

Principles of the Electric Circuit of Director Plus

Director Plus obtains 12V from a DC port, and then use DC-DC and LDO to convert the power to meet the requirements of the various chips.

The FPGA captures TMDS signal from the HDMI IN1 to IN4 port, these signals are processed by the FPGA and delivered to RK3588 through PCIE protocols.

HDMI OUT1 and OUT2 port connects to RK3588 through TMDS signal, out to an external screen CL1026 codec the audio signal from the Line IN/MIC or Line out port.

2.5G Ethernet is connected through an RJ45 port, processed by a RTL8125BG-CG chip and then connects to RK3588 using PCIE bus. The Wi-Fi module AP6275P connects to RK3588 through an SDIO bus, supports Bluetooth for audio input or output with Bluetooth devices, and also supports Bluetooth keyboard, etc.

TF CARD connects to RK3588 through an SDIO bus and supports saving recording files in MP4 or MOV format and screenshot files in PNG format, and supports exporting or downloading files through SD card.

One USB-C out port can connect the device to a monitor with a USB-C cable to HDMI/VGA/DP adapter, or connect to a PC to output audio and video to streaming software.

USB-A Port and USB-C (IN) Port can connect to a USB A/V device, such as webcam, USB microphone, USB speaker, etc.

WIFI

Modulation Type:

IEEE 802.11b: DSSS (CCK, QPSK, DBPSK)

IEEE 802.11g/n (HT20/HT40): OFDM (64QAM, 16QAM, QPSK, BPSK)

IEEE 802.11a: OFDM (64-QAM, 16-QAM, QPSK, BPSK)

IEEE 802.11ac: OFDM (256-QAM, 64-QAM, 16-QAM, QPSK, BPSK)

IEEE 802.11ax: OFDM (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)

Frequency Range:

WIFI 2.4G Band

2412MHz ~ 2462MHz for 802.11b/g/n (HT20) /ax (HEW20);

WIFI 5G Band

Band 1: 5180MHz-5240MHz

WIFI Antenna: Two Dipole antenna with reverse polarity antenna connector used. The Gain is 7.40dBi for 2.4G Band and 4.58dBi for 5G band for each one;

Bluetooth BR/EDR:

Type of Modulation: GFSK, $\pi/4$ DQPSK, 8DPSK

Frequency range: 2402-2480MHz

Channel Spacing: 1MHz

Channel Number: 79 channels

BT Antenna: Dipole antenna with reverse polarity antenna connector used. The Gain is 7.40dBi

Note: WIFI 2.4G band and 5G band cannot transmit Simultaneously