GUARDIAN™

High Speed Serial Connectivity for Remote Monitoring and Control

The NextGen Guardian™ wireless modem provides a high-speed data link suitable for a wide variety of applications requiring system security and diagnostic reporting. Designed for speed and efficiency, the Guardian is applicable for analog operation such as paging, phone line substitution and slow speed data use cases.

HIGHLIGHTS

1-10 watts continuous duty; software selectable

10-30 VDC wide range power supply

User selectable data rates

OTA compatible with T-96SR and TSLM

Flexible, programmable external I/O interface

SELECTABLE OPERATING MODES

- RS-232, RS-422 and RS-485 compatible
- Simplex, half-duplex or full-duplex operation
- RTS-CTS handshaking protocol
- Data activated transmission (DOX) mode
- Transparent, asynchronous serial formats supported

MARKET APPLICATIONS

- Industrial Equipment
- Monitoring and Control

RELATED PRODUCTS

- Viper SC+™

A PRODUCT OF

NextGen RF DESIGN

Technical Specifications

General

Frequency Range	136-174 MHz, 406-512 MHz
Channel Bandwidth	12.5 kHz, 25 kHz
Modes of Operation	Modem and Analog: Simplex, half-duplex, full-duplex
Modulation	2FSK

Receiver Standards

Bit Error Rate	@ 1x10-6
12.5 kHz	-107 dBm @ 9.6 kbps -110 dBm @ 4.8 kbps
25 kHz	-100 dBm @ 19.2 kbps -107 dBm @ 9.6 kbps -110 dBm @ 4.8 kbps
Adjacent Channel	60 dB @ 12.5 kHz; 70 dB @ 25 kHz

Transmitter

Frequency Stability	1.0 ppm
Carrier Output Power	1-10 watts
Duty Cycle	100% (Power foldback for high temps)
Output Impedance	50 Ω

Certifications

Industry Certifications	FCC, IC, UL Class I, Div. II

Electrical

Tx Current	1.2-3.6A @ 10V; 0.6-1.8A @ 20V; 0.4-1.2A @ 30V
Rx Current	360mA @ 10V; 200mA @ 20V; 150mA @ 30V (typ)
Primary Power	10-30 VDC

Environmental

Temperature	-30° to +60° C -40° to +70° C (w/ 50% duty cycle at 10W RF power)
Humidity	5% to 95% non-condensing

Physical/Design

Dimensions	5.50" x 2.125" x 4.25" (13.97 x 5.40 x 10.8 cm)
Weight	2.4 lbs. (1.1 kg)

Interface Standards

Serial COM 1, COM 2	RS-232 DB-9
Analog User	I/O Right Angle, RS-422, RS-485, 8 Contacts (Male)
Antenna	TNC female (Tx/Rx), SMA female (Rx)-Full duplex models only

This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D OR non-hazardous locations only.

WARNING: EXPLOSION HAZARD – Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.

WARNING: EXPLOSION HAZARD – Substitution of components may impair suitability for Class I, Division 2.

CALIFORNIA PROPOSITION 65

WARNING: This product can expose you to chemicals including Carbon black and Nickel, which are known to the State of California to cause cancer, and including Bisphenol A and 1,3-Butadiene, which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

NextGen RF DESIGN

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