Communication module
APT-VERTI-1

The APT-VERTI-1 communication module is an RF intermediate transmission device to communicate between RF data output meter modules and a meter-reading collector's app installed on a mobile device. The primary function of the communication module is to convert the data signals between an RF interface operating in the ISM 868 MHz band and a Bluetooth/USB interface. The communication module is controlled by the meter-reading collector's app installed on a mobile device, and listens for and receives spontaneous T1 mode RF data frames. It can also read configuration data in the two-way T2 mode. APT-VERTI-1 also works in the C1 one-way transmission mode. The communication module is the next-generation of data converter, featuring an extremely sensitive radio receiver and a data reading success rate much higher than possible with legacy data converters. This enables the reading of metering data via the APT-VERTI-1 much faster and at a greater distance from the data transmitter.

Regulatory and standard compliance
- 2014/53/EU Radio Equipment Directive (RED)
- RoHS 2
- Supports Wireless M-Bus
- Cooperates with devices working in OMS standard

Application
The APT-VERTI-1 communication module transfers readings from Apator Powogaz brand metering devices, including water meters, heat meters and heat cost allocators in remote meter reading collector systems (operated in walk-by or drive-by modes). The communication module supports RF devices that transmit over a Wireless M-Bus to a collector app installed on a mobile device (such as a smartphone or tablet).
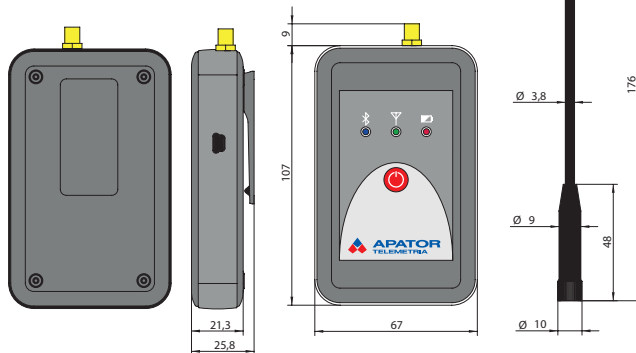
Key features
- Intermediate data relay between RF-interface devices and mobile apps, for data reading and configuration over a Wireless M-Bus.
- Two app interfaces available: Bluetooth and USB.
- Power saver mode.
- Enhanced reading mode.
- Battery status LED.
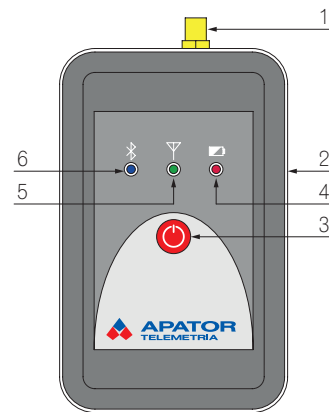- Customizable with an external RF antenna.

water&heat

Table 1. Technical data

	APT-VERTI-1*
Power supply	Li-ion battery pack
Continuous operating time	up to 24 h
Battery charging time	up to 6 h
Transmission frequency	868.95 MHz – mode T1 , C1 868.30 MHz – mode T2
Receiver sensitivity	-110 dBm
Operating temperature range	0°C ÷ 60°C
Ingress protection rating	IP30
Weight	130 g
Antenna height	176 mm
Module height	116 mm
Module width	67 mm
Module depth	25,8 mm

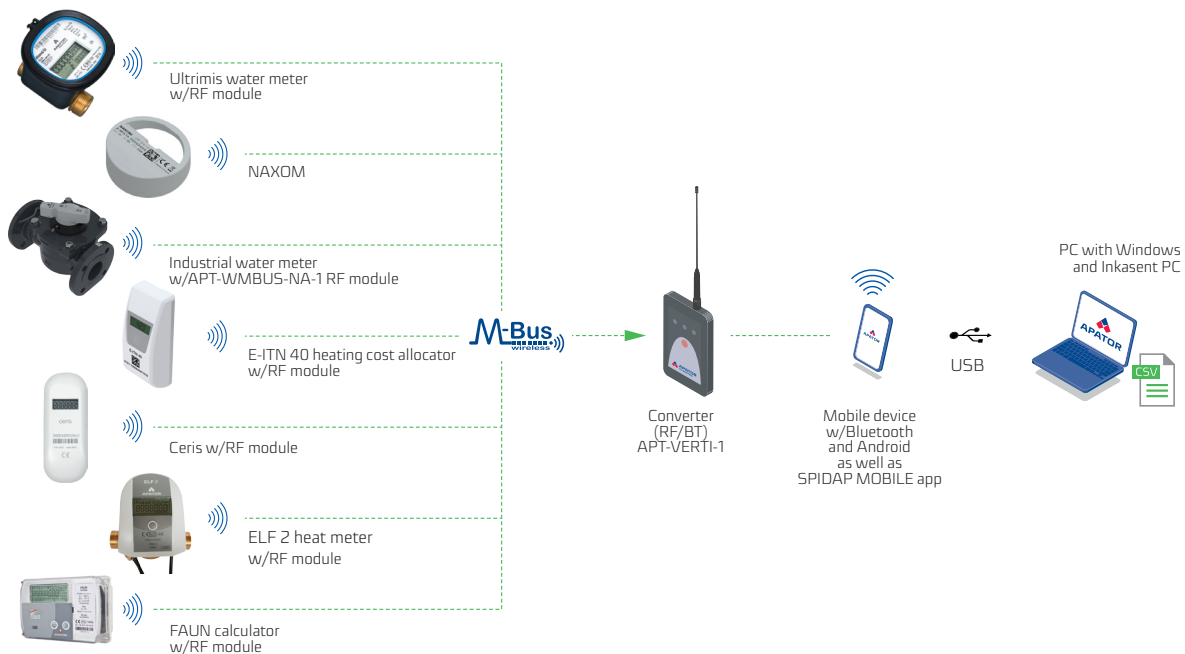* See the User Manual for the full specification of supported devices.

Key device housing features

1. RP-SMA RF antenna port
2. Mini USB-A port
3. On/Off/Bluetooth selector button
4. Power LED
5. Rx LED
6. Bluetooth Connected LED

Sample remote reading connection diagram

- Ultrimis water meter w/RF module
- NAXOM
- Industrial water meter w/APT-WMBUS-NA-1 RF module
- E-ITN 40 heating cost allocator w/RF module
- Ceris w/RF module
- ELF 2 heat meter w/RF module
- FAUN calculator w/RF module

M-Bus wireless

Converter (RF/BT) APT-VERTI-1

Mobile device w/Bluetooth and Android as well as SPIDAP MOBILE app

USB

PC with Windows and Inkasent PC