



HDV 3000 System is a video link, with HD quality and low delay, specially designed and developed for applications where it is necessary to transmit high quality video from an aircraft to ground from medium and long distances.

It consists of the following elements:

- Transmitters HDVT-3000 Family:
 - HDVT-3000U (200 mW)
 - HDVT-3000UC (2W)
 - HDVT-3000ULD (10W)
- Base receiver for ground HDVT-3000D, diversity.

General characteristics:

- Very compact system
- Wide frequency range: 200-800 MHz
- High level MER
- Selection of the bandwidth 1-8 MHz
- Optional sending of embedded data
- Possibility of encryption
- Versatility in HDMI / CVBS video inputs
- Easy to use and configure
- Robust and reliable in long distance
- Up to 300 km range can be achieved depending on the antennas used and their situation.
- Low latency

HDV 3000

HD VIDEO SYSTEM

HDV-3000 Transmitters

The family is composed by the following models:

- HDVT-3000-U – 200 mW output power
- HDVT-3000-UC – 2W output power
- HDVT-3000-ULD – 10 to 20 W output power

All of them share the following features:

- The video input source from either HDMI or CVBS (composite) is encoded in H.264 streams, modulated in OFDM with the standard ETSI EN 300-744.
- High performance wide frequency support.
- Direct digital synthesis from 100 MHz to 2.700 MHz for excellent signal quality and high grade modulation error rate (MER).
- Flexible bandwidth option: 1 MHz to 8 MHz
- UART digital data max: GPS or any other aviation data can be multiplexed in the transmitter stream from the modulator UART port.
- Sensitivity: Support both, RF layer and data layer encryption.
- Versatile video inputs: HDMI and CVBS (composite)
- Easy to configure: By means of a PC GUI or a two push buttons for CH selection on the modulator board.
- Robust, reliable and long distance: Easily transmit 1.080p video over the air up to 300km distance, depending on each model, propagation conditions and antennas situation.
- Real time protocol and low latency ~300 ms

HDVR-3000D Receiver

The HDVR-3000D is a 1080 full HD diversity receiver which receives and decodes ETSI EN 300 744 HD/SD standard/non standard signals.

It features the video output of HDMI and composite (CVBS).

The HDVR-3000D is designed with 2-way diversity antenna reception, which can enhance high mobility support and mitigate multi-path effect.

Besides remote controller, the HDVR-3000D can be configured and controlled thru its UART port by an external host.

The HDVR-3000D can decode the multiplexed UART data in received streams and output thru its local UART port.

Can be tuned in 1.1/1.5/2/2.5/3/4/5/6/7 and 8 MHz bandwidth channels.

Depending on the sub-models, the receiver can support frequency range from 170 to 2.700 MHz

HDVT-3000 Family GENERAL SPECIFICATIONS

Input:	Video: CVBS, HDMI Audio: Stereo line, HDMI PCM audio in
Compression:	Video: H.264 / Audio: AAC or MPEG
Resolution:	Input CVBS: 720x480 / 720x576 Input HDMI: 720x480 / 720x576 / 1280x720 / 1920x1080
Video output:	Compression: H.264 Frame size: 720x480 / 720x576 / 1280x720 / 1920x1080
Constellation:	QPSK, 16QAM, 64QAM
FFT:	2K, 4K, 8K
Code Rate:	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval:	1/4, 1/8, 1/16, 1/32
RF Output power:	HDVT-3000U: 200mW HDVT-3000UC: 2W HDVT-3000ULD: 10/20W
Power consumption @ 12V:	HDVT-3000U: 400mA HDVT-3000UC: 2A HDVT-3000ULD: 12A
Dimensions and weight:	HDVT-3000U: 87x62x39 mm / 250 g HDVT-3000UC: 95x71x40 mm / 320 g HDVT-3000ULD: 290x120x70 mm / 1.900 g
Video transmitter standard:	ETSI EN 300.744
RF connector:	HDVT-3000U: SMA HDVT-3000UC: SMA HDVT-3000ULD: Type N
Bandwidth:	1/1.5/2/2.5/3/4/5/6/7 and 8
Freq. range:	100-2700 MHz, step 1 kHz
Digital attenuator:	0-47dB, 1dB step
MER (modulator):	>35dB
Shoulder (modulator):	>45dB
Phase noise:	<-92dB@10kHz
Carrier suppression:	>42dB

HDVR-3000D SPECIFICATIONS

RF INPUTS	
Supported frequency bands:	170-862 MHz (sub-model U) 2100-2550 MHz (sub-model 2.5) 700-2700 MHz (sub-model 2.7) 50-2700 MHz (sub-model 2.7U)
Bandwidth:	1/1.5/2/2.5/3/4/5/6/7/8 MHz
Demodulation:	COFDM (ETSI EN 300.744)
FFT:	2K, 4K, 8K
Constellation:	QPSK, 16QAM, 64QAM
Guard Interval:	1/4, 1/8, 1/16, 1/32
Code Rate:	1/2, 2/3, 3/4, 5/6, 7/8
Sensitivity:	-92dBm with test conditions: one antenna, 5 MHz bandwidth, 2K, 16QAM, 2/3, 1/8
VIDEO	
Formats:	MPEG, MPEG4/H.264
Outputs:	Digital Video (HDMI) / Composite Video (CVBS)
Aspect ratio:	4:3 / 16:9
AUDIO	
Decoding:	MPEG-1, I/II MPEG-2, II MPEG-2, AAC MPEG-4
Sampling rate:	32 kHz, 44.1 kHz, 48 kHz
Output:	Stereo line out and HDMI digital output
FRONT PANEL	
IR remote	
7 segment led display	
Status	
Power	
Channel lock	
GENERAL	
Power supply:	Typical @12V 600mA
Dimensions:	210 x 200 x 40 mm
Weight:	1.050 g