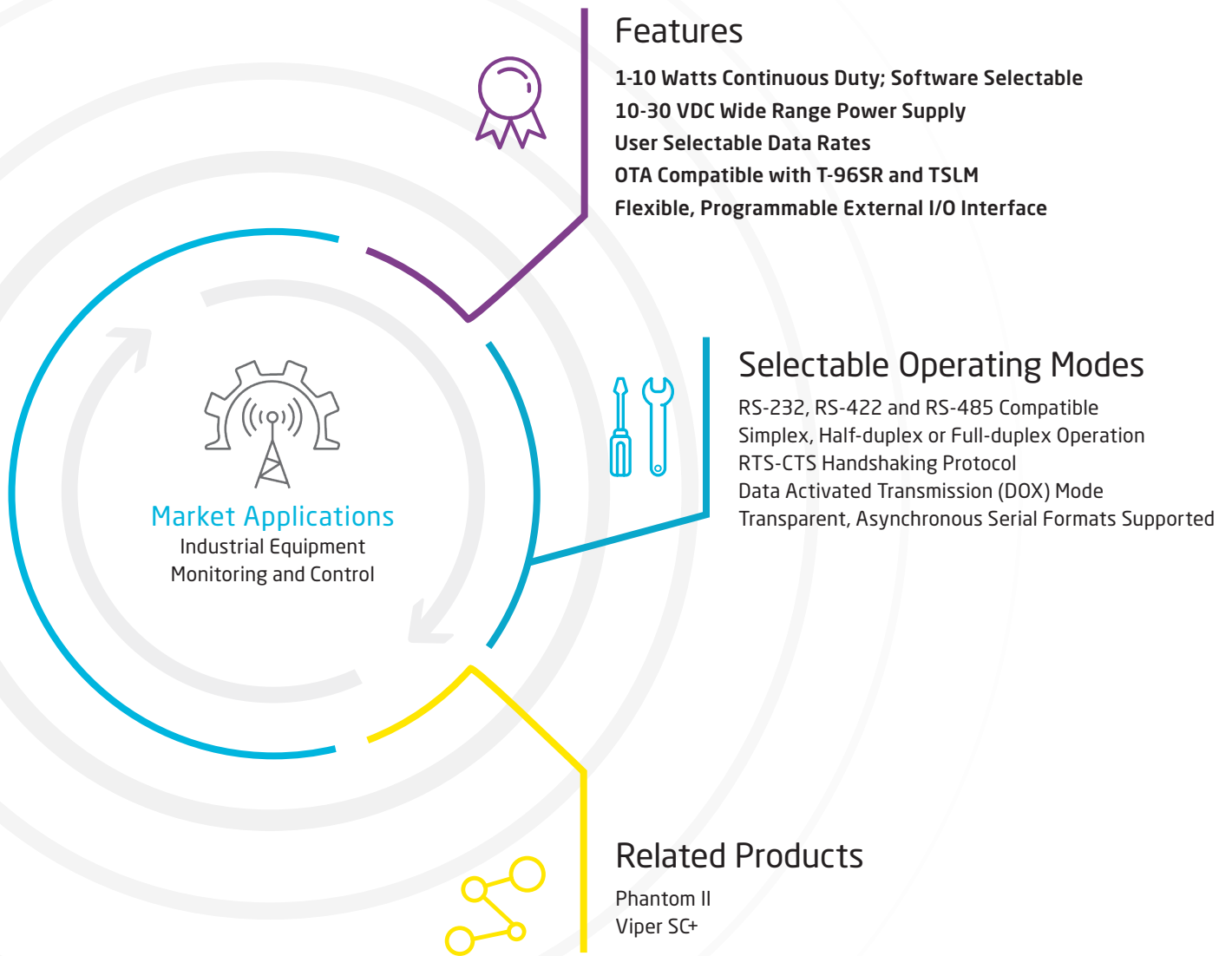# Guardian™

High Speed Serial Connectivity
for Remote Monitoring and Control

The 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.

Features

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

Phantom II
Viper SC+

Guardian™ 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	@ 1×10^{-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