

R3200

The "install anywhere" mobile broadband router for trains



- Ease of installation
- Fanless and solid state (vibration proof)
- 3GPP HSPA / EDGE / GPRS, CDMA & other Wireless backhaul Interfaces
- Various rugged power options
- Wired and Wireless Ethernet connectivity
- Built in 12 channel GPS with enhanced accelerometer meter
- Full modem power control
- 5 PCI Express Mini Card expansion slots
- 3 USB expansion slots
- Remote management & diagnostics

Following on from the success of the CCU R3500, the R3200 is the latest addition to the R3000 series of wireless broadband gateways provided by Nomad. The R3200 provides similar functionality to its larger peer, with its reduced size enabling easier deployment across fleets.

The R3200 enables passenger WiFi and a range of other fleet applications including operational data downloading, train system monitoring and remote CCTV access.

The R3200 is a highly ruggedized compact design, which is rail industry approved being compliant with all relevant EMC, shock, vibration and environmental standards for rail (EN50155/EN50121).

The R3200 provides a range of interface connections, including four 10/100 Base T Ethernet ports, five PCI Express Mini slots, RS232 serial port, USB 2.0 all easily enabling connectivity with Passenger Information Systems, ticketing applications and digital video Recorders. The Reil acts as a hub for on-train equipment with built in wired and Wifi access directly from the unit.

The Reil integrates a range of WAN back haul network technologies, including 3G HSPA, EDGE / GPRS, CDMA-200 EV-DO RevA, and mobile WiMAX 802.16.

The R3200 firmware enables rapid switching between available backhaul networks - high speed switching combined with low latency and aggregation across all available links ensures a high quality service.

The R3200 comes complete with leading edge GPS technology, with an optional accelerometer device to enhance GPS accuracy, monitor infrastructure condition and identify train on track orientation. This is fully compatible with Nomad's Fleetmanager, providing a wealth of operational data to rail operators.

Specifications

Hardware

Nomad Blue Powder coated Aluminium case
Fanless, solid state components only
Full railway rolling stock compliance

Surface Mount

Wall or rack mountable (supplied)

Power Input

Range of power supplies including
24 x DC (8-30)
48 x DC (34-90)
M12 or D type connector options

Dimensions

280mm (W) x 178mm (D) x 50mm (H)

Weight

2.5kg (dependent on options)

Power Consumptions

14 Watts (dependent on options)

Processor

Intel Atom 1.6 GHz Processor
1GB RAM
CompactFlash Slot

Antenna Connectors

1 x TNC for GPS
5 x N Type connectors for external antennae
Optional 10 x TNC Type connectors for external diversity

GPS Accuracy (SBAS)

Horizontal: - < 2 metres (50%), 4 meters (90%)
Altitude: - < 3 metres (50%), < 5 metres (90%)

Interface Ports

4 x 10/100 Base T Ethernet via M12 D Type connectors
1 x RS 232 serial port
3 x USB 2.0 (internal)
LED status lights

Protocols and Services

VLAN (IEEE 802.1Q)
Traffic prioritization (up to four packet queues)
Configurable NAT/non-NAT routing
Fully customised firewall
Remote management and diagnostics
Certificate and password based access control

WAN Interfaces

Internal

3GPP HSPA+ | EDGE | GPRS
WiMAX 802.16e
WiFi 802.11
CDMA-2000 EV-DO RevA

External

Satellite
WiMAX / Pre WiMAX
Proprietary radio technology

Wifi Features

802.11 a/b/g/n, 2.4GHz and 5GHz
Multiple SSID, 802.1Q client to client isolation

MTBF

circa 50,000 hours

Compliance

EN 50155
EN 50121-3-2
EN 301 489-7 v1.3.1
EN 61373 : 1999

Patents

GB 2455976
GB 2461386
GB 2462910
GB 2464480
GB 2463009
GB 2472537



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