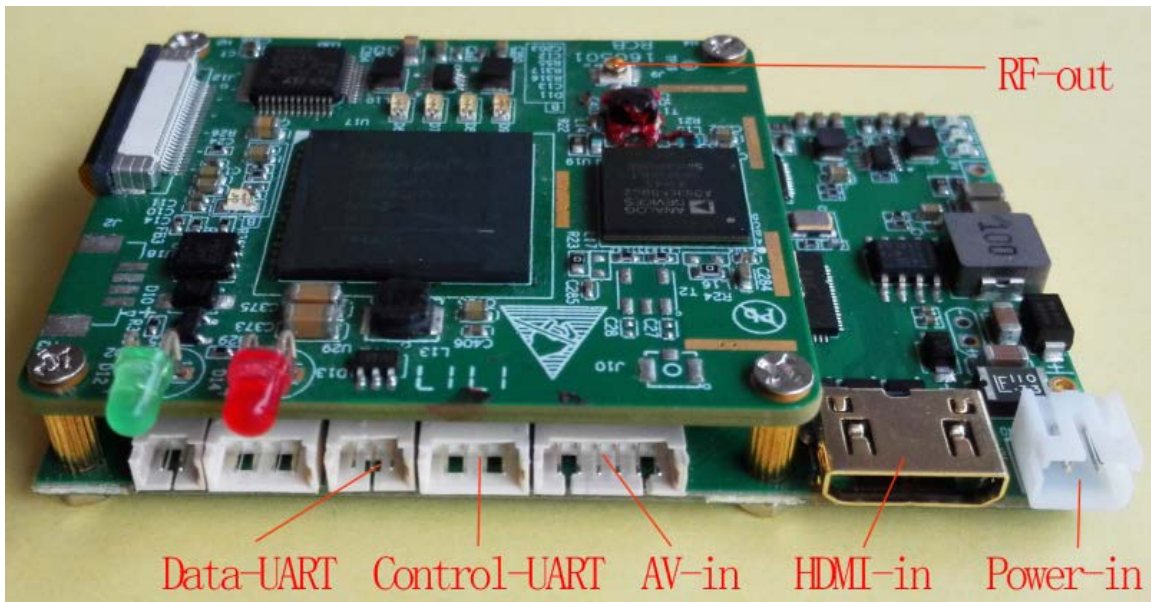


SUE5&RCB COFDM Transmitter Module

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



SUE5&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. SUE5&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).

SUE5&RCB module can work in different features mode with different firmware which should be specified before it shipped. The default normal features of SUE5&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, bitstream rates, RF power, etc.

The default normal features of SUE5&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	Mini HDMI, HDMI type “B” Connector
Composite Video input	6PIN 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
Audio input	Embedded HDMI or AV 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

Storage: -40° to +80°C

Dimensions

70x45x13mm(not including connectors out of the board)

Power requirements

Input range: 7~24VDC

Power consumption: <300mA@12V

Signals description

AV-in

PIN	Signal
AV	Analog video input
GND	GND
LR	Line in right(Audio)
LL	Line in left(Audio)
MR	Mic in right(Audio)
ML	Mic in left(Audio)

Data UART and Control Uart

TTL, 3.3V signal

Power-LED

Red light when board is powered

Link-LED

Green blinks on transmitting

