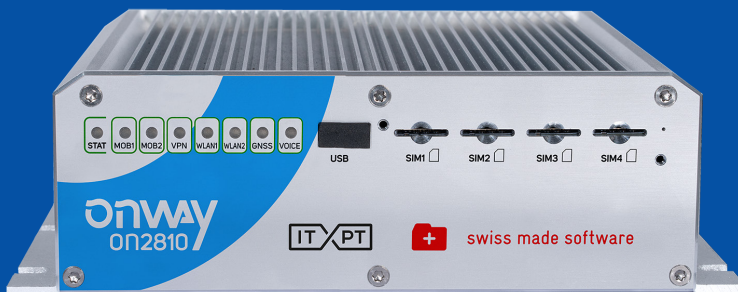




Datasheet ON2810

- Thanks to ITxPT, optimal communication unit for vehicles, as it enables interoperability between IT systems (vehicles, routers, audio-visual systems, sensors, etc.) in public transport.
- Secure transfer of usage data (IPsec with certificates)
- Secure, constant connection to central management system (Configuration Management)
- Zero touch deployment from the works
- High transmission rates with 5G + LTE Advanced Pro and WLAN 802.11ac
- Secure, logical separation of internal and external data connections
- Maximum bandwidth in the vehicle-to-ground connection by bundling all available mobile phone capacities
- Redundancy through evaluation of link telemetry data
- Detection of vehicle ignition voltage (run-on time)
- Very fast boot process
- Modern software architecture – ideal for mobile cloud applications
- Software developed in house based on Linux®



Applications

- Smart vehicles
- Passenger WiFi
- Status monitoring
- Passenger information systems
- Driver communication
- CCTV
- Remote maintenance

Features

- ITxPT standard compliance
- Automotive E1-Mark / ECE-R118
- Ignition voltage detection
- Conductive Cooling concept
- Up to 2x 5G (Cat. 20) or 4G (Cat. 12)
- Quad SIM
- Multiple WiFi ac AP / client modules
- 2 gigabit Ethernet ports
- VLAN, VXLAN, VRF, IPsec, Firewall
- Multipath routing, load balancing
- «Quality of Service» (QoS) to prioritise data traffic
- Integrated content and web server

Performance

- Dual-Core, 1,3 GHz ARM-CPU
- 1000 Mbps ETH to ETH routing
- >200 Mbps LTE to WiFi/LAN for each module

Technical specifications ON2810

Dimensions (W x H x D): 164/190 x 58 x 139.5 mm
Weight: 1000 g
Operating temperature: -25 to +70 °C
Storage temperature: -40 to +85 °C
Ingress Protection Level: IP40

Mobile / Cellular

1-2x Multimode 5G-NR, LTE-A Pro, UMTS oder Multimode 4G LTE-A Pro, UMTS

5G – NR: n1, n2, n3, n5, n7, n8, n12*, n20, n25, n28, n38, n40, n41, n48, n66, n71, n77, n78, n79

2014/53/EU (RED): n1, n3, n7, n8, n20, n28, n38, n40, n77, n78

4G – LTE-A Pro: B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29DL, B30, B32, B34, B38, B39, B40, B41, B42, B43*, B46 (LAA), B48 (CRS), B66, B71

2014/53/EU (RED): B1, B3, B7, B8, B20, B28, B38, B40

3G – DC-HSPA+/UMTS: B1, B2, B3, B4, B5, B6, B8, B9, B19
2014/53/EU (RED): B1 (2100), B3 (1800), B8 (900)

5G – NR Modes: Sub-6 FDD and TDD

LTE Category: Cat. 20 up to 7CA

MIMO: 4x4 MIMO in 5G-NR support on n1, n2, n3, n7, n25, n38, n40, n41, n48, n66, n77, n78, n79 and LTE B1, B2, B3, B4, B7, B25, B30, B38, B39, B40, B41, B42, B43, B46, B48, B66

*future module firmware release

Antenna ports: 4

Power class: 23dBm (Power Class 3)

Data rate down/up (max): up to 5.5 Gbps DL / 2.7 Gbps UL

Operations modes: 5G Core SA and NSA operations

3GPP: 4G/5G Rel. 15, 3G HSPA+ Rel. 8

FCC ID: RI7FN980

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

Connectors: 2-8x FAKRA D-coded male

SIM: 4x Micro SIM – 3FF

WLAN / WiFi

1-2 IEEE 802.11 a/b/g/n/ac up to 867 Mbps 2.4 / 5GHz

2x2 MIMO, Access Point or Client

Clients in access point mode: at least 100, no limitation by software

2 or 4 FAKRA I (beige, plug) antenna connectors supporting MIMO or standard antennas.

Ethernet

2 Ethernet ports 10 / 100 / 1000 Mbps (GbE), auto MDX, RJ45

CAN

Optional single or dual CAN-Bus interface for CAN V2.0B up to 1Mbit/s.

GPS / GNSS

GPS / GLONASS data server with JSON or NMEA data stream, tracking sensitivity -154 dBm (typical)

Antenna connector: FAKRA C (blue, plug), support for active and passive antennas.

Optional: GPS / GLONASS / BeiDu / (Galileo ready), -160 dBm, 72-channel, 2m accuracy, dead reckoning with onboard 3D accelerometer and 3D gyroscope

USB

USB 3.0 Host; USB A connector type

Mass Storage

Up to 1TB SSD disk for content like web pages, pictures, audio, and video files

Ignition Sense

Configurable time delay between ignition off and power down.

Power

Nominal voltages: 24VDC, 36VDC and 48VDC

Input voltage: 12V DC to 48V DC -25% / +20%

Max. power cons.: 20W

Connector: 3 pins of the 6-pin terminal block (V+, GND, ignition sense)

MCP Blue Code A adapter cables available for ITxPT hardware compliance

System

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

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

MTBF

180'000 h – 280'000 h depending on model

EMC Standards

EN 55022:2010, EN 61000-6-3: 2007+A1:2012, EN 50121-3-2: 2006+AC:2008; CFR 47 Part 15B, EN 301 489 (Emission) EN 50121-3-2: 2006+AC:2008, EN 301 489 (Immunity)

Type Approval

CE according R&TTE, FCC according to 47 CFR, Part 15B

Automotive: E1 according to Regulation No. 10, ECE-R118