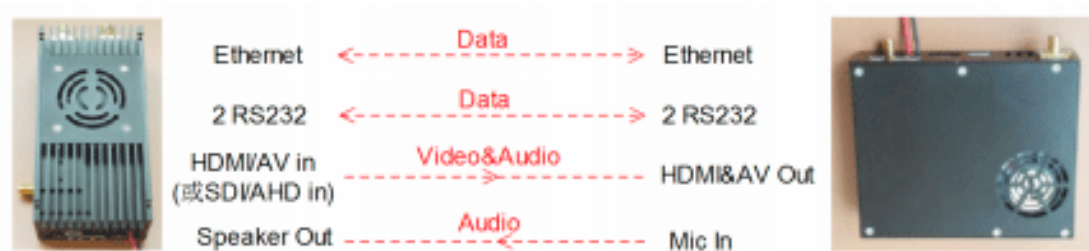


Long-distance two-way wireless link (transmitter and receiver)



1) OFDM two-way wireless transmission link, supports automatic frequency hopping, supports point-to-point, point-to-multipoint two-way communication;

2) Supports HD and SD video wireless Transmission, support video sending and receiving or Data sending and receiving, video H265 codec. The transmitter can input HDMI and AV two-channel video encoding transmission at the same time, and the receiver can decode 4 channels of video at the same time for screen split display (programming software with different functions according to user needs at the time of shipment);

3) Support two-way Ethernet port data transmission penetrate;

4) supports two-way wireless transmission through the RS232 serial data;

5) support the receiver MIC audio input, the output of the transmitter corresponding to the speaker or HDMI.

6) Wireless transmission the HDMI/AV audio and video from the transmitter to the HDMI and AV interface of the receiver for simultaneous output

7) Configurable wireless communication parameters, audio and video codec parameters, etc.

8) Wireless transmission distance: air-to-ground 15 km, 30 km, 50 km, 80 km, 100 km or more.

Video Data Integrated HD Wireless Transmitter

This is a digital integrated wireless transmitter with built-in two-way OFDM wireless link, supporting one-way wireless video transmission, two-way wireless voice transmission, two-way wireless network transparent transmission, and two-way wireless serial port transparent transmission. .

- 1 way HDMI definition+ 1 channel AV standard video voiceless H265 coded OFDM wireless transmitter (or 1 channel SDI digital high definition+ 1 path analog HD AHD)
- 1 bidirectional wireless transmission through an Ethernet port, 2-way pass-through bidirectional wireless RS232 serial port
- 1 RS232 an with serial port parameters
- 1 audio output channel, can be directly connected to 1W the speaker

Transmitter Specifications

1, unidirectional wireless video transmission

Support one-way wireless video transmission from the transmitter to the receiver

✓ Video input method: Mini HDMI input+ AV input (or optional SDI + AHD input), Mini HDMI interface for high-definition digital audio and video, and AV interface for standard-definition analog audio and video. It can be single-channel video input or dual-channel video input(optional);

✓ Video input format support:

Mini HDMI in (or SDI in):1080 60P,1080 50P,1080 30P,1080 25P,1080 24P,1080 60I,1080 50I, 1080 30I, 720 60Pvarious adaptive mode; AV in: 720x480 60I (NTSC the adaptive mode;

✓ video encoder: using H265 / H264 coding technique, Maximum support 1080P@60, backward compatible with other various resolutions and frame rate encoding;

✓ Video encoding rate can be set through the network port web method;

2.Two-way wireless voice transmission

supports transmitter and receiver Voice transmission.

✓ Audio input method: Mini HDMI input or AV input, Mini HDMI interface input digital audio, AV interface input analog audio; only analog audio input is supported when two-way audio is working.

✓ Audio output: Two output lines can be directly connected to 1W speakers

3.Two-way data communication

Supports two-way wireless data communication between transmitter and receiver:

✓ One- way two-way wireless transparent transmission Ethernet port;

✓ Two- way two-way wireless transmission RS232 Serial port, serial port baud rate can be configured.

4.Wireless link

✓ Dual antennas

✓ Wireless working frequency band:1428~1448MHz~826MHz or 806(optional), support automatic frequency hopping in the frequency band ✓
Wireless bandwidth: maximum 20MHz, air interface rate up to 25Mbps

✓ Maximum transmit power:2W or 5W(optional)

✓ receiving sensitivity: -108dBm (1Mbps time)

✓ radio link encryption and decryption: support

5, Power supply and structure

✓ working voltage:12V or 24V(optional),

the maximum power consumption: <12W(2W transmission power)or <24W (5W transmission

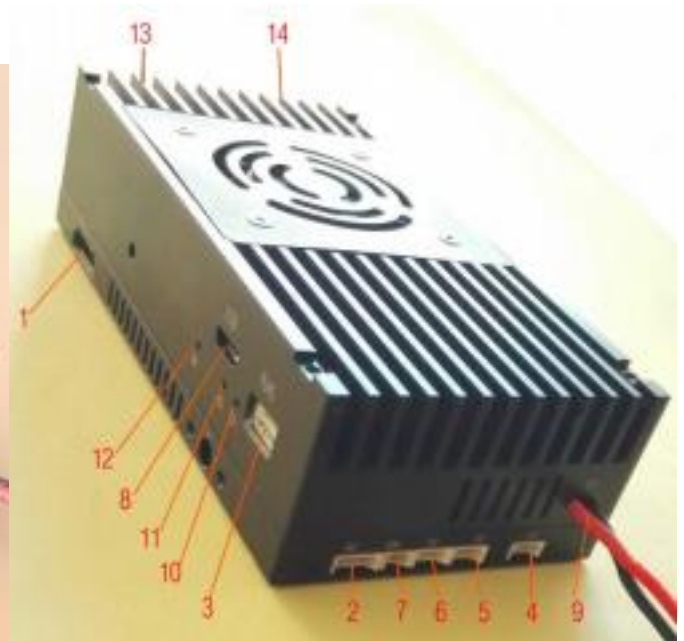
power).

- ✓ Antenna interface: SMA external threaded inner hole.
- ✓ The weight of the whole machine:160g.
- ✓ Size 102x52x28.8mm (does not comprise projecting connector housing).

Transmitter interface



Transmitter (Mini HDMI model)



Transmitter(SDI model)

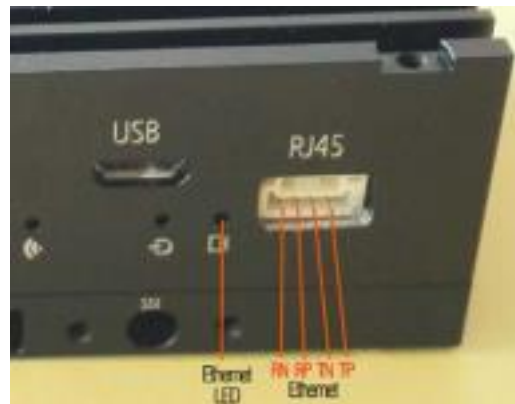
interface description:

serial number	description
1	Digital high-definition audio and video Mini HDMI input (or SDI input, SMA external threaded inner socket, different assembly according to user needs when shipped Video input interface)
2	analog standard definition audio and video input AV interface (or AHD),4PIN 1.25mmsocket pitch
3	Ethernet port,4PIN 1.25mmsocket pitch lock buckle
4	transparent data serial port D1, RS232 level,3PIN 1.25mm pitch socket
5	Transparent data serial port D2, RS232 level,3PIN 1.25mm pitch socket
6	Configuration serial port D3, RS232 level,3PIN 1.25mm pitch
7	Speaker socket audio output interface, socket2PIN 1.25mm pitch
8	Micro USB interface, used for device software maintenance.
9	Device power supply input line, red is VDD, black is GND

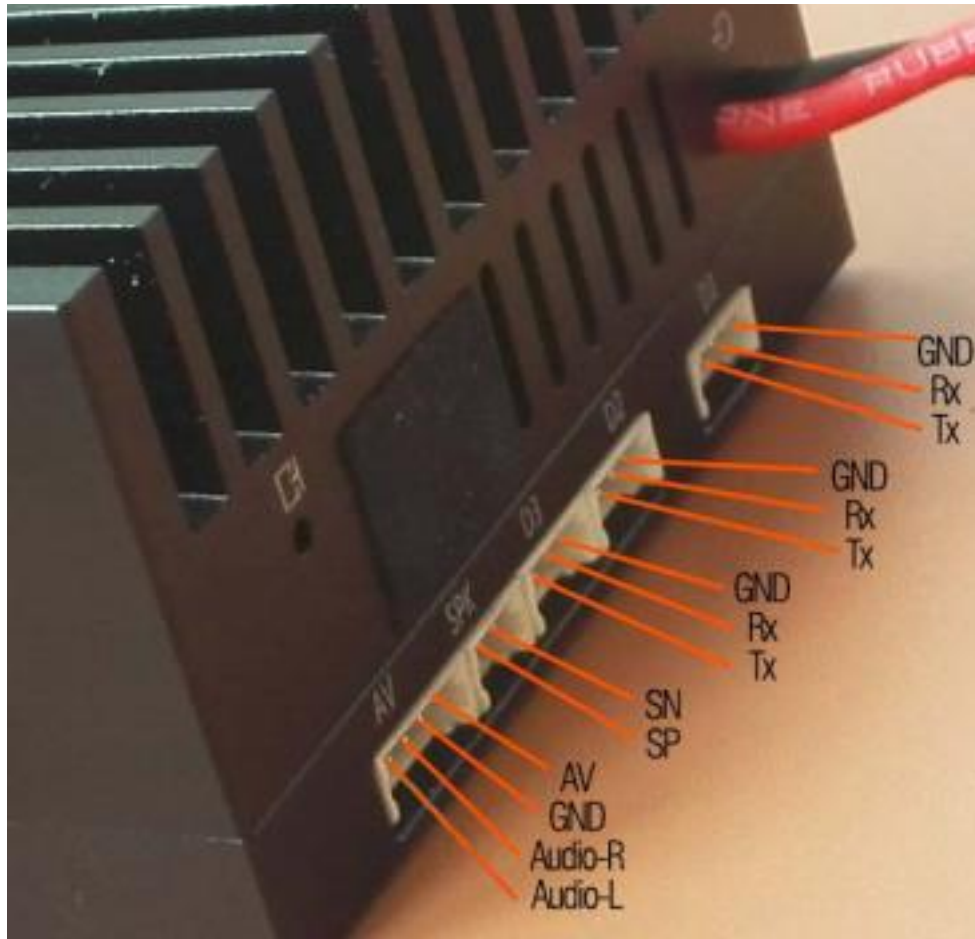
10	Green Ethernet port work indicator, it will flash according to data flow during normal operation.
11	Red power indicator light, always on during normal operation
12	Wireless link working status indicator, when normal operation, the indicator will always be on. If the wireless transmitter module is set to work as the central node, the indicator light will not light up.
13	ANT1, SMA externally threaded inner hole, main antenna interface, the antenna is TDD transmit/receive working mode
14	ANT2, SMA outer threaded inner hole, auxiliary antenna interface, this antenna assists reception, does not transmit

Ethernet port interface signals:

via wireless Link transparent data transmission Ethernet port, 4PIN 1.25mm pitch with lock buckle seat, signal description see above picture.



Data serial port, parameter serial port, AV interface, Speaker interface signal:



D1, D2 is a two-way transparent data transmission serial port, RS232 level. The default setting D1 serial port has the highest priority in wireless link data transmission (higher than audio and video data and other port data), and the delay is the lowest. The D1 serial port data is transmitted wirelessly to the receiving end D1 serial port of the. The D2 priority of the serial port is lower than that of the D1 serial port, and the D2 serial port data is transparently transmitted wirelessly to the receiving end D2 serial port.

D3 is the configuration serial port, which is not yet open to users.

SPK is an audio output interface that can drive 1W speakers. When using audio output, only analog audio input is valid and digital audio input is invalid.

The AV interface (or AHD) is used for analog audio and video input.

Usually DESCRIPTION transmitter

The transmitter may be equipped with various function modules, a conventional shipping assembly tasks:

- Working frequency: 1428~1448MHz
- transmit power Amplifier: 33dBm (2W)
- From Air to ground the transmission distance: 30km
- single-channel video Input: HDMI or SDI or AHD or AV input
- Working voltage: 12V

Transmitter can also be equipped with different functional modules according to user needs to realize the following different configuration options:

- Working frequency band: 1428~1448MHz or 806~826MHz

- Transmitting power amplifier: (2W ~ 5W)33~ 37dBm
- From air to ground transmission distance of 30 km,50 km,80 km,100 km above the level of
- Single video input stream (HDMI or SDI or AV input) or dual video input
- Operating voltage:12V or 24V

Transmitter. Note

- 1) If only a single antenna is used, it must be connected to ANT1, It is recommended to use dual antennas. When dual antennas are used, the signal quality of the wireless link will be improved by compared to using only a single antenna 3dB about. Keep the two antennas as far away as possible.
- 2) connection video source HDMI using the cable good shielding performance HDMI cable.HDMI is a high frequency signal, it is recommended to stay away from the antenna of various wireless signals as much as possible.
- 3) The power supply voltage must not exceed the range of 10V~25V, otherwise the parts will

be burnt out. Normal working voltage is 12V or 24V (determined at shipment).

More physical transmitter pictures



Video Data Integrated HD Wireless Receiver

This is an integrated high-definition wireless receiver with a built-in two-way OFDM wireless link, supporting one-way wireless video reception, two-way wireless voice transmission, two-way wireless network transparent transmission, and two-way wireless serial port transparent transmission.

- ✓ H.265/H.264 decoding HDMI and AV simultaneous display
- ✓ 1 two-way wireless transparent transmission Ethernet port, 2 two-way wireless transparent transmission RS232 serial port
- ✓ 1 serial port with parameters
- ✓ 1 audio input, can be directly connected to the microphone



Receiver technical specifications

1. One-way wireless video reception and playback The

Receiver through the OFDM receives the audio and video of the supporting transmitter wireless link, and decodes and plays it. ✓ H.265/H.264 decoding and playback, maximum support 1080P@60fps H.265 decoding.

- ✓ can simultaneously decode 4 video, thumbnail display screen (optional)
- ✓ HDMI, AV interfaces simultaneously outputs the decoded audio and video
- ✓ support TF card or U disk storage wirelessly received video.

2. Two-way wireless voice transmission two-way wireless voice transmission

Supports from the supporting transmitter to the receiver:

- ✓ audio output: through the HDMI and the AV output together simultaneously with the video interface.
- ✓ Audio input: MIC interface connects external microphone to input audio.

3. Two-way data communication two-way data communication

- ✓ One two-way wireless transparent transmission Ethernet port;
- ✓ Two two-way wireless transparent transmission RS232 serial ports, the baud rate of the serial port is configurable.

4. Wireless link

- ✓ Dual antennas
- ✓ Wireless working frequency band: 1428~1448MHz or 806~826MHz (optional), support automatic frequency hopping in the frequency band
- ✓ Wireless bandwidth: maximum 20MHz, air interface rate up to 25Mbps
- ✓ Maximum transmit power: 2W or 5W (optional)
- ✓ receiving sensitivity: -108dBm (1Mbps time)
- ✓ radio link encryption and decryption: support

5, Power supply and structure

- ✓ working voltage: 12V or 24V (optional), the maximum power consumption < 12W (2W PA) or < 24W (5W PA).
- ✓ antenna interface: SMA external thread hole
- ✓ size: 99x84x26mm.

Receiver interface

- HDMI: audio and video high-definition output interface, standard socket HDMI A -type.
- CVBS: SD audio and video output interfaces, 2.0mm pitch 4PIN transposon, following signals:

PIN	Description
AV	SD analog video output
GND	signal ground
AL	Audio left output
AR	right channel audio output

- power input: 2PIN power supply line, Red is VDD, black is GND, working voltage is 12V or 24V.
- antenna interface: 2 the SMA (Male thread inner hole), ANT1 main antenna (TDD mode transceiver), ANT2 Auxiliary antenna (receive only).



- D1: Two-way wireless pass-through serial port one, RS232 level, 3PIN 1.25mm pitch holder. The default setting is that serial port D1 has the highest priority (higher than audio/video data and other port data) and the lowest latency in wireless link data transmission. D1 serial port data is transmitted wirelessly to D1 serial port on the transmitter side.
- D2: Two-way wireless pass-through to serial port two, RS232 level, 3PIN 1.25mm pitch holder. D2 serial port data is wirelessly passed through to the D2 serial port on the transmitter side.
- D3: Configure serial port, RS232 level, 3PIN 1.25mm pitch socket, not yet open to users.

3 The signal description of the serial ports is shown in the figure below.



Mic: Microphone audio input interface, socket2PIN 2.0mm pitch. Only Switch when the button is pressed, Mic audio will be transmitted to the transmitter. The signal description is shown in the figure above.

- RJ45: Two-way wireless transparent transmission network port, 4PIN 1.25mm pitch with buckle holder. The signal description is shown in the figure above.
- USB interface: can be connected to a U disk to store video.
- TF-Card interface: used for software upgrade or insert TF card to store video.
- Working indicator description

Indicator	description
Ethernet LED is	green, the network port signal indicator, the network port will flicker when data is normally transmitted.
Link LED	green, wireless link working status indicator. The receiver is shipped with a wireless link configured as a central node by default, and the indicator light is off. If configured as an access node, it will always be on during normal operation.
The Power LED is	red, always on when the power supply is normal.
The Rec LED is	green, always on when recording video.
Video LED is	green, and it will flicker when receiving video decoding output normally.

- Key description

Key	description
Switch	When using the Mic input to send audio from the receiving end to the transmitting end, use this button to audio transmission

8

	switch. holding down Switch button while the audio transmission, is released. Switch audio data is not transmitted to the transmitting end button
The Rec	REC button is the video recording on/off button (Record button), long press the button to switch the state. After the receiver is powered on, it defaults to the "Recording On" state. When the storage device is detected after power on, it will start recording and record to the TF card first. If the not inserted TF card is, it will record to the U disk. If none is inserted, it will not record.

Usually the receiver described

receiver may be equipped with various function modules, a conventional shipping assembly tasks:

- Working frequency:1428~1448MHz
- transmit power amplifier:33dBm (2W)
- From Air to ground the transmission distance: 30km
- single-channel video decoder Output
- Working voltage: The12V

Receiver can also be equipped with different functional modules according to user needs to realize the following different configuration options:

- Working frequency band:1428~1448MHz826MHz or 806~
- Transmitting power:33~37dBm(2W~5W)
- to-ground 30 kmtransmission,50 km,80 km,100 km or more level
- multi-channel video decoder output (switching by the OSD display buttons)
- Operating voltage:12V

24V receiver using Note

1) The use of only a single antenna , Must be connected to ANT1 . It is recommended to use dual antennas. When dual antennas are used, the signal quality of the wireless link will be improved by compared to using only a single antenna 3dB about. Keep the two antennas as far away as possible.

2) connection video source HDMI using the cable good shielding performance HDMI cable. HDMI is a high frequency signal, it is recommended to stay away from the antenna of various wireless signals as much as possible.

3) The power supply voltage must not exceed the range of 10V~25V , otherwise the parts will be burnt out. Normal working voltage is 12V or 24V (determined at shipment).