

Digi Connect[®] WAN GSM-R

Wireless WAN Gateway/Router for Railway

2G Wireless WAN cellular router provides wireless TCP/IP data communications via cellular GSM-R networks for railways.



Overview

The GSM-R network, owned and operated by several European railway operators, is part of the European Rail Traffic Management System (ERTMS). It provides a secure and reliable wireless infrastructure for communication with trains, railway signal equipment, and customer information displays.

The Digi Connect WAN GSM-R utilizes the GSM-R infrastructure to provide wireless device connectivity to Ethernet networks and serial devices. Its GPRS Class 10 cellular interface provides data rates up to 240 Kbps (100-130 Kbps typical).

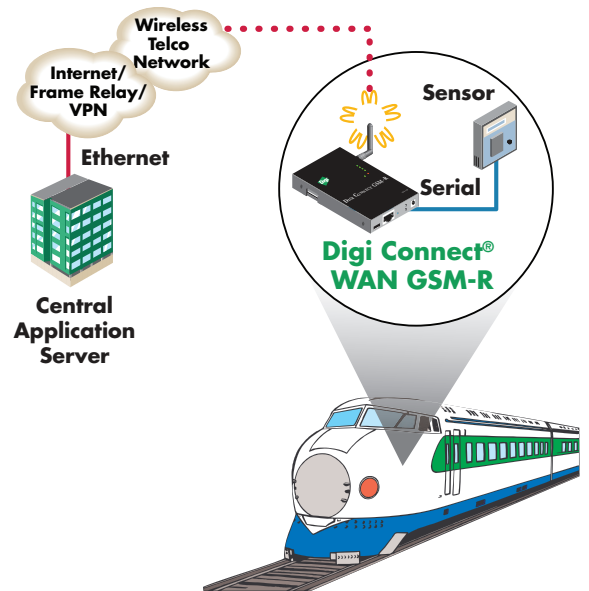
Benefits of wireless communications via the Digi Connect WAN GSM-R include instant deployment, elimination of wiring costs, elimination of problems due to wire breaks and the ability to traverse firewalls. In addition, the Digi Connect WAN GSM-R offers the flexibility to move the connection anywhere within the coverage area of the railway operator's own free-of-charge data network.

Target Applications



Transportation

Application Highlight



Features/Benefits

- 2G (GSM-R) cellular router with 1 serial, 1 Ethernet port for wireless railway network connectivity
- 9-30VDC for diverse power input
- Web interface for easy centralized console configuration and statistics
- Digi Connectware[®] Manager enables remote management of large numbers of devices
- Unique Digi SureLink[™] maintains "always-on" wireless connection across unpredictable networks
- Programmable in Python for device customization



Specifications

Digi Connect® WAN GSM-R

Interfaces

Serial

| | |
|-------|--|
| Ports | 1 RS-232/422/485 DB-9; Up to 230 Kbps throughput; Hardware and software flow control; Signal support for TXD, RXD, RTS, CTS, DTR, DSR, DCD |
|-------|--|

Ethernet

| | |
|-------|--|
| Ports | 1 RJ-45 10/100 Mbps 10Base-T (auto-sensing); Full or half duplex |
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Cellular

| | |
|---------------------|-------|
| GSM GPRS 12/EDGE 10 | Fixed |
|---------------------|-------|

Features

| | |
|-----------------------------------|---|
| Network Protocols | UDP/TCP, DHCP |
| Status LEDs | Ethernet, power on, cellular link/activity, signal strength (4 bars) |
| Software | Device-initiated patented RealPort COM port redirector and RFC 2217; Digi SureLink "always-on" connection; Python scripting; Custom development environment |
| Security | SSL, SSL/TLS, SSHv2, FIPS 197 |
| Router/Firewall Features | NAT, NAT-T (NAT traversal) VPN tunneling, Port forwarding, VPN/GRE pass-through; Access control lists (IP filtering), IP pass-through, Virtual Router Redundancy Protocol (VRRP) per RFC 3768 |
| VPN Features | IPsec with IKE/ISAKMP; Multiple tunnel support; DES, 3DES and up to 256-bit AES Encryption, Simple Certificate Enrollment Protocol (SCEP) for X.509 certificates |
| Management | HTTP/HTTPS, CLI or Telnet; Optional secure enterprise management via Digi Connectware Manager |
| Dimensions (L x W x H) and Weight | 5.25 in (13.34 cm) x 3.35 in (8.51 cm) x 0.97 in (2.47 cm), 1.00 lb (0.45 kg) |

RF Features

| | |
|--------------|--|
| Class | GPRS multi-slot class 10; 85 Kbps max (downlink) |
| Output Power | Class 4 (2W) at EGSM900; Class 1 (1W) at GSM1800 |
| Frequency | Quadband GSM-R /EGSM 900/GSM 1800 |
| Antenna | 1 x 50 Ohm female SMA connector |

Power Requirements

| | |
|----------------------|--|
| Power Input | 9-30 VDC |
| Power Supply | 12VDC power supply for 0° C to 60° C (32° F to 140° F) with locking barrel connector included; Extended temperature power supply available |
| DC Power Consumption | Idle: 1.2W; Max: 3.4W |
| AC Power Consumption | Idle: 2.0W; Max: 5.8W |
| Surge Protection | 4 kV burst (EFT) per-4-4; 2 kV surge per EN61000-4 |

Environmental

| | |
|------------------------------|---|
| Operating Temperature | -30° C to +75° C (-22° F to +167° F) |
| Relative Humidity | 5 to 95% (non-condensing) |
| Ethernet Isolation | 1500VAC min per IEEE 802.3/ANSI X 3.263 |
| Serial Port Protection (ESD) | +15 kV air gap and +8 kV contact discharge per IEC 1000-4-2 |

Approvals

| | |
|----------------------------------|--|
| Safety | UL 60950, CSA 22.2 No. 60950, EN60950 |
| Emissions/Immunity | CE, FCC Part 15 Class A (FCC identifier GGL-R1902G), AS/NZS CISPR 22, EN55024, EN55022 Class A |
| Mobile Certifications - GSM/UMTS | PTCRB, NAPRD.03, GCF-CC, R&TTE, EN 301 511 |

Visit www.digi.com for part numbers.

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