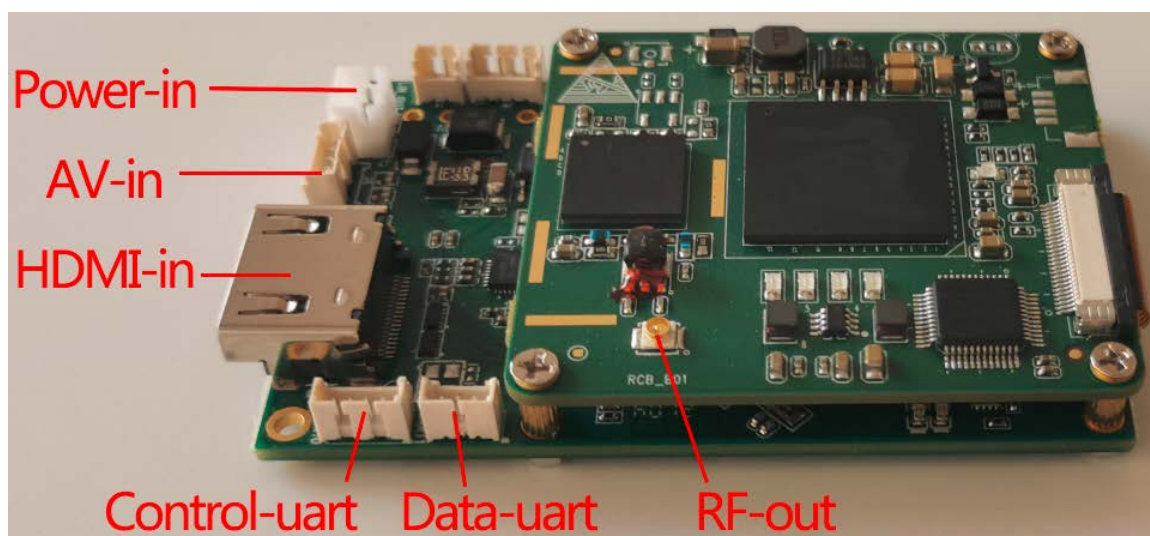


SUE6&RCB COFDM Transmitter Module

-- HD video COFDM transmitter module with HDMI/AV input interface



SUE6&RCB module features HDMI/AV inputs with COFDM modulation technology and H.265/H.264 encoding that complete video audio transmission in high-speed motion and NLOS (none line of sight) conditions with low latency. SUE6&RCB module consists of two boards(video codec board and COFDM modulation board) with flat cable connection. The module also provides one transparent transmission uart(one way).

SUE6&RCB module can work in different features mode with different firmware which should be specified before it shipped. The default normal features of SUE6&RCB module:

- H.265 video compression and COFDM modulation;
- Video input via HDMI or AV interface
- Full HD resolution, 1080p/i @60fps;
- Adjustable working frequency, band width, bit stream rates, RF power, etc.

The default normal features of SUE6&RCB transmitter module will be paired with Sihid SHD5&DR2C receiver module. The HD video latency from its inputting of the transmitter to the HDMI screen displaying of the receiver is about 200ms to 250ms.

Specified features implemented with different firmware:

- Normal H.264 video compression;
(Paired with Sihid SHD4&DR2C receiver module.)
- Proprietary H.264 video compression only used p-frames for lowest latency;
(Paired with Sihid SHD4&DR2C receiver module with specified firmware. The video latency from its inputting of the transmitter to the HDMI screen displaying of the receiver is about 50ms to 130ms.)
- Video input via HDMI + AV interface, two channels video compression and transmitted
(Paired with Sihid SHD5&DR2C receiver module with specified firmware.)

Specification:

IO

HD Video input	HDMI, HDMI type A Connector
Composite Video input	4PIN PH1.25mm Connector
TTL UART data	3PIN PH1.25mm Connector
TTL UART control	4PIN PH1.25mm Connector

Power in	2PIN PH2.0mm Connector
RF output	IPEX

Modulation

Modulation Formats	COFDM(DVB-T)
Carriers	2K
Bandwidth	Configurable from 1MHz to 8MHz, step by 1KHz
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard interval	1/32, 1/16, 1/8, 1/4
Constellation	QPSK, 16QAM, 64QAM
Bitrates	0.5Mbps to 31.67Mbps

RF

Frequency Bands	200MHz~2300MHz(other bands can be supported with special manufacturing)
Tuning Step size	1KHz
Power out	Configurable from -93dBm to -5dBm(subject to frequency)

Video and Audio

Video input	HDMI 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	H.265/H.264
Audio input	Embedded HDMI or Analog audio(Specify Mic in/Line in)
Audio Coding	AAC, 16bit, stereo, 32Kbps
Encryption	AES256

Monitoring and control

Comprehensive setup with Sihid Config Panel or other device via control UART.

Temperature range

Full specification: 0° to +70°C Ambient (Optional: -40° to +85°C)
Storage: -40° to +85°C

Dimensions

70x45x14mm(not including connectors out of the board)

Power requirements

Input range: 7~24VDC
Power consumption: <340mA@12V

Signals description

Power-in and 5V-out

The power input interface is a 2PIN PH2.0mm connector. The module also provides a 5V power output (two solder holes) for fan that it may be required when the module is integrated with power amplifier.

AV-in

PIN	Signal
AL	Audio in right
AR	Audio in left
GND	GND
AV	Analog video input

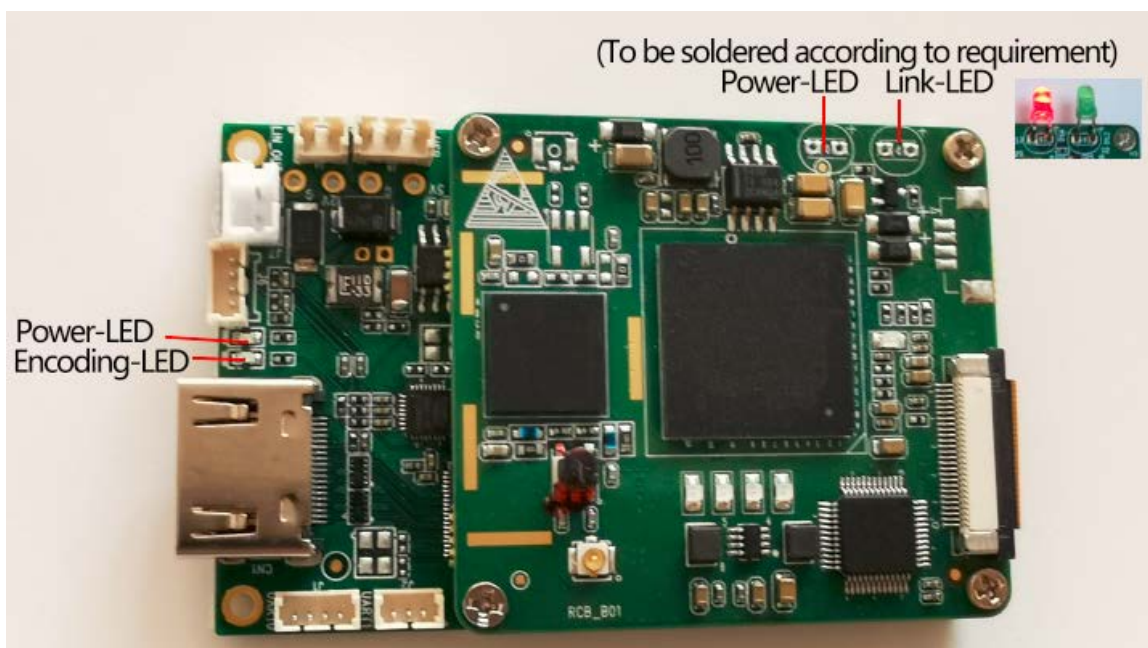
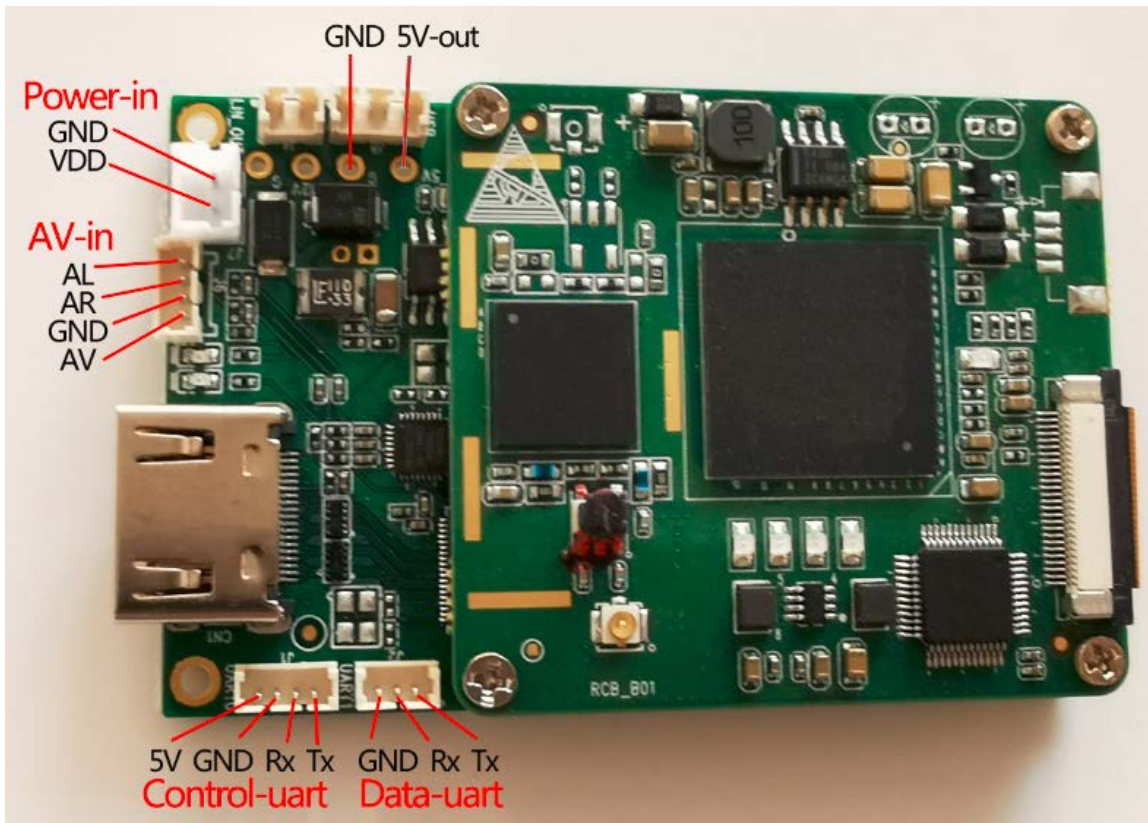
Data uart

The module supports one channel uart data packed with the video stream and transmitted. When

SUE6&RCB module works paired with Sihid COFDM receiver module (SHD4&DR2C, SHD5&DR2C, etc.), this uart data will be transferred to the data uart of Sihid COFDM receiver module.

Control uart

4PIN PH1.25mm connector, TTL 3.3V. The SUE6 board system can be set-up via this control uart with AT command. Sihid Config Panel can be connected to this control uart directly.



Power-LED

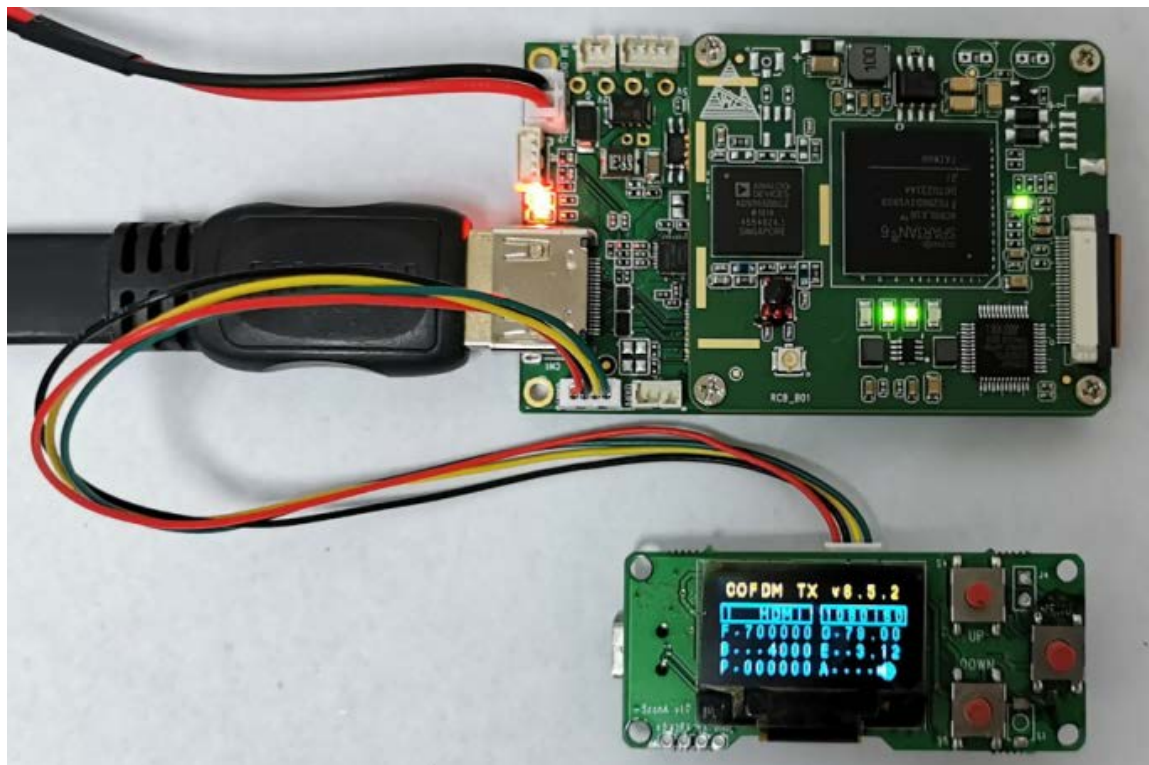
Red light when board is normal powered.

Link-LED

Green blinks on transmitting.

Encoding-LED

Green blinks on video encoding.



SUE6&RCB module worked with Sihid SconA config panel with HDMI video input