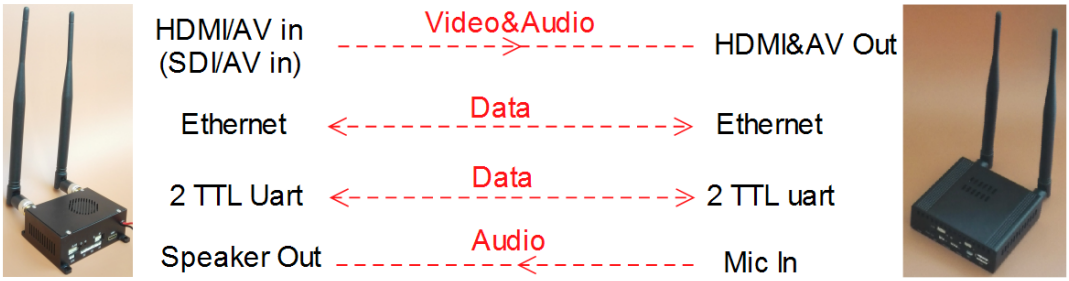
300mW Full Duplex Wireless Transceiver for Video and Data Link

-- 300mW TDD OFDM full duplex wireless transceiver works at 800MHz, 1.4GHz and 2.4GHz bands
-- HD video transmission with H.265/H.264 video codec supporting
-- Ethernet and TTL uart data link
-- Transmit distance: 500~2000 meter(ground-to-ground), 5~17km(UAV-to-ground)



Video Transmitter Video Receiver

Sihid HD51 series wireless digital video transceivers was designed to capture real-time HD video with two way wireless data link. These transceivers feature HD or SD video input/output with two way OFDM modulation technology and H.265/H.264 codec that complete video audio transmission in high-speed motion with low latency. This OFDM radio works at 800MHz, 1.4GHz and 2.4GHz bands, with frequency hopping technology (FHSS) to make sure better stability signal communication.

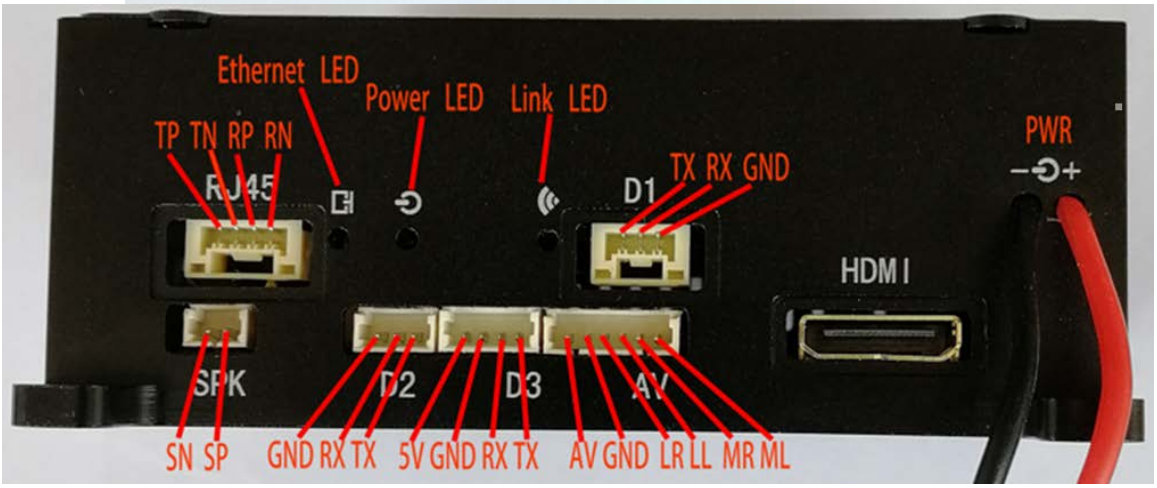
Now we have 2 models video transmitter in these series:
- HDT510 video transmitter with HDMI/AV input
- HDT511 video transmitter with SDI/AV input

Both of the two transmitters are paired with HDR510 video receiver.

Features:

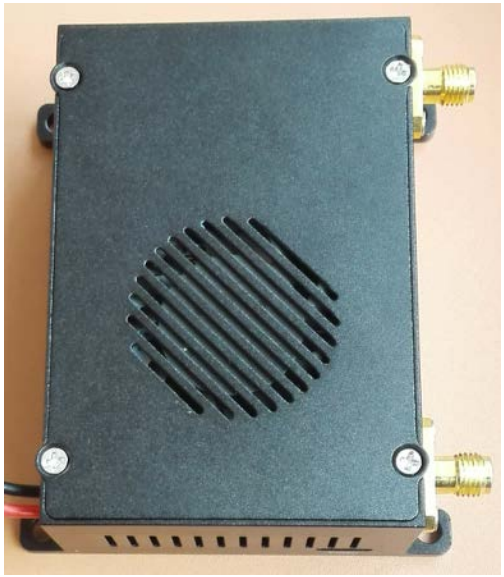
- TDD OFDM modulation
- Supports 3 bands (806~826HMz/1428~1448MHz/2402~2482MHz)
- Supports FHSS inside each band
- 1.4/3/5/10/20MHz bandwidths
- Max 30Mbps@20MHz throughput
- RF transmission power: 300mW
- Constellation: QPSK, 16QAM, 64QAM, self-adaption
- Sensitivity: -106dBm(2.4GHz 1Mbps), -108dBm(1.4GHz 1Mbps), -108dBm(800MHz 1Mbps)
- H265/H264 Video codec, full HD resolution 1080p/i @60fps
- Supports two way audio
- Supports IP data transmission
- Supports serial data transmission(2 channel, TTL)
- Up to 17km LOS (UAV-to-ground) and 2km LOS(ground-to-ground)
- Control uart for management
- AES256 encryption
- Uplink and downlink stream control
- Compact size and light weight
- Rugged aluminum alloy housing

HDT510 Video Transmitter Specification:

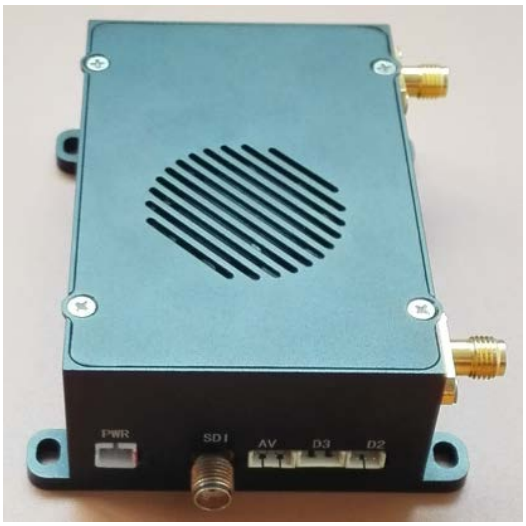


Video input	HDMI or CVBS, auto-detected after system start-up (optional: HDMI+CVBS at the same time)
Video formats	1080@60P, 1080@50P, 1080@30P, 1080@25P, 1080@24P, 1080@60I, 1080@50I, 1080@30I, 720@60P, 720@50P, 720@30P, …… 720*480 60I(NTSC), 720*576 50I(PAL) (optional: 3840*2160@30fps)
Video Coding	H.265/H2.64
Audio input	Embedded HDMI or analog audio
Audio Coding	AAC, 16bit, stereo, 32Kbps
Encryption	AES256
HD Video input	Mini HDMI, HDMI type “B” Connector
Composite Video input	6PIN PH1.25mm Connector
TTL UART data(D1)	3PIN lockable Connector
TTL UART data(D2)	3PIN PH1.25mm Connector
TTL UART control	4PIN PH1.25mm Connector
Ethernet	4PIN lockable Connector
Speaker	2PIN PH1.25mm Connector
Power in	VDD/GND cables

RF output	Two SMA female
Power Input	9~24V(default 12V)
Power Consumption	<6.5W
Dimensions	74*53*29mm
Weight	102.4g



HDT511 Video Transmitter Specification:

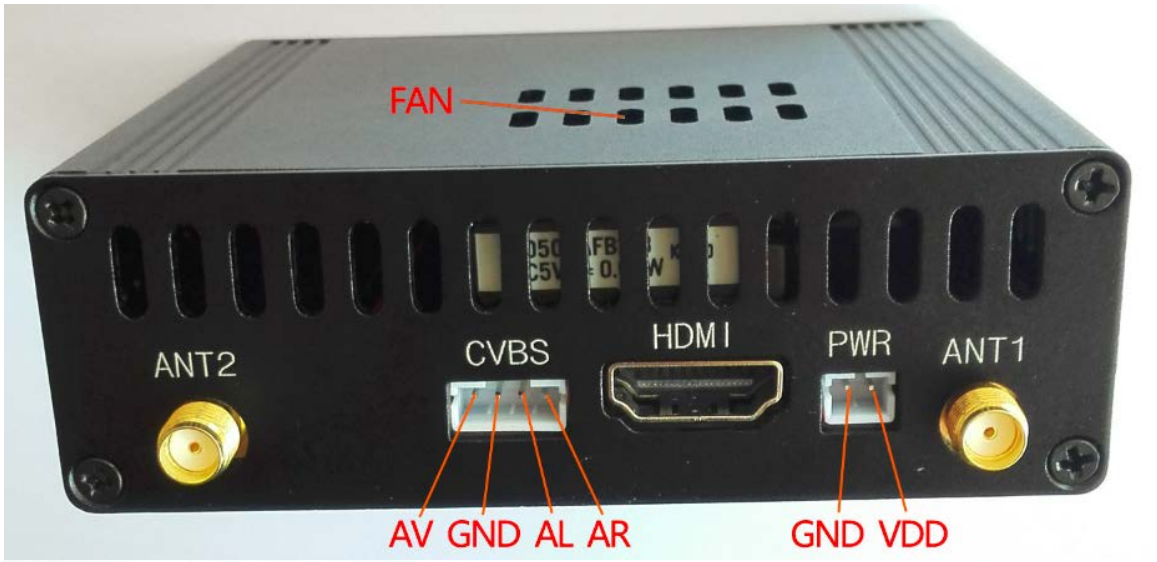


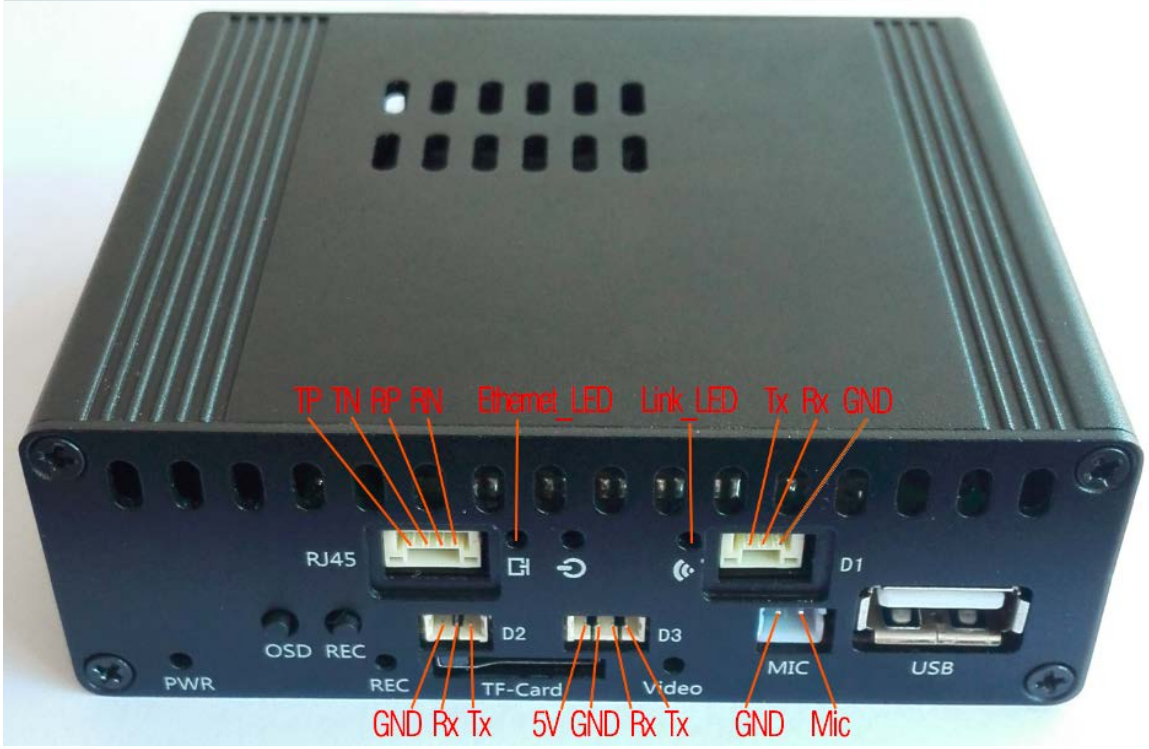
Video input	SDI or CVBS, auto-detected after system start-up
Video formats	1080@60P, 1080@50P, 1080@30P, 1080@25P, 1080@24P, 1080@60I, 1080@50I, 1080@30I, 720@60P, 720@50P, 720@30P, …… 720*480 60I(NTSC), 720*576 50I(PAL)
Video Coding	H2.64

Audio input	Embedded SDI or AV audio
Audio Coding	AAC, 16bit, stereo, 32Kbps
Encryption	AES256
HD Video input	SDI, SMA female
Composite Video input	4PIN PH1.25mm connector
TTL UART data(D1)	3PIN lockable connector
TTL UART data(D2)	3PIN PH1.25mm connector
TTL UART control	4PIN PH1.25mm connector
Ethernet	4PIN lockable connector
Power in	2PIN PH2.0mm connector
RF output	Two SMA female
Power Input	9~18V(default 12V)
Power Consumption	<7W
Dimensions	80*52*26.9mm
Weight	110g

HDR510 Video Receiver Specification:

HDR510 video receiver is paired with HDT510/HDT511 video transmitter. HDR510 is integrated H.265/H.264 decoding in a compact and lightweight housing, suitable for use in fluid and high-mobility applications. This receiver features a range of comprehensive signal outputs including HD at 4K/1080P/720P, down-converted HD CVBS monitor video, and two analog audios is supported. HDR510 also supports decoding maximum 4 channel videos at the same time and display via split screen mode(option). HDR510 includes DVR record functionality with Micro SD card or USB disk using REC switch controls. Additionally, the HDR510 supports a built-in RTSP sever that enables video streaming over Ethernet for remote software or hardware decoders(option).





Video output	HDMI and CVBS optional: split screen for 4 videos and switch between videos

Video decoding	H2.64/H.265 Optional: decoding maximum 4 channel videos at the same time
Audio output	Embedded HDMI and analog audio
Encryption	AES256
Composite Video output	4PIN PH2.0mm connector
TTL UART data(D1)	3PIN lockable connector
TTL UART data(D2)	3PIN PH1.25mm connector
TTL UART control	4PIN PH1.25mm connector
Ethernet	4PIN lockable connector
Mic in	Optional function, invalid by default
Power in	2PIN PH2.0mm connector
Power Input	9~24V(default 12V)
Power Consumption	<7W
Dimensions	91*80*30mm
Weight	200g

Application with HDT510/HDT511/HDR510

1) Delivering real-time live video(1 or 2 channel) from point to point with two way wireless data link
2) Delivering real-time live video from multipoint to point with two way wireless data link
3) Delivering real-time live video from point to multipoint with two way wireless data link
4) Delivering real-time live video from point to point with two way data link, and relay transmitting to LAN or next wireless point by a built-in RTSP sever supporting.