

# VT30 Video/Audio/Data Transmitter

UHF, L-Band, S-Band, C-Band

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



FCC ID: U8KVT30SC

AMP's VT30 Series 3.3 cubic inch video transmitters offer the same innovative features and high quality packaging as the VT15 Series with up to two Line/Mic audio or RS232 data subcarriers and 2 Watts output power. VT30 Series are available with fixed RF output powers of 1 Watt and 2 Watts and may be optionally configured for dual power operation utilizing any two power levels between 250mW and 2 Watts.

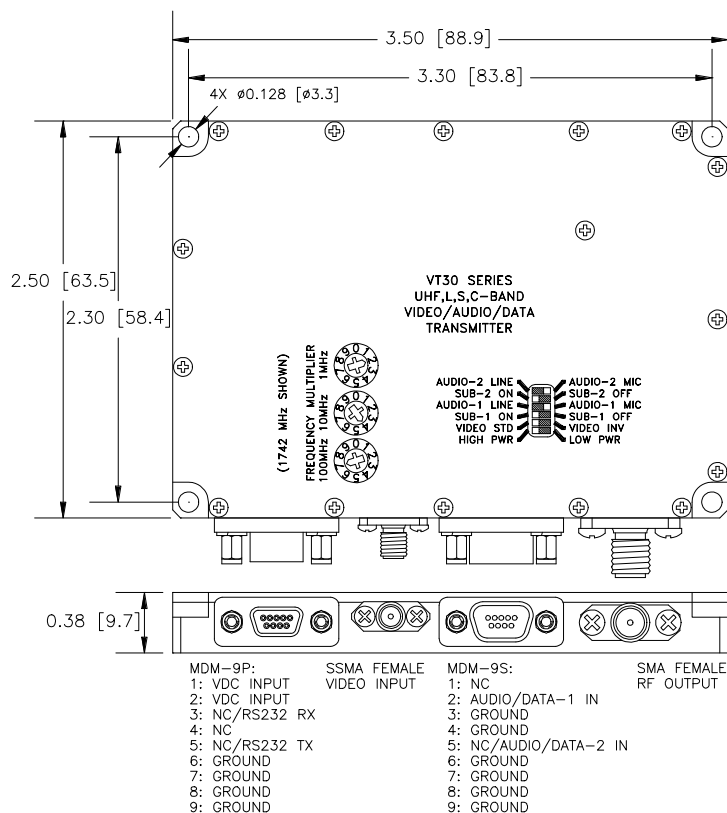
Transmitter carrier frequency may be selected locally with BCD rotary switches, remotely with RS232 interface, or locally/remotely with a programmable binary switch. Slide switches allow control of dual power modes, video inversion, subcarrier on/off, and audio input level selection.

With military telemetry heritage, VT30 Series 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.

If your application requires less range or video-only transmission, please review AMP's VT15 Series video transmitters. If your application requires more range, please review AMP's VT50 Series video transmitters.

## Design Features:

- 3.3 Cubic Inch Package (2.5" x 3.5" x 0.38")
- Weighs < 2.8 oz.
- Up to 2 Watts RF Output Power
- Dual Power Modes (Slide Switch Control)
- Full Band Channelized (BCD Rotary Switches, RS232 Remote Control, or Programmable Binary Switch)
- Video Inversion (Slide Switch Control)
- NTSC or PAL Video Formats (Bandwidth & Pre-Emphasis)
- Dual Audio or Data Subcarriers (Optional)
- Line/Mic Audio Level Selection (Slide Switch Control)
- J-STD-001D Class 3 Assembly (Medical/Aerospace)



### \*\* NOTES:

- 1) NC = No Connection
- 2) Single audio, single data, and dual data subcarrier models utilize a 4-position slide switch with corresponding switch functions
- 3) Programmable binary switch models utilize a single 16-position binary switch in place of the shown 1 MHz switch



**Manufactured by:**  
Advanced Microwave Products  
7025 Longley Lane, Suite 20  
Reno, NV 89511  
www.advmw.com



**Distributed in North America By:**  
Dyplex Communications LTD.  
107 Woodbine Down Blvd, Unit 7&8  
Toronto, ON M9W 6Y1  
Ph 1- 416-675-2002, ext. 2  
Email: info2@dyplex.com

# AMP VT30 Series Video/Audio/Data Transmitter

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## RF Characteristics

Frequency Range (Specify): (Other Ranges Available)	UHF: 340.0 – 399.9 MHz Lower L-Band: 1435 – 1535 MHz Upper L-Band: 1700 – 1850 MHz S-Band: 2200 – 2399 MHz ISM S-Band: 2400.00 – 2499.75 MHz C-Band: 4400 – 4999 MHz Public Safety C-Band: 4940 – 4990 MHz	Steps: 100 kHz Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other Steps: 250 kHz Steps: 1 MHz BCD, 250 kHz Other Steps: 1 MHz BCD, 250 kHz Other
Frequency Selection (Specify):	Fixed or Channelized (Full Band - BCD Rotary Switches, RS232 Remote Control, or Programmable Binary Switch)	
Frequency Stability:	±4 ppm Over -20°C to +60°C	
Output Power (Specify):	1 W, 2 W, or Dual Power (Any 2 Levels – 250mW, 500mW, 1 W, 2 W, Slide Switch Selectable)	
Output Impedance:	50 Ω Nominal, VSWR 1.5:1 Maximum	
Output Protection:	UHF: None – 20:1 VSWR Indefinitely L/S/C: Internal Isolator - Open/Short Indefinitely	
Spurious Output:	-13 dBm Maximum	

## Video Characteristics

Modulation Type:	Analog FM
Modulation Sense:	Standard (Positive) or Inverted (Negative), Slide Switch Selectable
Frequency Response (Specify):	10 Hz to 3.5 MHz (Monochrome), 4.2 MHz (NTSC), or 5.0 MHz (PAL), ±1.5 dB
Pre-Emphasis:	525-Line (NTSC) or 625-Line (PAL)
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):	One or Two
Subcarrier Type (Specify):	Audio or Data
Subcarrier Frequency (Specify):	4.83, 5.8, 6.0, 6.2, 6.5, 6.8, 7.2, 7.5, 8.3, 8.5, or 8.59 MHz, or Custom
Subcarrier Separation (Two):	1 MHz 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:	Slide Switch Selectable
Modulation Type:	Analog FM, Positive Sense
Frequency Response:	100 Hz to 10 kHz ±1.5 dB (Audio) or 100 bps to 48 kbps (Data)
Pre-Emphasis:	75 μsec NTSC or 50 μsec PAL (Audio) or None (Data)
Modulation Sensitivity:	100 kHz pk-pk @ 1 kHz rate (Audio) or 150 kHz pk-pk (Data)
Input Level:	-55 dBV Mic or -10 dBV Line (Slide Switch Selectable, Audio) or RS232 (Data)
Input Impedance:	4.7 kΩ Minimum Unbalanced (Audio) or 10 kΩ to Gnd (Data)
Mic DC Supply (Audio Input(s)):	2.0 Vdc Thru 4.7 kΩ Pull-Up

## Power Requirements

Input Voltage:	+9 to +16 Vdc, Reverse Polarity Protected
Current Draw: (Maximum)	UHF/L/S-Band: 600 mA for 1 W, 800 mA for 2 W C-Band: 650 mA for 1 W, 850 mA for 2 W

## Mechanical

Material:	CNC Machined T6061-T6 Aluminum
Finish (Specify):	Nickel Plated or Black Plated
Dimensions:	2.50" W x 3.50" L x 0.38" H
Weight:	2.8 oz. Maximum
Connectors:	RF Output: SMA Female Video Input: SSMA Female (Others Available) Audio/Data Input, Mic Supply: MDM-9S DC Supply, RS232 (If Applicable): MDM-9P

## 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