VHSM-5001 VERY HIGH SPEED MODEM

ADVANCED CONNECTIVITY, MAXIMUM FLEXIBILITY

Modernizing in-service HF, VHF and UHF radios

Secure communication. It's an essential factor in the success of any mission – whether that mission is military, civilian, related to disaster relief or any other complex, collaborative operation.

Highly functional radios, along with a reliable infrastructure to connect them, have an important role to play in that mission success. Modernizing your in-service radios with the Collins Aerospace VHSM-5001 (Very High Speed Modem), an upgrade from the previous VHSM-5000, is a proactive approach to improving radio performance and keeping communication lines open.

The VHSM-5001 supports a large number of channel bandwidths and offers advanced STANAG 4691 compliant waveforms. Rates range from 75 bps in 3 kHz channels for extremely robust communication to 1.92 Mbps in 500 kHz channels for high data-rate requirements.

Featuring a 70 MHz IF interface, the VHSM-5001 offers the top data rates possible in radio channels from 3 kHz to 500 kHz. With increased functionality, high-speed data throughput and faster connections, the VHSM-5001 can keep command and control centers in secure communication with forces in the air and on the ground. And the enhanced capabilities of our world-class modem can optimize performance of in-service HF, UHF and VUHF radios, whether they are from our 721S V/UHF family of fixed-site and transportable radios or a third-party supplier.

KEY FEATURES & BENEFITS

- World-class user data rates
- Designed for line-of-sight communications with very short synchronization time requirements
- Built-in AM modulator provides compatibility with audio HF/VHF/UHF modems using wideband AM radios
- Control remotely across any standard IP network via mobile device or stationery computer
- 19" 1U and 70 MHz interface

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SPECIFICATIONS

Functional Interfaces

Data	Ethernet, serial (75 bps to 1.92 Mbps)
Control	Locally with control LCD and keypad or embedded graphical user interface (GUI) with mouse and monitor (not included)
	Remotely via Windows application over IP
	Standard Software Development Kit to allow the customer to integrate control into their own framework
70 MHz IF Interface	-30 dBm to +5 dBm output -70 dBm to +5 dBm input
Keyline	Relay operated contact closure

Waveforms

VUHF 500K BW	180 kbps to 1.92 Mbps (coded) using 500 kHz channel per STANAG 4691 Annex E
VUHF 300K BW	112.5 kbps to 1.152 Mbps (coded) using 300 kHz channel per STANAG 4691 Annex D
VUHF 100K BW	32 to 384 kbps (coded) using 100 kHz channel per STANAG 4691 Annex C
VUHF 40K BW	4.8 to 153.6 kbps (coded) using 40 kHz channel
VUHF 25K BW	16 to 96 kbps (coded) using 25 kHz channel per STANAG 4691 Annex B
VUHF 20K BW	2.4 to 76.8 kbps (coded) using 21.6 kHz channel
VUHF 12K5 BW	2.4 to 48 kbps (coded) using 12.5 kHz channel
VUHF 8K33 BW	2.4 to 32 kbps (coded) using 8.33 kHz channel
VHDR	Very high data rate HF waveform up to 16 kbps in 3 kHz channel
STANAG	4539, 4285, 4415, 4529
MIL-STD 188-110A	Serial Tone
MIL-STD 188-110B	Appendix B, C, F
Programmable FSK	
Commercial Airborne 1800	
Commercial Maritime 1440	

Other waveforms can be added in the future via software updates to the unit.

Physical Interfaces

Ethernet	Dual 10/100/1000 Mbps RJ45
Serial	Single 44-pin synchronous/asynchronous (DCE): RS-232, RS-422 and RS-530 (custom interface cables required)
	Asynchronous RS-232 COM port interface
Radio	SMA connectors: 70 MHz IF In/Out
Video	SVGA and HDMI output for embedded GUI
Keyboard/mouse	USB-A

Environmental

Operating temperature	0º C to 50º C
Storage temperature	-40º C to 70º C
Relative humidity	0 to 95%, non-condensing
Altitude	1,000 ft below sea level to 15,000 ft above sea level
Shock	MIL-STD 810H, Method 516.8, Section 4.6.2 functional shock, Procedure I
Vibration	MIL-STD 810H, Method 528.1, Section 5.1.2.4 Discrete Frequency Test
Compliance	CCE, CA and FCC (Class A, Part 15) compliant
	MIL-STD 461G compliant (CE101, CE102, CS101, CS114, CS115, CS118, RE101, RS103 , RE102)
	Note: CS116 compliant with external Collins Aerospace custom dongle
Power	100 - 240 VAC, 50/60 Hz, 70 W, 2.0A
1U aluminum rack-mount chassis	19" W (17" W Chassis) x 1.75" H x 18.25" D
Weight	Approximately 11.5 lbs

Specifications subject to change without notice.

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