

### **Operational description**

U19 (LT8619C) is a HDMI receiver which receive the video data from the video source and translate the video data which in HDMI standard format into the parallel BT1120 data, then send the data into the U10

U10 (NT98528) is the main processor, which processing the data from the HDMI interface and processing the users input from the wireless module.

When the U10 received the BT1120 data, the first step is analyzing the resolution and frame rate, if the resolution and frame rate is valid, the second step is encoding the video data in special format, then send the encoding data to the USB port which connect to a Wi-Fi module.

U10 also receive data from the Wi-Fi module, the received data included users command like change the SSID, channel, password of the Wi-Fi module, also the wireless signal quality included. U4 will dynamically change the encoding size of the video data dependent on the signal quality.

U15 is a WiFi module, which used to receive the video from the U10 and then transmit the video to mobile devices over WiFi. It's a WLAN chip (model number: RT8812CU) from Realtek, and it is a single chip Wi-Fi solution, crystal oscillator is 40Mhz. Which usually used in Network card, computer, and other consumer electronics.

There is only one power buttons for power on and power off the device. When the user clicks this button, U10 will start the whole system. Once user hold the button for 2 seconds then U10 will shut down the whole system.

The whole system includes nine DC-DC circuit, U5 on the board is a DC-DC convert input voltage to 5V, and U2, U3, U8, U6, U14 and U9 on the board will convert 5V to the voltage which U10 and other chips needed. U16 is a DC-DC which used to power the WiFi module (U15).

U13 (H5TQ4G63EFR-RDC) is a DDR3 chip.

Operation Frequency:	IEEE 802.11n(HT20): 5.180GHz-5.240GHz
	IEEE 802.11 n(HT20):5.280GHz-5.320GHz
	IEEE 802.11 n(HT20):5.500GHz-5.700GHz
	IEEE 802.11 n(HT20):5.745GHz-5.825GHz
Modulation Type:	802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM
Antenna Type:	External antenna
Antenna Gain (dBi):	5G WLAN: ANT 1: 2.5 dBi ANT 2: 2.5 dBi MIMO 1+2: 5.51dBi

Note: The 5260 frequency point in this segment has been blocked according to customer application requirements