Gen II Radio Network Controller Modem Assembly

Ensure robust communication during your operational day.

Seamless communication between your vehicles in service and dispatch operations depends on the reliability of your radio equipment. The new Vontas OnRoute Generation II Radio Network Controller Modem Assembly is the fixed site Time Division Multiple Access (TDMA) data interface component between the Radio Network Controller (RNC) and the base radio station. It facilitates communication between in-vehicle radios and central dispatch workstations.

The Radio Network Controller (RNC) is located at the data channel base station(s) to manage communications between the dispatch center and the mobile units using TDMA communication technology. Data is converted from the RNC into data packets for transmission to the vehicles, and from the vehicles to data for the RNC. TDMA technology divides a radio frequency into time slots and allocates the slots to multiple calls. Thus, a single frequency is able to support multiple vehicles simultaneously.

Overview

Fail-Safe Communication

- Provides dual modems for simultaneous transmit and receive of TDMA data; selectable TDMA data rates of 4800, 9600, and 19,200 bps
- Provides 8 general purpose I/O ports for customized applications
- Provides the capability for switching between primary and secondary data systems
- Transmit switch on the front panel keys and de-keys the radio

Front Panel View

- Rack Mounting Holes
- Power Status LED's
- Primary/Backup Status LED's
- Receive Modem Digital GPIO LED's
- Transmit Modem digital GPIO LED's
- Transmit Key Enable/Disable Switch with Status LED
- Receive Data Window Test Port
- Receive Data Packet Test Port with Packet Received LED
- Transmit Data Packet Test Port with Packet Sent LED

Rear Panel View

- Transmit Modem USB Port
- Spare Analog Input/Output Connector
- Receive Data Relay Connector
- Transmit Data Relay Connector
- Modem Data Connector
- Key Relay Connector
- Primary/Backup Relay Switching Control Input and Output
- Transmit Modem GPIO's
- Receive Modem GPIO's
- Receive Modem USB Port
- Primary/Backup Control Switches
- 6-112 VDC Power Input Connector

Easy Installation and Maintenance

- Provides test ports for examining the transmit and receive signals
- Occupies only 1.75" of vertical equipment rack space; USB interface to RNC
- Provides test and diagnostic ports and LED indicators
- The assembly is external to the RNC and contains fast disconnect cables for easier service

Agency Benefits

More Responsive Dispatch Operations

Gen II RNC provides the ability to support data communications over a private data radio network, Improving your communications capabilities and situational awareness so you can better respond to events and emergencies. In addition, the RNC broadcasts differential correction data messages received from the GPS reference station to the mobile units, providing corrective position information for enhancing GPS accuracy. These messages are typically sent every four seconds.

Proven Technology and Support

24/7 support by Customer Care and Return Material Authorization (RMA program ensures maximum uptime for your equipment.

Passenger Benefits

Passenger Safety

- Clear, collaborative communication between operator and dispatch improves response times to emergencies and incidents, helping ensure vehicle reliability and passenger safety

Better Rider Experience

- Enhanced operational communication helps deliver the seamless service passengers expect

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Vontas

TECHNICAL SPECS FOR

Gen II Radio

TOUCHSCREEN DISPLAY

- 10.1” TFT WSVGA (1024 x 600) Color LCD w/LED Backlight
- Aspect Ratio: 16:9
- Contrast Ratio: 600:1 Min.:800:1 Typ.
- Luminance: 500 cd/m2 Min.; 560 cd/m2 Typ.
- ViewEmbedded TDMA Modem provides patented data commu

PHYSICAL CHARACTERISTICS

- Size: 6.84” deep x 16.50” wide x 1.73” high (1 RU)
- Weight: 2 pounds

ENVIRONMENTAL

- SAE J1455 tested as follows:
  1. Operating Temperature Range: -40°C to +80°C
  2. Storage Temperature Range: -40°C to +85°C
  3. Humidity 0 – 90% non-condensing
- Conforms to CFR Part 15 Subpart B Sections 15.107 and 109 for Class A digital devices
- Conforms to Industry Canada ICES-003 for Class A digital devices

INTERFACES

- External desk type power supply. 120 VDC input, 7.5 VDC output supplied with unit
- Communication Interfaces USB 2.0 (QTY. 2) Type A peripheral
- GPIO Port – User defined, (QTY. 8)
- Modem Tx and Rx data port
- Receive and Transmit packet analog test ports
- Receive data timing window port

FCC, (FEDERAL COMMUNICATIONS COMMISSION)

- Verified per FCC Title 47, Part 15, Subpart B, Section 15.107 and 15.109 for Class A digital devices
- This device complies with Part 15 of the FCC Rules: Operation is subject to the following two conditions:
  1. This device may not cause harmful interference.
  2. This device must accept any interference, including that which may cause undesired operation.

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