



# HDTV-2000

## SDI, HD, HDMI, High Definition Audio/Video Transmitter

### 25 MHz- 1 GHz



New Digital UHF Video Transmitter model HDTV-2000 is a fully synthesized audio/video transmitter for UHF band from 25 MHz-1000 MHz. It is a special designed unit that covers the wide UHF frequency range. The picture you can pick using any digital ready TV set. The RF power output power is adjustable from 100 mW – 1 W (5W depends on model). It sends a crisp HD color picture and sound up to 6,500 ft or more using the special high gain antennas. This transmitter will encode a single uncompressed program derived from devices with **SDI, HD, HDMI, Component Video, Composite Video or VGA outputs to HD MPEG2 video. It supports 480i, 480p, 720p and 1080i resolutions.**

#### Features:

- Accepts one (1) program from any of the following inputs: 1xComponent, 1xHD-SDI, 1xHDMI (unencrypted), 1xVGA, and 1xComposite
- Simultaneously delivers the following outputs: 1xQAM, 1xASI, and 1xIP
- Provides +40 dBmV QAM RF output level
- Provides comprehensive GUI-based monitoring and control via standard Web browsers
- Compact design permits installation of up to 3 Encoder modules in 1RU
- Supports Real-time Dolby® Digital audio encoding
- Supports user-defined PSIP configuration
- Supports Closed Captioning EIA-608 and EIA-708

Technical Specifications			
<b>INPUT</b>			
Component	Connectors	3x RCA for Video (Y, Pb, Pr) 2x RCA for Analog Audio (L, R) 1x RCA for Digital Audio (PCM)	
	Video Resolution:	480i, 720p, & 1080i	
	Video Aspect Ratio:	4:3 & 16:9	
HD-SDI	Connector:	1x BNC	
	Standard:	SMPTE 292M	
	Video Resolution:	480i, 720p, & 1080i	
	Audio:	Embedded PCM and pass-through Dolby® Digital only	
HDMI	Connector:	1x HDMI	
	Video Resolution:	480i, 720p, & 1080i	
	HDCP Encryption:	Not supported	
	Audio:	Embedded PCM & pass-through Dolby® Digital only	
VGA	Connectors:	2x Female VGA (Input + Loop-through Output)	
	Video Resolution:	640x480 @ 60 fps 800x600 @ 60 fps 1024x768 @ 60 fps	
	Audio:	2x RCA for Analog Audio (L, R) 1x RCA for Digital Audio (PCM)	
Composite	Connectors:	1x RCA for Video (Y)	
	Video Resolution:	480i	
	Audio:	2x RCA for Analog Audio (L, R) 1x RCA for Digital Audio (PCM)	
Encoding Profile	Video	Output Format:	MPEG-2 HD MP@ML; ISO 13818-2
		Chroma:	4:2:0
		Resolution:	720x480; 1280x720; 1920x1080
		Frame rate:	29.97 fps (480i); 29.97 fps (1080i); 59.97 fps (720p)
		Aspect Ratio:	4:3 & 16:9
		GOP Structure:	I & P frames (user-selectable)
		Transport Rate:	Variable (user-selectable)
		Video Bit Rate:	Variable (user-selectable)
		Video Pre-filter:	Variable (user-selectable)
		Intra DC Precision:	Variable; 8-11 bit (user-selectable)
	Color Space:	YCbCr and RGB	
	Audio	Output Format:	Dolby® Digital AC-3
		Sampling rate:	48 kHz
Bit rate:		Variable; 96 - 448 Kbps (user-selectable)	
Closed Captioning	Component:	EIA- 608; 1x RCA (CC)	
	HD-SDI:	EIA-708; Embedded in HD-SDI input	
	HDMI:	EIA- 608; 1x RCA (CC)	
	Composite:	EIA- 608	

## Technical Specifications

### OUTPUT

QAM	Connector:	1x "F" Female (Rear-panel)
	Modulation:	QAM 16, 32, 64, 128, and 256
	Standards:	ITU-T J.83; Annex A and B
	DVB Symbol Rate:	Variable; up to 7 MSymbol/sec (MBaud)
	Frequency Range:	54 to 1002 MHz
	Tuning:	CATV Channel Selectable (Ch. 2 to 158)
	Channels' Bandwidth:	6 MHz
	RF Output power:	1W- (5 W, depend on model)
	RF Level Adjustment:	0.1 W- 1 W (5 W)
	Frequency Tolerance:	± 0.02 kHz @ 77 °F (25 °C)
	Frequency Stability:	± 3 kHz over 32 to 122 °F (0 to 50 °C)
	Amplitude Flatness:	± 0.25 dB (over 6 MHz channel)
	Phase Noise:	-98 dBc (@ 10 kHz)
	Spurious:	-60 dBc
	Broadband Noise:	-70 dBc
	RF Impedance:	50 Ω
	Spectral Inversion:	Auto Recognition
	Carrier Suppression:	45 dB
	Return Loss:	14 dB typical
	Signal-to-Noise Ratio (SNR):	40 dB typical
MER:	40 dB typical	
I/Q Phase Error:	Less than 1 degree	
I/Q Amplitude Imbalance:	Less than 1%	
ASI	Connectors:	1x BNC (Front-panel)
	Format:	DVB-ASI
	Standard:	ETSI EN 50083-9
IP	Connector:	1x RJ45 (Front-panel)
	Standard:	10/100Base-T Ethernet
	UDP/RTP:	Supported (user-selectable)

General	
Dimensions (W x D x H):	5.65 x 12.5 x 1.75 inches (144 x 317.5 x 44.5 mm)
Power:	External Power Supply (Input 115-230VAC / Output 12VDC @ 3 Amp)
Power Dissipation:	20 W
Weight (one module):	1.5 lbs (0.7 kg)
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)
Operating Humidity:	0 to 95% RH @ 35 °C max, non-condensing
Storage Humidity:	0 to 95% RH @ 35 °C max, non-condensing

Alarms/Monitoring/Control	
Local Monitoring:	1x Status LED 1x Power LED
Local Control:	1x IP Reset button
Remote Monitoring/Control:	GUI-based menu via standard Web browsers (1x RJ45 front-panel connector; 10/100Base-T, also used for IP output)