ConnectPort® X5 R

Rugged Wireless PAN to IP Gateway

Rugged telematics gateway for Vehicle Area Network (VAN) traffic, such as ZigBee and 802.15.4 point-to-multipoint, for IP connectivity using cellular or Wi-Fi connections.
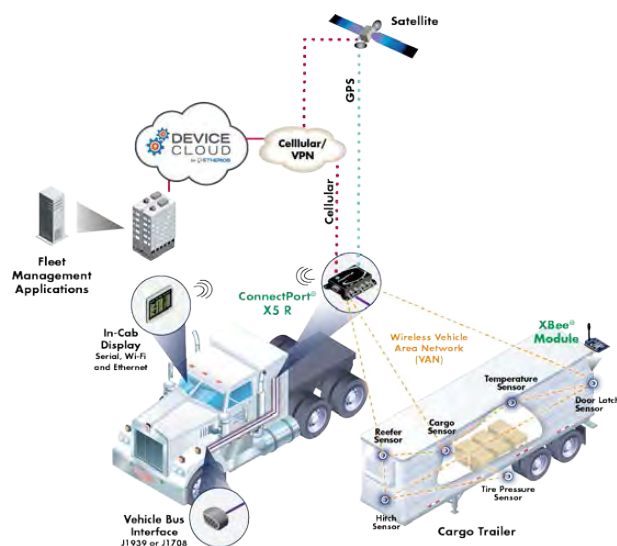
Overview

The ConnectPort X5 R offers the industry's smallest Quint-Mode (cellular, satellite, GPS, Wi-Fi, Vehicle Area Network) wireless telematics product. The gateway provides remote connectivity to mobile assets to monitor operating health, performance, location and driver/operator behavior, as well as to enable automated event reporting.

The ConnectPort X5 R supports Vehicle Area Networks (VANs) with Digi's industry leading XBee(R) 802.15.4/ZigBee or Point-to-Multipoint 2.4 GHz radio technology.

The ConnectPort X5 R offers cellular, Wi-Fi and satellite for flexible WAN connectivity. Cellular provides instant/always-on communications, while Wi-Fi provides a cost-effective way to transfer large files, firmware or logs across "low-cost" secure public or private networks. The ConnectPort X5 R Wi-Fi functionality can also be used to wirelessly connect peripheral devices such as vehicle displays and handhelds.

Related Products

Device Cloud Solutions   Dev Kits   Modules

Application Highlight

Features/Benefits

- **Automated event reporting** – unit can continuously transmit vehicle status at user-defined intervals
- **Factory sealed enclosure with IP67 and SAE1455 certifications**
- **J1939 CAN interface with J1708 serial connectivity support**
- **Advanced power management functionality**
- **Global coverage over satellite or cellular (GSM/GPRS or CDMA) networks**
- **3-axis accelerometer to detect movement, driver behavior and accident conditions**

Specifications	ConnectPort® X5 R
General	
Management	Device Cloud and/or WebUI
Software	Python, Device Cloud by Etherios™, DIA
Protocols	UDP/DHCP, SNMPv1/v2
Memory	Total: 16 MB Flash, 32 MB RAM; Available user space: ~5.5 MB Flash, ~18 MB RAM (without Device Cloud DIA) / ~15 MB RAM (with
LEDs	Power, User, Cellular link/activity, Signal strength (3 bars), GPS, XBee®, Ethernet, Wi-Fi
Security	SSL tunnels, SSHv2, FIPS 197 (serial port)
VPN	IPsec with IKE/ISAKMP, Multiple tunnel support, DES, 3DES and up to 256-bit AES, VPN pass-through, GRE forwarding
Device Connector	Tyco 23-pin
Dimensions (L x W x H)	5.5 in x 7.5 in x 1.8 in (14.0 cm 19.0 x cm x 4.6 cm)
Weight	2.2 lb (1.0 kg)
Antennas	
XBee	7" dipole; RP-TNC (Center pin - on device: male; on antenna: female)
Combination Cellular/GPS	Adhesive mount, 3m cable; TNC (Center pin - on device: female; on antenna: male)
Satellite	Magnetic mount, 15' cable; TNC (Center pin - on device: female; on antenna: male)
Wi-Fi	Surface mount, 10' cable; RP-TNC (Center pin - on device: male; on antenna: female)
Connector Type (on Gateway)	50 Ω TNC, Standard polarity for cellular, Reverse polarity for Wi-Fi, GPS, XBee
Interfaces	
Cellular	GSM/GPRS/CDMA, 1xRTT Sprint Field accessible SIM access via SIM cover (GSM/GPRS only)
XBee (Low-Power RF)	Optional XBee-PRO® module; XBee ZB (ZigBee) and XBee 802.15.4 versions available
Serial	1 RS-232 (4-Wire) with 115.2 Kbps throughput
Ethernet	1 RJ-45 10 Mbps 10Base-T; Full or Half duplex
GPS	SBAS enabled; 50 channels; Time-To-First-Fix on cold start: 29 s; Horizontal position accuracy: 2.0 m; Velocity accuracy: 515 m/s
Satellite	Optional Iridium; Message size: 100-200 bytes; Latency: 30 s typical / 2 min max
Accelerometer	3-axis
Vehicle Bus	J1939 and J1708, wired or wireless via 3rd-party adapters
I/O	2 DIO, 1 ignition sense
Wi-Fi (802.11b/g)	
Frequency/Data Rate	2.4 GHz; Up to 54 Mbps w/fallback
Transmit Power/Receiver Sensitivity	802.11b/g (16 dBm @ 6 Mbps, 12 dBm @54 Mbps); -82 dBm @ 11 Mbps
Modes	Ad-hoc, AP Client and Infrastructure modes
Power Requirements	
Power Input/Power Supply	9-48 VDC; +12/24 V battery
Power Consumption	Idle: 4 W; Peak: 12 W; Sleep: 60 mW
Environmental/Regulatory Approvals	
Environmental	IP67 and SAE1455 certified
Operating Temperature	-40º C to +70º C (-40º F to +158º F)
Safety	UL 60950-1, EN 60950-1, CSA 22.2 No. 60950, UL 60950-22, EN 60950-22
EMC	CE, FCC PART 15 (Class B), SAE/ISO automotive testing

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