

# Notion application module MW29



MW29 is a high-performance NB-IoT application module with extremely low power consumption. It supports a broad range of frequency bands used all over the world. It also provides special external interfaces (UARTs, pulse counter interface, etc.) and protocol stacks (UDP/TCP, CoAP, LWM2M, etc.). Especially **the ESIM and motor driver inside-design make it suitable for smart gas and water meters without external microcontroller unit (MCU)**. The rich interfaces, small size, low power consumption and many RF bands allow it to be widely used for smart gas and water meters. With this module various data can easily be transmitted to a remote management system over an NB-IoT network.

**RF bands** 1 / 3 / 5 / 8 / 20 / 28 / 2\* / 4\* / 12\* / 13\* / 17\* / 18\* / 19\* / 25\* / 26\* / 66\* (bands with a '\*' are not tested yet) **certifications**

- SRRC
- CMCC
- CT
- Deutsche Telekom

**power supply** 2.2–3.7 V (typical: 3.3 V)

**package** LCC

**dimensions** 53 × 29 mm

**operating temperature** –20–60 °C

**extreme working temperature** –40–85 °C

**humidity** 5–95 %

**software update** via USB, UART, DFOTA\*

**RF output power** 23 ± 2 dB m

**RF sensitivity** –114 dB m

**single tone upload speed** 16.7 kbit/s

**single tone download speed** 25.5 kbit/s

**multi tone upload speed** 62.5 kbit/s

**multi tone download speed** 25.5 kbit/s

**power saving mode (PSM)** <10 µA@3.3 V

**DRX (2.56 s)** average 300 µA@3.3 V

**eDRX (81.92 s)** average 70 µA@3.3 V

## interfaces

- 1 × USB 1.1
- 2 × UART
- 2 × SIM (internal and external)
- 2 × antenna (internal and external)
- Pulse counters: Reed switch, Hall, non-magnetic
- RG LED for signal display
- keys: power, touch
- motor driver interface

**protocols** UDP / TCP / CoAP / MQTT / LWM2M / PPP / SSL / TLS / DTLS / HTTP / HTTPS / FTP\*

**AT commands** 3GPP release 13/14

## applications

- water / gas meters

