Datasheet ON3800

- Optimum communications unit for vehicles
- 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 LTE Advanced 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
- Maximum mobile phone transmission with LTE Advanced modems
- 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

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

Features

- EN 50155, EN 45545
- Up to 1 TB memory
- Up to 4 LTE Advanced modems (Cat. 6)
- Quad SIM
- Up to 2 WLAN-ac AP/client modules
- 2 Gigabit Ethernet M12
- 3 Fast Ethernet M12
- VLAN, IPsec, firewall
- Multipath routing, load balancing
- «Quality of Service» (QoS) to prioritise data traffic

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 ON3800

Dimensions (W x H x D): 167/190 x 121.1 x 106.5 mm
Weight: ca. 2000 g
1–4 radio modules Temperatur range EN50155 TX:
-40 °C to +70 °C, 10 minutes 85 °C
5–6 radio modules Temperatur range EN50155 T2:
-40 °C to +55 °C, 10 minutes 70 °C
Ingress Protection Level: IP40

Mobile / Cellular
1–4 Multimode LTE Advanced, UMTS/3G modules with seamless hand-over
LTE Advanced Bands: B30, B41, B29, B26, B25, B5, B20, B13, B12, B7, B4, B3, B2, B1
3G – DC-HSPA+/UMTS: 1800, 1700, 900, 850, 1900, 2100
LTE Advanced Cat. 6 max. 300 Mbps downlink / 50 Mbps uplink, DC-HSPA+ 42/5.76
TNC female antenna connectors supporting MIMO or standard antennas
SIM slots: 4 Mini-SIM ISO/IEC 7810:2003, ID-000

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

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; TNC connectors female supporting MIMO or standard antennas.

Ethernet
5 Ethernet ports: 2x 10/100/1000Mbps (GbE) auto MDX, M12 connector 8 poles X-coded female,
3x 10/100Mbps (FE) auto MDX, M12 connector 4 poles D-coded female

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

GPS / GNSS
GPS/GLONASS data server with JSON or NMEA data stream, tracking sensitivity -154dBm (typical); TNC connector, support for active and passive antennas
Optional: GPS/GLONASS/BeiDu/(Galileo ready), –160 dBm, 72-channel, 2 m accuracy, dead reckoning with onboard 3D accelerometer and 3D gyroscope

Storage
Up to 1TB SSD

Power
Standard – Nominal voltages: 24VDC, 36VDC and 48VDC according to EN50155
Voltage range: 24VDC to 60VDC, -30% / +5%
Max. power consumption: 25W
Option – Nominal voltages: 72VDC, 96VDC and 110VDC according to EN50155
Voltage range: 72VDC to 110VDC, -30% / +25%
Max. power consumption: 20W
Power Interruption Class S2: interruptions up to 10 ms are tolerated, no batteries; M12 connector, 4 poles, A-coded male, Pin1 +, Pin3 -

MTBF
117'000 h – 296'000 h depending on model

EMC Standards
EN 55022:2010, EN 50121-3-2:2006, EN 301 489 (Emission)
EN 50121-3-2:2006, EN 301 489 (Immunity)

Type Approval
CE according to R&TTE
Railway: EN50155:2007, EN 45545-2:2015

onway ag | Stauffacherstrasse 16 | 8004 Zurich | Switzerland
phone +41 55 214 18 30 | sales@onway.ch | www.onway.ch

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