CNT1 Narrowband COFDM Video Transmitter

Excellent Digital Video Transmitter for Urban Multipath Environments!

Design Features

- 3.8 Cubic Inch Package (2.50"x4.00"x0.375")
- High Efficiency (~6W DC for 100mW RF)
- Full Frequency Band Channelized
- Local & Remote Frequency and Configuration Selection
- JPEG2000 Video Compression
- Supports Composite Video (NTSC or PAL)
- 2.5 MHz Narrow Bandwidth
- QPSK/16QAM/64QAM Modulation
- AES 256 Bit Encryption
- Optional Stereo Audio (Line/Mic Selection)
- Auxiliary Data Channel (TTL/RS232 Selection)
- J-STD-001D Class 3 Assembly (Medical/Aerospace)

CNT1 Series

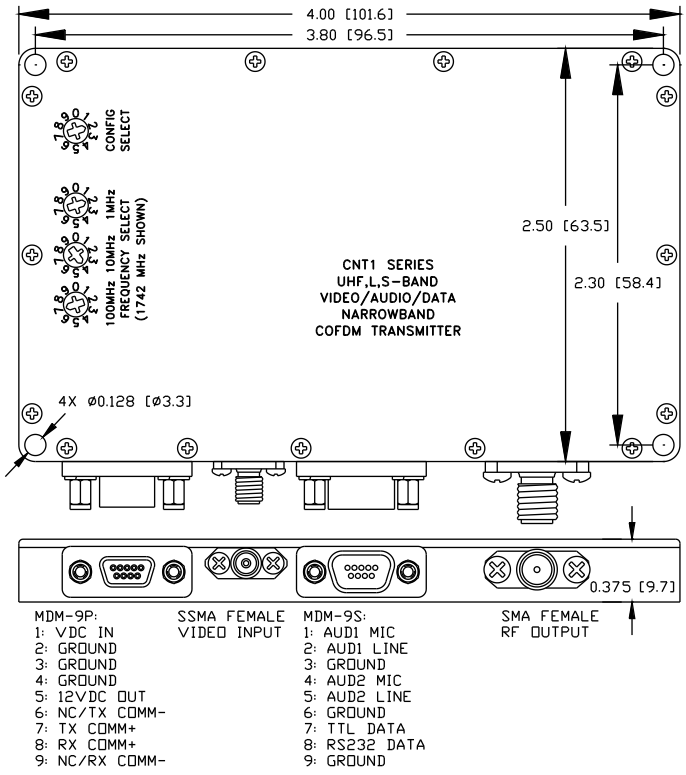
AMP's CNT1 Series 3.8 cubic inch COFDM video transmitters are designed for high quality COFDM video transmission in multipath environments such as metropolitan areas.

The CNT1 transmitters offer high power efficiency, full frequency band channelization, narrow 2.5 MHz occupied RF bandwidth, and JPEG2000 video compression. All models may be optionally configured with stereo audio channels with line/mic input level selection and are standard equipped with an auxiliary data channel with TTL/RS232 input selection and built-in 12V camera supply. Many optimal combinations of COFDM signal parameters (modulation, FEC, guard) are provided through pre-set configurations.

Frequency and configuration may be selected locally with chassis-mounted BCD switches and remotely through the transmitter's serial interface.

The CNT1 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.

CNT1 transmitters can be mated to AMP's HSN1 High Power Amplifiers 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
Frequency Selection (Specify):	Full Band Channelized - Remote Control or Remote/Local BCD		
Frequency Stability:	±5 ppm Over -20°C to +60°C		
Output Power (Specify Fixed or Variable):	100 mW, Fixed or Variable (1 dB steps, 16 levels)		
Output Impedance:	50 Ω Nominal, VSWR 2:1 Maximum		
Output Protection:	Open/Short Indefinitely		
Occupied Bandwidth:	2.5 MHz Narrow Bandwidth		
Spurious Output:	-13 dBm Maximum		

COFDM Video/Audio Characteristics

Modulation Type:	QPSK, 16QAM or 64QAM - Configuration Dependent
Input Impedance:	75 Ω Nominal, Unbalanced
Video Compression:	JPEG2000
Video Format:	NTSC and PAL - Remotely Selectable
Frame Rate:	15/30 FPS (NTSC) or 12.5/25 FPS (PAL) - Configuration Dependent
Horizontal Resolution:	480 Pixel
COFDM Carriers:	Approximately 200
Guard Interval:	1/4
Latency:	67 msec (NTSC) or 80 msec (PAL)
Encryption:	AES 256-bit Programmable
Audio Channels (Specify):	Zero or Two (Stereo)
Audio Bandwidth:	3 kHz to 12.5 kHz - Configuration Dependent
Audio Sampling:	6.25 kHz to 25 kHz, 16-bit - Configuration Dependent
Audio Input Level:	-55 dBV Mic/-10 dBV Line Audio - Remotely Selectable
Audio Input Impedance:	>4 kΩ to Gnd
Mic DC Supply (Audio Input(s)):	2.0 Vdc Thru 4.7 kΩ Pull-Up

COFDM Auxiliary Data Channel Characteristics

Interface Type:	One-Way UART
Signaling Type (Specify):	RS232/3.3V TTL, RS485, or RS422
Supported Data Rates:	9600/57600/115200 Baud - Configuration Dependent

Configuration Interface Characteristics

Interface Type:	Two-Way UART
Signalling 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:	500 mA for 100 mW RF (Typical @ 12 Vdc)
Camera Supply Output:	+12 Vdc, 250 mA Current Limit

Mechanical

Material:	CNC Machined T6061-T6 Aluminum	
Finish (Specify):	Nickel Plated or Gold Iridite	
Dimensions:	2.50" W x 4.00" L x 0.375" H (w/o Heat Sink)	
Weight:	<4 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