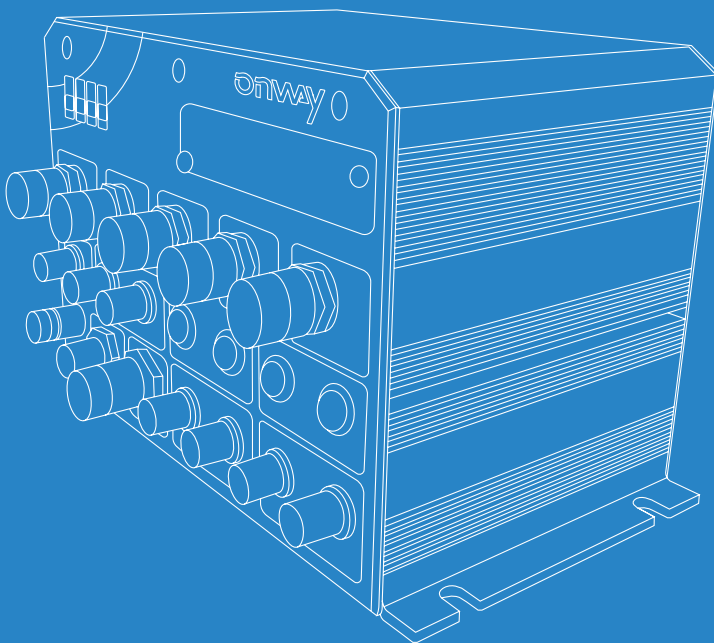




Datasheet R3800

- 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
- Monitoring of vital router functions
- 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

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

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

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, 2m accuracy, dead reckoning with onboard 3D accelerometer and 3D gyroscope

Storage

Up to 1TB SSD

Dimensions

Width 167/190mm x height 121.1mm x depth 106.5mm

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 10ms are tolerated, no batteries; M12 connector, 4 poles, A-coded male, Pin1 +, Pin3 -

Environment

1 - 4 radio modules: Temperature range EN50155 TX (-40°C to +70°C, 10 minutes 85°C) 5 - 6 radio modules: Temperature range EN50155 T2 (-40°C to +55°C, 10 minutes 70°C)

MTBF

117'000h-296'000h 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