Viper SC™

Intelligent IP Router for Licensed Spectrum

VERSATILE, SECURE COMMUNICATIONS WITH MULTISPEED FUNCTIONALITY

Designed for the energy and utility segment as well as the water or wastewater industries, the CalAmp Viper SC is an intelligent, point-to-multipoint bridge or router for licensed narrowband spectrum holders. This robust communications IP router for VHF & 900 licensed networks features an internal web browser with a familiar interface for IT and network administrators to set up and view device information, configure network parameters and deploy unit upgrades from any location. Using a Software Defined Radio, Viper SC is programmable for 50, 25, 12.5 or 6.25 kHz channels.

FAST & RELIABLE

MultiSpeed operation allows each remote Viper SC to communicate to a Viper SC Base Station at the fastest speed supported by a given signal strength. MultiSpeed operation results in an adaptive network which is optimized for performance and reliability. Each Viper SC features single device store and forward and route redundancy for extended range and easy network expansion. With advanced diagnostic capabilities, over the air firmware upgrades, channel migration and RoHS compliance, you can bet your investment today is protected well into the future.

INTELLIGENT & SECURE

Featuring advanced QoS, the Viper SC allocated guaranteed RF bandwidth to critical, high-priority user-defined applications. Able to support multiple applications simultaneously, the Viper SC also boasts data prioritization for the ultimate in router intelligence. The Virtual Local Area Network (VLAN) routing capability of the Viper SC improves scalability, security and traffic-flow management. Versatile and scalable for the future, the Viper SC can be used as an IP router, terminal server, Ethernet bridge, access point or remote site.

CENTRALIZED MANAGEMENT

Viper SC can be managed via an intuitive webpage, SNMP, or telnet enabling remote management for every application. Viper's device management capabilities allow administrators to set-up and view device information, configure network parameters and deploy unit upgrades from any location. These remote management tools reduce the time and cost of maintaining network infrastructure while improving workforce efficiency for managing and monitoring industrial equipment in the field.

Experience The Advantage

- Advanced Multi-Level Modulation allows up to 128 kbps in a 50 KHz channel

- 1-10 Watts output Power, software selectable

- Multi - Hop store and forward routing to avoid obstructions and extend range

- FIPS 140-2 compliant providing AES 128/256 encryption, Radius authentication and Multiple VPNs

- Viper functions as an IP Bridge or IP Router

- Viper supports Terminal Services allowing IP to Serial Conversion

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

VIPER SC SPECIFICATIONS

PRODUCT HIGHLIGHTS

- QoS
- Bridge and Router Modes
- Secure VPN Tunnels
- MultiSpeeds

CONNECTORS/INTERFACE

Ethernet	10 BaseT 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

ENVIRONMENTAL

Operating Temperature	-40° to +70° C, (-40° to +158° F)
Specified Temperature	-30° to +60° C, (-22° to +140° F)
Storage Temperature	-40° to +85° C, (-40° to +185° F)
Operating Humidity	5% to 95% Non-condensing RH

POWER

Tx Current	1.2-3.6A@10V; 0.6-1.8A@20V;
	0.4-1.2A@30V
Rx Current	450mA@10V; 240mA@20V; 170mA@30V
Primary Power	10-30 VDC

STANDARDS & CERTIFICATIONS

- FCC   • IC   • UL

TRANSMITTER

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

FREQUENCY BANDS

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

RECEIVER

VHF/UHF BER @ 1x10-6

6.25 kHz	-115@4 kbps; -106@8 kbps;
	-100@12 kbps
12.5 kHz	-116@8 kbps; -109@16 kbps;
	-102@24 kbps; -95@32 kbps
25 kHz	-114@16 kbps; -106@32 kbps;
	-100@48 kbps; -92@64 kbps
50 kHz	-111@32 kbps; -104@64 kbps;
	-97@96 kbps; -88@128 kbps

MAS BER @ 1x10-6

12.5 kHz	-112@8 kbps; -106@16 kbps;
	-99@24 kbps; -90@32 kbps
25 kHz	-111@16 kbps; -104@32 kbps;
	-97@48 kbps; -89@64 kbps
50 kHz	-108@32 kbps; -101@64 kbps;
	-94@96 kbps; -85@128

Adjacent Channel	
(VHF/UHF)	45 dB@6.25 kHz; 60 dB@12.5 kHz;
	70 dB@25 kHz; 75 dB@50 kHz
(MAS)	55 dB@12.5 kHz; 65 dB@25 kHz;
	70 dB@50 kHz