VIPER SC+™

Intelligent IP Router for Licensed Spectrum

The NextGen Viper SC+™ is an intelligent, point-to-multipoint bridge or router for licensed narrowband spectrum holders. The ruggedized Viper SC+ reliably delivers faster data speeds to support telemetry and SCADA applications in bandwidths ranging from 6.25 kHz to 100 kHz. Flexible for long-distance applications, this software-programmable router is fast, secure and intelligent.

HIGHLIGHTS

Highly secure, intelligent and versatile narrowband spectrum router

Up to 256 kbps speeds for reliable delivery of business critical data*

Highly secure VLAN, designed to meet FIPS 140-2

EXPERIENCE THE ADVANTAGE

- Up to 4X the speed of devices in its class
  Optimum control for managing data flow
  Get the most out of your RF channel

- User selected channel size: 6.25, 12.5, 25, 50 and 100 KHz

- 4 kbps to 256 kbps speeds based on application requirements; configurable to adapt to your applications

- QOS for simultaneous use of multiple applications and data transfer prioritization

- Easily deployed and managed via web browser

MARKET APPLICATIONS

- Telemetry

- SCADA

- Real-Time Communications

RELATED PRODUCTS

- Guardian™

*Viper SC+ 200, 900 with 100 KHz channel capability

A PRODUCT OF

NextGen RF DESIGN

Technical Specifications

Connectors/Interface

Ethernet	VHF/UHF: 10 Base-T Auto-MDIX RJ-45 200/900: 10/100 Base-T Auto-MDIX RJ-45
Serial COM 1, COM 2	RS-232 DB-9
Antenna	TNC female (Tx/Rx) SMA female (Rx) - Dual port models only

Mechanical

Dimensions	5.50" W x 2.125" H x 4.25" D, (13.97 x 5.40 x 10.8 cm)
Weight	2.4 lbs, 1.1 kg

Power

Tx Current	1W: 1.4A@10V; 0.8A@20V; 0.6A@30V 8/10W: 3.8A@10V; 2.0A@20V; 1.4A@30V
Rx Current	600mA@10V; 300mA@20V; 225mA@30V
Primary Power	10-30 VDC
Output Impedance	50 Ω

LED

Power, Status, Ethernet Activity, Ethernet Link, Receive/Transmit

Certifications

Industry Certifications	FCC, IC, UL Class I, Div. II, ROHS2 Compliant

Transmitter

Frequency Stability	1.0 ppm
Carrier Output Power	1-10 Watts (VHF/ UHF/200), 1-8 Watts (900 & MAS)
Duty Cycle	100% (Power Foldback for High Temps)
Output Impedance	50 Ω

⚠️ The antenna connector is for connection to antennas housed inside of a suitable enclosure.

⚠️ The unit is to be powered with a Listed Class 2 or LPS power supply.

⚠️ 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 k WARNING: nown 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

Frequency Bands

	Frequency Channel	Bandwidth
VHF:	136-174 MHz	6.25/12.5/25/50kHz
200:	215-240 MHz	6.25/12.5/25/50/100kHz
UHF:	406.1-512 MHz	6.25/12.5/25/50kHz
900 (NPCS):	880-902 MHz	12.5/25/50/100kHz
900 (NPCS, MAS):	928-960 MHz	12.5/25/50/100kHz
Modes of Operation:	Simplex, Half-Duplex	50 Ω
Modulation:	2FSK, 4FSK, 8FSK, 16FSK	

Receiver

VHF/200, UHF/900 MHz BER @ 1 X 10 -6

6.25 kHz	-115dBm@4kbps; -106dBm@8kbps; -100dBm@12kbps
12.5 kHz	-116dBm@8kbps; -109dBm@16kbps; -102dBm@24kbps; -95dBm@32kbps
25 kHz	-114dBm@16kbps; -106dBm@32kbps; -100dBm@48kbps; -92dBm@64 kbps
50 kHz	-111dBm@32kbps; -104dBm@64 kbps; -97dBm@96kbps; -88dBm@128kbps
100 kHz(200 only)	-103dBm@64kbps; -96dBm@128 kpbs -89dBm@192kbps; 80dBm@256kbps

900+ MAS BER @ 1 X 10 -6

12.5 kHz	-112dBm@8kbps; -106dBm@16kbps; -99dBm@24kbps; -90dBm@32kbps
25 kHz	-111dBm@16kbps; -104dBm@32kbps; -97dBm@48kbps; -89dBm@64 kbps
50 kHz	-108dBm@32kbps; -101dBm@64 kbps
100 kHz	-100dBm@64kbps; -93dBm@128kbps; -86dBm@192kbps; -77dBm@256kbps

Adjacent Channel

VHF/200, UHF/900	60dB@12.5 kHz; 70 dB@25 kHz; 75 dB@50 kHz; 75dB@100kHz
900 (MAS + NPCS)	55 dB@12.5 kHz; 65 dB@25 kHz; 70 dB@50kHz; 70dB@100kHz

Security

VLAN, AES-128, VPN with AES-128/192/256, RADIUS, Designed to meet FIPS 140-2

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