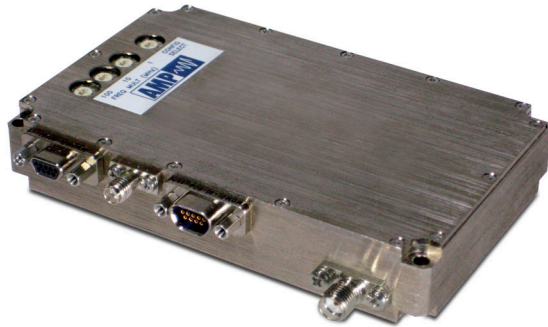


# CT70 Series COFDM Video Transmitter

UHF, L-Band, S-Band

500mW / 1W / 2W

## Excellent Digital Video Transmitter for Urban Multipath Environments!



AMP's CT70 Series 7.0 cubic inch COFDM video transmitters are designed for high quality COFDM video transmission in multipath environments such as metropolitan areas.

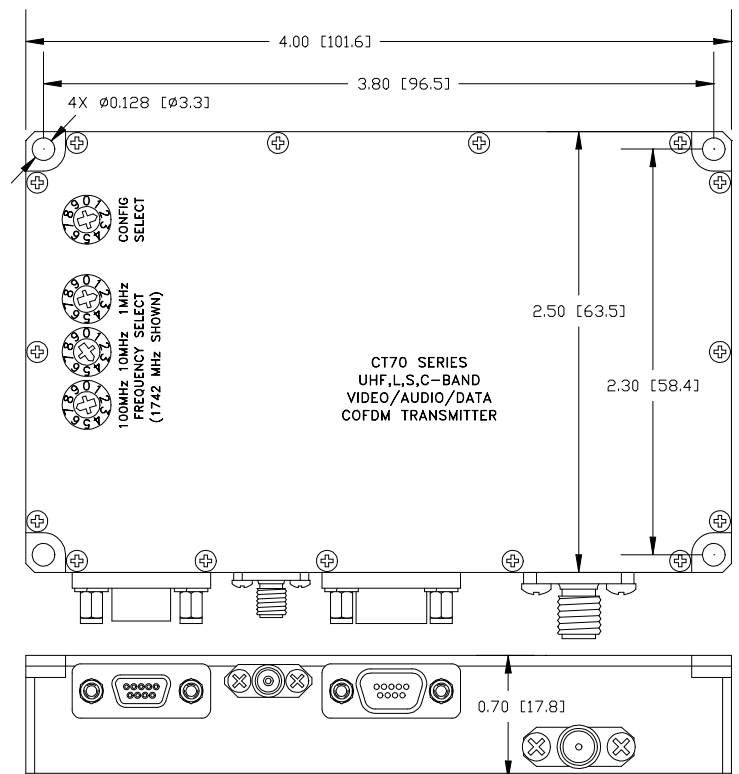
The CT70 Series transmitters offer up to 2 Watts output power with extremely high power efficiency, full frequency band channelization, narrow 2.5 MHz occupied RF bandwidth, and JPEG2000 video encoding. All models are standard equipped with stereo audio (line/mic), an auxiliary data channel, and built-in 5V and 12V camera supplies. Many COFDM parameters are user-selectable: modulation (QPSK, 16QAM, or 64QAM), FEC (1/6<sup>th</sup> to 2/3<sup>rd</sup>), guard interval (1/4 to 1/16), and encryption (AES 128 or 256-bit). CT70 transmitters are optionally configured with selectable 1.25 MHz ultra-narrow RF bandwidth.

Frequency may be selected locally with chassis-mounted BCD switches, remotely through the transmitter's RS232 serial interface, and locally/remotely with configurable pre-sets.

The CT70 Series transmitters are designed to withstand harsh environments and are ideal for law enforcement, surveillance, UAV, UGV, military, and other applications requiring high quality video transmission in a compact, rugged package.

## Design Features:

- 7.0 Cubic Inch Package (2.50"x4.00"x0.70")
- High Efficiency (<24W DC for 2W RF)
- Up to 2 Watts RF Output Power
- Full Frequency Band Channelized
- Three Frequency Selection Modes (BCD Switches, RS232, Programmable Switch)
- 10 Configurable Pre-Sets
- JPEG2000 Video Encoder
- NTSC and PAL Video
- 2.5 MHz Occupied RF Bandwidth
- 1.25 MHz Bandwidth Optional
- QPSK / 16QAM / 64QAM Selectable Modulation
- AES 128 / 256 Bit Selectable Encryption
- Stereo Audio with Auxiliary Data Channel
- 5V and 12V Camera Supplies Built-In
- J-STD-001D Class 3 Assembly (Medical/Aerospace)



MDM-9P:  
1: 12 VDC INPUT  
2: 12 VDC INPUT  
3: GROUND  
4: RS232-TX COMM  
5: RS232-RX COMM  
6: GROUND  
7: GROUND  
8: RS232-IN DATA  
9: NO CONNECT

SSMA FEMALE VIDEO INPUT

MDM-9S:  
1: NO CONNECT  
2: AUDIO-L INPUT  
3: GROUND  
4: GROUND  
5: AUDIO-R INPUT  
6: GROUND  
7: 12 VDC OUTPUT  
8: 5 VDC OUTPUT  
9: GROUND

SMA FEMALE RF OUTPUT



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# CT70 COFDM Video/Audio/Data Transmitter

## 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	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
Frequency Selection (Specify):	Fixed or Channelized (Full Band - BCD Rotary Switches, RS232 Remote Control, and Programmable Binary Switch)	
Frequency Stability:	±4 ppm Over -20°C to +70°C	
Output Power (Specify):	500 mW, 1 Watt, or 2 Watts	
Output Impedance:	50 Ω Nominal, VSWR 2:1 Maximum	
Output Protection:	Open/Short Indefinitely	
Occupied Bandwidth (Specify):	2.5 MHz Narrow or Selectable 2.5 MHz Narrow / 1.25 MHz Ultra-Narrow	
Spurious Output:	-13 dBm Maximum	

## COFDM Video/Audio Characteristics

Modulation Type:	QPSK, 16QAM or 64QAM - Selectable
Input Impedance:	75 Ω Nominal, Unbalanced
Video Encoding:	JPEG2000
Video Format:	NTSC and PAL - Selectable
Frame Rate:	30 FPS (NTSC) or 25 FPS (PAL)
Horizontal Resolution:	704, 528, 480, or 352 Pixel - Selectable
COFDM Carriers:	Approximately 200
Guard Interval:	1/4, 1/8 or 1/16 - Selectable
Latency:	<60 msec, End to End
Audio Channels:	Two (Stereo), Mic or Line Level - Selectable
Audio Input Characteristics:	5 kΩ to Gnd, Minimum, Biased w/ 3.3 Vdc (Mic Mode Only)
Encryption:	AES 128-bit or 256-bit - Selectable

## COFDM Auxiliary Data Channel Characteristics

Interface Type:	RS-232 One-Way
Supported Data Rates:	Up to 115.2 kbps Selectable
Connection:	RS232 IN-DATA

## Configuration Interface Characteristics

Interface Type:	RS-232 Two-Way
Interface Parameters:	9600/8/1/None/None (Baud/Data Bits/Stop Bits/Parity/Handshake)
Connection:	RS232 RX/TX-Comm Ports

## Power Requirements

Input Voltage:	+11 to +16 Vdc, Reverse Polarity Protected
Current Draw:	750 mA for 500 mW RF
(Typical @ 12 Vdc)	1.2 A for 1 Watt RF
	2 A for 2 Watts RF
Camera Supply Output:	+5 Vdc and +12 Vdc, 250 mA Current Limit

## Mechanical

Material:	CNC Machined T6061-T6 Aluminum	
Finish:	Nickel Plated	
Dimensions:	2.50" W x 4.00" L x 0.70" H (w/o Heat Sink)	
Weight:	7 oz. Maximum	
Connectors:	RF Output:	SMA Female
	Video Input: (Others Available)	SSMA Female
	DC Supply, RS-232:	MDM-9P
	Audio Inputs, Cam Supplies:	MDM-9S

## Environmental

Temperature (Operating):	-20°C to +70°C
Acceleration:	100 g, 3 Axes
Altitude:	Unlimited
Humidity:	Up to 95% @ Any Temperature Forming Frost or Condensation