apator Metra proprietary protocol, wM-Bus OMS
Antenna	External
Typical range	3 to 4 floors (40 meters)
Peak antenna gain	~1.4 dBi
VSWR	~1.8:1
Configuration options	Collection duration in each mode, inter-frame timeout, collecting intervals

Functionality	Device type filtering, ID filtering, transparent wM-Bus bridge, discovery scan, active error reporting, NB-IoT network failure recovery mechanisms, scheduled readings - last day of the month, first day of the month, business day
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#### Battery specifications

Battery size	D-Cell
Capacity	38 000 mAh
Self-discharge	<1%
Rechargeable	No
Replacable by the customer	Yes
Battery connector	JST-XH 2pin

#### Battery life-time

5 hour reading, 1x a week	12 years
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#### Packaging

1x wM-Bus to NB-IoT converter	1x installation manual
1x Battery	1x wM-Bus 2JW0315-868-C675 antenna
4x M4 screws, 2x zip-tie	

#### Optional accessories

ACR-CONFIG	Configuration cable
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#### Ordering codes

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#### Additional project requirements

The supplier - ACRIOS Systems - will test each SIM card for its physical functions. The connectivity of Bite SIM cards can not be tested due to the unsported roaming in Czech republic. The connectivity of the device will be tested with local SIM card.

The devices will be supplied with a configuration agreed upon with the Buyer.

The warranty is 24 months from the date of delivery.