NB IoT BOX MICRO

Compact NB-IoT data logger with a universal TTL interface for device integration

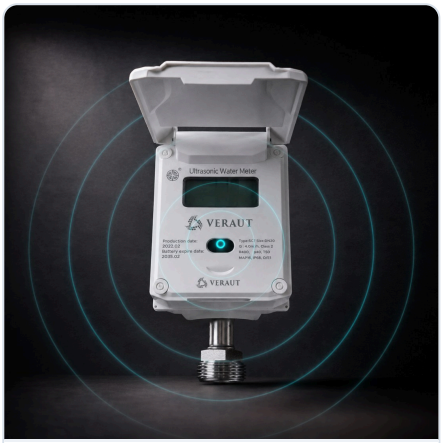
NB-IOT · LTE CAT-NB2 | TTL 3.3 V MCU | BATTERY 10+ YEARS | 50 × 35 × 5 MM | APPROX. 50 G | MODBUS RTU · ASCII | MQTT · COAP | OEM INTEGRATION

The NB-IoT module for your own device

The **NB IoT BOX MICRO** is a compact, battery-powered data logger with NB-IoT communication – developed for applications where measured or status data has to be transmitted reliably and efficiently.

Its TTL interface at MCU level lets it be built into existing devices and controllers. VERAUT uses it in its own products: it is integrated in the VUSWM ultrasonic water meter, and meters with a pulse output can be retrofitted with it.

The module works autonomously and transmits cyclically or on events straight to the backend – without a gateway and without a radio infrastructure of your own. The compact form saves space inside the host device.



The NB IoT BOX MICRO is built into the VERAUT VUSWM ultrasonic water meter. The picture shows the meter with the module integrated.

50 × 35 × 5

Dimensions in millimetres – small enough to fit into existing devices.

10+ years

Battery life at periodic transmission (ECL 0).

TTL 3.3 V

Interface at MCU level; Modbus RTU, ASCII or customer specific.

NB-IoT

LTE Cat-NB2 in licensed spectrum – straight to the backend, without a gateway.

Product features

- Communication over NB-IoT (LTE Cat-NB2), straight through without a gateway
- 1 × TTL interface at MCU level (3.3 V)
- Protocols Modbus RTU, ASCII or customer specific
- Transmission cyclic or event driven, freely configurable
- Transmission by MQTT or CoAP
- Payload additionally encrypted with AES-128 or AES-256
- Compact form of 50 × 35 × 5 mm for space-saving installation
- Weight of about 50 g
- Dynamic energy management for maximum autonomy
- Integrated in the VERAUT VUSWM ultrasonic water meter
- Retrofitting of meters with a pulse output
- Extensions on request

Typical applications

- **OEM integration** – NB-IoT connectivity for your own device
- **Water meters** – built into the VUSWM ultrasonic water meter
- **Retrofit** – making meters with a pulse output remotely readable
- **Customer-specific controllers** – connected via Modbus RTU or ASCII
- **Status and measured-value transmission** in decentralised applications
- **Mobile and stationary systems** – universal data acquisition
- **Remote sites** – remote monitoring without a gateway
- **Projects with minimal energy demand** and high autonomy

WORKS WITH VERILOG web portal – analysis, alarms, export · VUSWM – ultrasonic water meter with the module integrated · NB IoT BOX LITE – logger for pulse and encoder meters · NB IoT BOX GPS – logger with GNSS positioning · HES, MDM and ERP systems – data handover

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Subject to technical change. The information describes the product status at the time of preparation and does not constitute warranted characteristics in a legal sense. Version, installation and antenna position are defined per project; binding delivery characteristics follow from the order confirmation.

01 Interface and integration

Interface	1 × TTL at MCU level (3.3 V)
Protocols	Modbus RTU, ASCII or customer specific
Installation	For integration into existing devices and controllers
Retrofit	Meters with a pulse output
Extensions	On request

02 Power supply

Supply	Battery; supply from the host device possible per project
Battery life	10+ years at periodic transmission (ECL 0)
Energy management	Dynamic, in ultra-low-power operation

03 Communication

Technology	NB-IoT based on LTE Cat-NB2, licensed spectrum
Protocols	MQTT or CoAP
Encryption	Payload additionally with AES-128 or AES-256
Transmission	Cyclic or event driven, configurable
Infrastructure	No gateway and no concentrator required
Backend	VERILOG web portal as well as HES, MDM and ERP systems

04 Mechanics and environment

Dimensions	50 × 35 × 5 mm, variable depending on the version
Weight	approx. 50 g
Operating temperature	−25 °C to +60 °C
Mounting	According to the host device; antenna position to be agreed per project

05 Platform and data

Operation	VERAUT GmbH servers in Linz, Austria; GDPR-compliant
Analysis	VERILOG web portal: history, limit alarms, export
Export	CSV, XML, XLSX, JSON and API
Integration	Handover to HES, MDM and ERP systems

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