



Datasheet ON1810

- Powerful, modular mobile radio communication unit with Gigabit Ethernet and fibre optic interfaces as well as PoE for networking in hard-to-reach locations.
- ON1810 is a robust mobile radio communication unit for use in industrial environments.
- IoT Edge Computing / Gateway functionality thanks to pre-processing, filtering, intermediate storage and monitoring of local sensor values
- Powerful dual-core ARM® processor
- Wired and wireless communication options: Ethernet, USB, RS232, mobile communications, WiFi, Bluetooth, LoRa, Zigbee, etc.
- Automatic «Zero Touch» deployment ex works, i.e. devices can be installed directly from production and no manual configuration work is necessary
- Secure transfer of usage data via VPN (IPsec with certification)
- Secure, continuous connection with central management system



Applications

- Industrial safety
- Point of Sale
- Public WLAN
- Smart Grid
- Oil and Gas
- Renewable Energies
- Factory Automation
- Mining
- Video surveillance

Features

- Pre-processing, filtering, intermediate storage and monitoring of local sensor values
- GPS / GLONASS localisation
- Powerful dual-core ARM® processor
- Automatic «Zero Touch» deployment
- Very fast boot process

Performance

- > 300 Mbps local routing
- > 150 Mbps VPN throughput via LTE

Technical data ON1810

Dimensions (W x H x D): 95 x 130 x 130 mm
Weight: 1100 g
Operating temperature: -40 to +50 °C
Ingress Protection Level: IP40

Mobile / Cellular

1x Multimode LTE, UMTS, GSM for EMEA, NA

4G – LTE: B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B7 (2600), B12 (700ac), B13 (700c), B20 (800DD), B5 (850), B25 (1900), B26 (850), B29 (700), B41 (TDD2500), B30 (WCS)
3G – DC-HSPA+/UMTS: B1 (2100), B2 (1900), B3 (1800), B4 (1700), B5 (850), B8 (900)

LTE Specification: Category LTE Cat 6

Antenna ports: 2x2 MIMO

Datarate: down / up (max) 300 Mbps / 50 Mbps

FCC ID: N7NMC7455

Region: Europe, EMEA, NA

Connectors: 2x SMA female

SIM: 2x Micro SIM – 3FF

1–2 x Mobile/Cellular

Multimode LTE Advanced Pro, UMTS

4G – LTE – B1, B3, B7, B8, B20, B28, B38, B40

3G – DC-HSPA+/UMTS: B1, B8

LTE Specification: LTE Cat 12, 2x2 MIMO

DL 600 Mbps / UL 50 Mbps

Region: Europe, EMEA, on request: NA, APAC

Connector: 2 – 4x FAKRA D-coded

SIM: 4x Mini SIM – 2FF

WiFi/WLAN

1x Dual-band WLAN 2.4/5 GHz a/b/g/n/ac

Wireless standard: IEEE 802.11a/b/g/n/ac

Frequency: 2.4/5 GHz

Diversity: 2x2 MIMO

Datarate (max): 300 Mbps (2.4 GHz) / 866 Mbps (5 GHz)

Modes: Client or access point (up to 100 clients)

FCC ID: TK4WLE600VX

Connectors: 2x SMA female

Ethernet

1x Gigabit Ethernet: 1000BASE-T, Auto MDIX, speed 10/100/1000 Mbps

1x Gigabit Ethernet/SFP combo (software switchable):

1000BASE-T, Auto MDIX, SFP standard depending on module, ask for supported modules, speed 10/100/1000 Mbps, combo port SFP or GbE interface activated (software switchable)

4x Gigabit Ethernet PoE+: 1000BASE-T, Auto MDIX, speed 10/100/1000 Mbps, PoE standard IEEE802.3af, IEEE802.3at, including two event classification; POE output power max 30 W per port, 60 W in total

Connectors: 2x RJ45, 1x SFP cage (mini GBIC), 4x RJ45

Positioning

1x GNSS: Receiver BeiDou, GLONASS, GPS

Antennas: active or passive

Sensitivity: -160 dBm

Services: stand-alone, assisted GPS

Data server: JSON, NMEA data stream

Connector: 1x SMA female

USB

1x USB 2.0 Host

Connector: 1x Type A

Serial, Fieldbus

1x RS-232/485 combo (software switchable), EIA-232, TX, RX, signal level high >5 VDC, low <-5 VDC, bit rate up to 1 Mbps, EIA-485, signals A, B, signal level differential output voltage, loaded 1.5 VDC – 3.6 VDC, bit rate up to 1 Mbps, termination 120 Ω for RS-485 configurable by software

Connector: 1x terminal block header 3.5 mm (screw locking)

Extended storage

SD card, microSD, 600 kByte/s, store user and logging data of SDK or LXC applications – SD card not included

System

1.3 GHz dual core, 1 GB RAM, 4 GB flash

Module slots: 2x miniPCIe (PCIe + USB),

2x Extension (USB)

Power

Input Voltage: 48 VDC

Nominal voltages: 48 VDC (restricted input range for PoE switch)

Absolute voltages: 48 VDC (-10 % / +10 %)

Connector: 1x terminal block header 3.5 mm (screw locking)

Consumption: 82 W (average), 90 W (max with 60 W PoE load)

Mounting

DIN-Rail

MTBF

180 000 h / 20.5 years, according SN29500 at environmental temperature 40 °C

Certifications

Compliance: CE according to 2014/53/EU (RED), 2011/65/EU (RoHS)

Domain: industrial