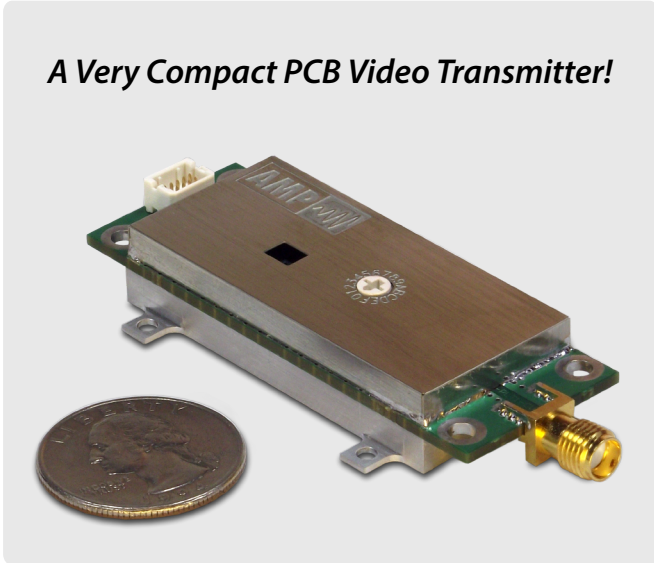


# PST1 PCB Video/Audio/Data Transmitter

**A Very Compact PCB Video Transmitter!**



## Design Features

- 1 Cubic Inch Package (0.95"x2.60"x0.41")
- Weighs < 1 oz.
- Up to 2 Watts RF Output Power
- Up to 4 Power Modes (Remote Control)
- Internal Isolator for Load Protection (Most Bands)
- Full Frequency Band Channelization
- 2 Frequency Selection Modes
- Supports Composite Video (NTSC or PAL)
- Optional Audio or Data Subcarrier
- Subcarrier On/Off Control (Remote Control)
- Power Amp On/Off Control (Remote Control)
- Temperature Indication & Fold-Back (Remote Control)
- J-STD-001D Class 3 Assembly (Medical/Aerospace)

## PST1 Series

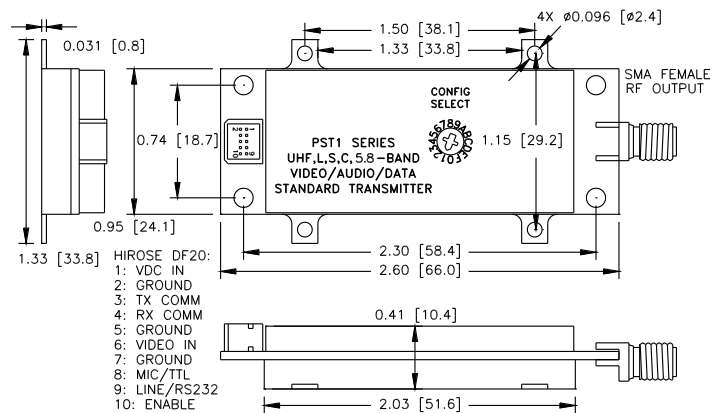
AMP's PST1 Series 1 cubic inch video transmitters offer many innovative features, are designed to withstand harsh environments, and are ideal for UAV and other applications requiring high efficient, high quality video/data transmission in a compact, rugged package.

PST1 transmitters may be configured with fixed RF output powers of 250 mW, 500 mW, 1 Watt, or 2 Watts (2 Watts not available for C-Band and 5.8 GHz). 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.

Transmitter carrier frequency may be selected remotely and locally/remotely with a programmable binary switch. Other remotely controllable features include transmitter power, subcarrier on/off, and temperature fold-back settings.

PST1 transmitters incorporate an internal isolator (most bands) for RF load protection and temperature fold-back for thermal protection (user configurable).

PST1 transmitters can be mated to AMP's HHA1 High Power Amplifier for applications that require higher RF output power.



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## 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
	ISM 5.8 GHz Band:	5725-5875 MHz	1 MHz Channels
Frequency Selection (Specify):	Full Band Channelized - Remote Control Only or Remote/Programmable Switch		
Frequency Stability:	±5 ppm Over -20°C to +60°C		
Output Power (Specify):	250 mW, 500 mW, 1 Watt, or 2 Watts (2W not available for C-Band and ISM 5.8 GHz), 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, Positive Sense		
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 or One, 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		
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:	Remote and Programmable Switch Control		
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 or -10 dBV Line (Selectable, Audio) or RS232/TTL (Selectable, Data)		
Input Impedance:	>4 kΩ Unbalanced (Audio) or 10 kΩ to Gnd (Data)		
Mic DC Supply:	2.0 Vdc Thru 4.7 kΩ Pull-Up		

## Configuration Interface Characteristics

Interface Type:	Two-Way UART		
Signalling Type (Specify):	RS232 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		
Transmitter Enable Control:	Open = On, Ground (or <1.5 Vdc) = Off		

## Mechanical

Dimensions:	0.95" x 2.6" x 0.41"		
Weight:	<1 oz.		
Interconnects*:	RF Output:	SMA Female	
	DC Supply, Video Input, Enable, Comms, Audio/Data In:	Hirose DF20F-10DP-1V Male, Mate Supplied	

## Environmental

Temperature (Operating):	-20°C to +60°C		
Over-Temperature Protection:	Reduces Output Power at +75°C, Returns to Full Power at +70°C, Limits Configurable Via Remote Control, Protection Bypassable		
Acceleration:	100 g, 3 Axis		
Altitude:	Unlimited		
Humidity:	Up to 95% @ Any Temperature Forming Frost or Condensation		