



ConnectPort HCG

Heavy-Grade Cellular Gateway for Fleet Management

Preliminary Datasheet

Published: November 19, 2008



Summary

The ConnectPort HCG is a ruggedized cellular gateway that can be used by service providers, integrators and end users looking to provide sophisticated and cost-effective fleet management and asset tracking solutions. The device provides remote connectivity to mobile assets to monitor operating health, performance, location and driver behavior, as well as to enable automated event reporting. With Digi's XBee technology running natively on the device, the ConnectPort HCG also allows users to deploy a low-power sensor network within and around the vehicle or mobile asset to monitor additional asset points (e.g. tires, reefer units, door locks, etc.). The ConnectPort HCG is housed within an IP67 rated enclosure and is capable of withstanding the vibration tolerances necessary to operate on heavy equipment fleets.

Features

- Location Tracking and Geo-fencing with on-board GPS
- Automated Event Reporting - unit can continuously transmit vehicle status at user-defined intervals

- Factory-sealed IP67 enclosure ensures protection from dust and total water immersion to 1 meter
- Controller Area Network (CAN) interface support for connection to J1939 or proprietary vehicle bus
- J1708 protocol support offers serial connectivity to a large installed base of heavy duty vehicle fleets
- Advanced power management based on vehicle ignition status
- Global cellular coverage over GSM/GPRS or CDMA networks
- 128-bit AES and SSL encryption for complete data security
- Programmable in Python for application customization
- Supports Digi's Data Acquisition Framework (DAQ) for simplified data collection from endpoints and the presentation of that data to the enterprise application

Configurations (Part #s TBD)

- HCG: Cellular (GPRS), XBee-PRO ZB, GPS
- HCG+: Cellular (GPRS or CDMA), XBee-PRO ZB, GPS, WiFi, Ethernet

Availability

	HCG	HCG+
Beta units:	Jan 2009	Jan 2009
Prototypes:	Feb/Mar 2009	Mar 2009
Production units:	Apr 2009	May 2009

Product Specifications

Feature	HCG	HCG+
CPU	Wavecom WMP150	Digi NS9215 (ARM9)
Memory	8/16MB	16/32MB
Programmable in Python	Yes	
Cellular	GPRS/GSM	GPRS/GSM or CDMA
Module Support	Wavecom WMP150	3 options: Wavecom WMP150 (GPRS) Wavecom Q26 Elite (CDMA) Kyocera M300/1xD (CDMA)
Low Power RF Interface	XBee-PRO module Outdoor range up to 1 mile; Indoor range up to 400 ft Transmit Power = 50 mW Receive Sensitivity = -102 dBm	
10/100 Ethernet	No	Yes
Wi-Fi (802.11 a/b/g)	No	Yes
Digital I/O	2	4 (2 on second Deutsch connector)
Analog I/O	1 (Ignition sense)	
USB Device	Yes	
J1708 Support	Yes	
CAN Support (1 Mbps)	Dedicated CAN microcontroller	Digi NS9215 CAN implementation (8 filter/mask pairs)

Feature	HCG	HCG+
Deutsch Connector Pinout	<p>HCG and HCG+ (1st Connector) 1: VIN, 2: CAN_H, 3: USB_DN, 4: IGN, 5: GPIO1, 6: J1708+ 7: J1708-, 8: GPIO2, 9: USB_5V, 10: USB_DP, 11: CAN_L, 12: GND</p> <p>HCG+ only (2nd Connector) 1: NC, 2: GPIO3, 3: Eth_TX+, 4: Eth_RX+, 5: NC, 6: NC, 7: NC, 8: NC, 9: Eth-RX-, 10: Eth_TX-, 11: GPIO4, 12: GND</p>	
GPS	<p>Yes Supplies NMEA strings</p>	
LED's	<p>Power (blue) Cellular signal strength 1 (green) Cellular signal strength 2 (green) Cellular signal strength 3 (green) XBee Link/Activity (link = green, activity = yellow) Cellular Link/Activity (link = green, activity = yellow) GPS (link = green) Ethernet (link = green, activity = yellow)* WiFi (link = green, activity = yellow)* General user-defined application (green or yellow) * Applies to Premium model only</p>	
USB Device	<p>Low speed</p>	
Power Consumption		
Powered (Peak)	12W	16.7W
Powered (Avg)	5.5W	8.2W
Sleeping (GPS on)	50 mW	50 mW
Power Mgmt	<p>Power management PIC + RTC, ignition sense</p>	
Mechanical	<p>IP67 rated enclosure (factory sealed), die cast aluminum, external antennas</p>	
Temperature	<p>-20C to 55C Range is limited by specification of the cellular module</p>	

Feature	HCG	HCG+
Antennas	Cellular (SMA) XBee (RP/SMA) GPS	Cellular (SMA) WiFi (RP/SMA) XBee (RP/SMA) GPS
Dimensions	4.0 in X 5.0 in X 2.5 in	
Certifications	FCC Part 15 B (US) ICES-003 Class B (Canada) VCCI Class II (Japan) EN 301 489-1, sections 8.2 to 8.6 (EU) EN 301 489-1, sections 9.2 to 9.6 (EU) SAE J1113 (Sec 3, 11, 21, 41) SAE J1455 (salt spray, chemical exposure) SAE J1960 SAE J1737 UL/cUL/CB Scheme 60950-1 (N Amer) RoHS WEEE	