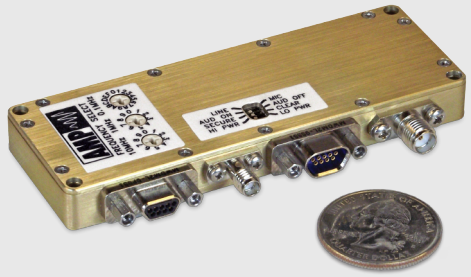
VST1 Analog Video/Audio/Data Transmitter

Rugged, Reliable, Efficient, Feature Rich in a Small Package. Ideal for Covert Operations, UAVs, and UGVs!



Design Features

- 1.7 Cubic Inch Package (1.25"x3.50"x0.375")
- Weighs < 1.7 oz.
- Up to 2 Watts RF Output Power
- Up to 4 Power Modes (Remote Control)
- Full Frequency Band Channelization
- 3 Configuration Modes
- Supports Composite Video (NTSC or PAL)
- Dual Audio or Data Subcarriers (Optional)
- Power Amp On/Off Control (Remote Control)
- Temperature Indication and Fold-Back (Remote Control)
- J-STD-001D Class 3 Assembly (Medical/Aerospace)

VST1 Series

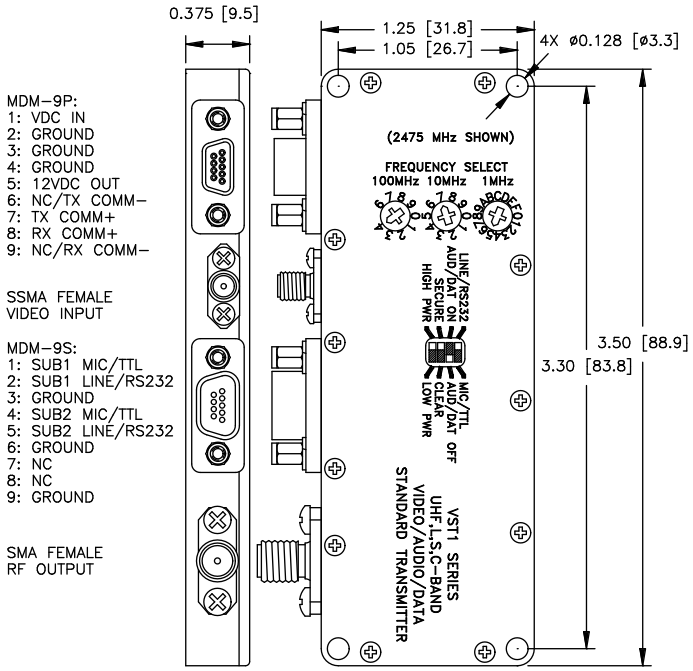
AMP's VST1 Series 1.7 cubic inch video transmitters offer innovative features and high quality packaging with up to two Line/Mic audio or RS232/TTL data subcarriers and up to 2 Watts output power.

VST1 transmitters may be configured with fixed RF output powers of 250 mW, 500 mW, 1 Watt, or 2 Watts. Transmitters may be optionally configured with remotely selectable power levels utilizing any of these four power levels. AMP's proprietary power-leveling circuit ensures level output power over the entire frequency band.

Locally configurable features include carrier frequency, high/low output power, video inversion, subcarrier enable, and subcarrier input type. These features and PA on/off, all power modes, and temperature fold-back characteristics may be configured remotely and assigned to programmable switch presets.

With military telemetry heritage, VST1 transmitters are designed to withstand harsh environments and are ideal for law enforcement, surveillance, UAV, UGV, Military, and other applications requiring efficient, high quality video/audio/data transmission in a compact, rugged package.

VST1 transmitters can be mated to AMP's HHA1 High Power Amplifier for applications that require higher RF output power.



Advanced Microwave Products
8748 Technology Way
Reno, NV 89521

Phone: (775) 345-9933
E-mail: sales@advmw.com
Web: www.advmw.com

VST1 Analog Video/Audio/Data Transmitter

RF Characteristics

Frequency Range (Specify):	UHF:	340.0-399.9 MHz	100 kHz Channels
(Other Ranges Available)	Lower L-Band:	1435-1535 MHz	1 MHz Channels
	Upper L-Band:	1700–1850 MHz	1 MHz Channels
	Lower S-Band:	2200-2399 MHz	1 MHz Channels
	Upper S-Band:	2400-2499 MHz	1 MHz Channels
	Full S-Band:	2200-2499 MHz	1 MHz Channels
	Lower C-Band:	4400-4900 MHz	1 MHz Channels
	Upper C-Band	4900-4999 MHz	1 MHz Channels
	Full C-Band:	4400-4999 MHz	1 MHz Channels
Frequency Selection (Specify):	Full Band Channelized - Remote Control Only or Remote/Programmable Switch/Local BCD		
Frequency Stability:	±5 ppm Over -20°C to +60°C		
Output Power (Specify):	250 mW, 500 mW, 1 Watt, or 2 Watts, Nominal (Selectable)		
Output Power, PA Disabled:	<0 dBm		
Power Modes (Specify):	One (Fixed), Two (Specify), Three (Specify), or Four (Specify)		
Power Leveling:	Within ±0.5 dB Over 6 Equal Width Sub-Bands, Typical		
Output Impedance:	50 Ω Nominal, VSWR 2:1 Maximum		
Output Protection:	Internal Isolator (Most Bands) - Open/Short Indefinitely		
Spurious Output:	-13 dBm Maximum		

Video Characteristics

Modulation Type:	Analog FM, Standard (Positive) or Inverted (Negative) Sense, (Selectable)
Video Standard (Specify):	NTSC (10Hz to 4.2MHz, 525 Line P/E) or PAL (10Hz to 5.0MHz, 625 Line P/E), +/- 1.5dB
Modulation Sensitivity:	±4 MHz / 1 Vpk-pk @ Crossover Frequency
Input Impedance:	75 Ω Nominal, Unbalanced, Shunted by 30 pF Maximum
Distortion:	2% Maximum
Incidental FM:	10 kHz RMS Maximum

Audio/Data Subcarrier Characteristics

Subcarriers (Specify):	None, One, or Two - Audio or Data
Subcarrier Frequency (Specify):	5.8, 6.0, 6.2, 6.5, 6.8, 7.2, 7.5, 8.3, or 8.59 MHz, or Custom
Subcarrier Separation (Two):	700 kHz Minimum
Frequency Stability:	±0.5% Over -20°C to +60°C
Subcarrier Insertion Level:	-26 dBc Nominal (Audio) or -22 dBc Nominal (Data)
Subcarrier On/Off Control:	Local, Remote, and Programmable Switch
Modulation Type:	Analog FM, Positive Sense
Frequency Response:	100 Hz to 10 kHz ±1.5 dB (Audio) or DC to 50 kbps (Data)
Pre-Emphasis:	75 µsec NTSC or 50 µsec PAL (Audio) or None (Data)
Modulation Sensitivity:	150 kHz pk-pk @ 1 kHz rate (Audio) or 150 kHz pk-pk (Data)
Input Level:	-55 dBV Mic/-10 dBV Line Audio or RS232/TTL Data (Selectable)
Input Impedance:	>4 kΩ Unbalanced (Audio) or 10 kΩ to Gnd (Data)
Mic DC Supply (Audio Input(s)):	2.0 Vdc Thru 4.7 kΩ Pull-Up

Configuration Interface Characteristics

Interface Type:	Two-Way UART
Signaling Type (Specify):	RS232, RS485, RS422, or 3.3V TTL
Interface Parameters:	9600/8/1/None/None (Baud/Data Bits/Stop Bits/Parity/Handshake)

Power Requirements

Input Voltage:	+11 to +16 Vdc, Reverse Polarity Protected
Current Draw (Typical at 12V):	200mA for 250mW, 300mA for 500mW, 400mA for 1W, or 650mA for 2W
Current Draw, PA Disabled:	70 mA, Typical
Camera Supply Output:	+12 Vdc, 250mA Current Limit

Mechanical

Material:	CNC Machined T6061-T6 Aluminum	
Finish (Specify):	Nickel Plated or Gold Iridite	
Dimensions:	1.25” W x 3.50” L x 0.375” H	
Weight:	<1.7 oz.	
Connectors:	RF Output:	SMA Female
	Video Input:	SSMA Female
	DC Supply, Comms, Cam Supply:	MDM-9P
	Audio Inputs, Data Inputs:	MDM-9S

Environmental

Temperature (Operating):	-20°C to +60°C
Acceleration:	100 g, 3 Axes
Altitude:	Unlimited
Humidity:	Up to 95% @ Any Temperature Forming Frost or Condensation