CalAmp
connecting tomorrow today

Viper SC+™

Intelligent IP Router for Licensed Spectrum

MORE SPEED. MORE INTELLIGENCE.

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. 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.

Fast & Reliable

Four times as fast as devices in its category, the Viper SC+ offers 256 kbps in 100 kHz channels, providing increased throughput for reliable, remote business-critical communications. The Viper SC+ boasts multispeed operation, which allows each Viper SC+ to communicate to a Viper SC+ Base Station at the fastest speed supported by a given signal strength. The result is a network where each RF link is optimized for performance and reliability.

Intelligent & Secure

Featuring advanced QoS, the Viper SC+ allocates 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 of the data transmitted and permits a greater number of remote device connections. 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 managment 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

- 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

VIPER SC+ SPECIFICATIONS

PRODUCT 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

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

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

LED

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

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

STANDARDS & 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 Impedence	50Ω

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

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
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;
	-94dBm@96kbps; -85dBm@128kbps
100kHz	-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

APPLICATIONS

• Telemetry • SCADA • Real-time communications

About CalAmp
CalAmp (NASDAQ: CAMP) is a proven leader in providing wireless communications solutions to a broad array of vertical market applications and customers. CalAmp's extensive portfolio of intelligent communications devices, robust and scalable cloud service platform, and targeted software applications streamline otherwise complex machine-to-machine (M2M) deployments. These solutions enable customers to optimize their operations by collecting, monitoring and efficiently reporting business-critical data and desired intelligence from high-value remote assets. For more information, please visit www.calamp.com.

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