

R3200



High-speed broadband for the Rail sector

Nomad Digital



Following on from the success of the R3500, the R3200 is the latest addition to the 3000 series of broadband gateways provided by Nomad. The R3200 provides similar functionality to its larger peer, but its reduced size enables easier deployment across fleets.

The R3200 enables passenger WiFi and a range of fleet applications including operational data downloading, driver performance monitoring and CCTV.

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).

The R3200 supports a range of power supplies including Power over Ethernet (PoE). The R3200 integrates a range of WAN backhaul network technologies, including 3G HSDPA / HSUPA, EDGE / GPRS, CDMA-2000 EV-DO RevA, and mobile WiMAX 802.16.

The R3200 firmware enables rapid switching between the available backhaul networks - high speed switching combined with low latency ensure a high quality of service throughout the train journey.

With support for 5 PCI Express Mini Cards, the R3200 can support a host of applications to suit your needs.

The R3200 provides a range of interface connections, including 10/100 Base T Ethernet ports, RS232 serial ports and USB 2.0 enabling connectivity with Passenger Information Systems, ticketing applications and digital voice recorder. The R3200 acts as a hub for on-train equipment and when in tandem with R3400 Carriage Boxes and 802.11 wireless access points provide a WiFi network for passengers and operational staff alike.

The R3200 comes complete with leading edge GPS technology to assist with fleet tracking, and is fully compatible with Nomad's Fleetmanager, providing a wealth of operational data to rail operators.

Rugged system design

EN50155 Rail approved

30 UMTS HSPA, EDGE
CDMA & other WAN
backhaul Interfaces

Various power options,
including PoE 10/100
Base T Ethernet

Built in 12 channel GPS

5 PCI Express Mini Card
expansion slots

802.11 access points

Remote management &
diagnostics

www.uknomad.com

Dimensions

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

Surface Mount

19" rack mounted using an adapted shelf (optional)

General

Rugged system design

No moving parts

Weight

2.5kg

Materials

Powder coated 16 gauge steel

Power Input

Range of power supplies including

8-30v DC, 50-90v DC, 100v DC,

110v AC, 220v AC

48v Power over Ethernet (PoE)

M12 or D type connector options

Power Consumptions

25w

Antenna Connectors

5x N Type connectors for external antennae

Interface Ports

4x 10/100 Base T Ethernet via M12 connectors

D Type connectors

1x RS 232 serial port

1x USB 2.0

Protocols and Services

VLAN (IEEE 802.1Q)

Traffic prioritization among up to four packet queues

Configurable NAT/non-NAT routing

Built in firewall

Certificate or password based administrative access control

Processor

Intel Atom 1.6 GHz Processor

1GB RAM

CompactFlash Slot

GPS

Trimble Copernicus Ultra thin

Low power

Surface mount GPS receiver

12 channel continuous tracking receiver

L1 (1575.42 MHz) frequency

C/A code

Includes WAAS

GPS Acquisition

Hot Start - 3 seconds

Warm Start - 35 seconds

Cold Start - 38 seconds

GPS Accuracy

Horizontal - <2.5 meters (50%), <5 meters (90%);(with SBAS accuracy) <2 metres (50%),4 meters (90%)

Altitude - <5 meters (50%), <8 meters (90%);

(with SBAS accuracy) <3 metres (50%), <5 metres (90%)

Velocity - 0.06m/s

WAN Radio

Up to 5 PCI Express Mini Cards

External via Ethernet connection

WAN throughput Capability

Card dependant

WAN Interface

Internal

WiMAX 802.16e

WiFi 802.11

EDGE / GPRS

3G UMTS HSPA

CDMA-2000 EV-DO RevA

External

Satellite

WiMAX / Pre WiMAX

Proprietary

WiFi Radio

Gigabyte AirCruiser N300 Dual Band Mini Card

WiFi Frequencies

802.11 a/b/g, 2.4 GHz and 5 GHz

Gateway Services

Nomad proprietary radio management

Management

Embedded Linux

SNMP

NTP

MTBF

Circa 50,000 hours

Environmental

-25C to +70C operating

-30C to +85C storage

Compliance

EN 61000-4-2, 3, 4, 5, 6

EN 50121-3-2

EN 55022

EN 50155

FCC CFR47 Part 15

BS 6853

Warranty

1 year hardware warranty

Extended warranty available

Nomad Digital Ltd 2nd Floor Baltic Chambers
Broad Chare Newcastle upon Tyne NE1 3DQ
Tel: +44 (0)207 096 6966 Fax: +44 (0)191 221 1339
www.uknomad.com

