Operational description

The RF module is AP6356S. It is a low-cost and low-power consumption module which has WiFi and Bluetooth functionalities. The highly integrated module makes the possibilities of web browsing,Bluetooth headsets applications. With advanced security, also could interact with different vendors' 802.11a/b/g/n/ac 2x2 Access Points in the wireless LAN.

The wireless module complies with IEEE 802.11 a/b/g/n/ac, 802.11n/ac support 2X2 MIMO standard and it can achieve up to a speed of 867Mbps with dual stream in 802.11ac to connect the wireless LAN. The integrated module provides SDIO interface for WiFi, UART / PCM interface for Bluetooth.

This compact module is a total solution for a combination of WiFi + BT technologies.

Features:

Chipset: Amlogic S912

DDR4: 2GB

Flash: 16GB eMMC Flash

OS: Android 6.0

CPU: Octa-core 64-bit ARM® Cortex™-A53 up to 2.0GHz

GPU: 750Mhz+ ARM Mali-T820MP3 GPUHW UHD H.265/VP9 60fps 10-bit video decoder and low latency1080p 60fps video encoder

Video Decoding:

- VP9-10 Profile

-2 up to 4Kx2K@60fps

- H.265 HEVC MP-10@L5.1 up to 4Kx2K@60fps

- H.264 AVC HP@L5.1 up to 4Kx2K@30fps, H.264 MVC up to 1080p@60fps etc.

HDR10 processing, REC709/BT2020 processing

Support Google Play store, DLNA, Kodi, WiFi Display(Miracast), Airplay

Codec: HD MPEG1/2/4, RM/RMVB(8/9/10), H.264, H.265,HD AVC/VC-1,Xvid/DivX3/4/5/6, Divx HD, Divx Plus HD, RealVideo8/9/10

Video Format: Avi, Rm, Rmvb, MKV, AVI, ISO, VOB, DAT, MPG/MPEG, MP4, MOV, TS, XVID, WMV, ASF, FLV

Audio Format: MP3, WMA, AAC, WAV, OGG, AC3, MIDI, DTS, FLAC, APE, ALAC, M4A

Photo Format: HD JPEG/BMP/GIF/PNG/TIFF

APPs: Skype, Netflix, Facebook, Twitter, Youtube ect.

Power supply: DC 5V(2A)

RF Module: AP6356S

BT Specs:

Items	Values
Frequency Range	2402 MHz – 2480 MHz
RF Power Output	$\leqslant$11dBm
Modulation	GFSK/8-DPSK/ π /4-DQPSK(EDR) GFSK(BLE)
Number or channels	79(EDR) 40(BLE)
Channel spacing	1MHz(EDR) 2NHz(BLE)
Antenna gain	$\leqslant$2dBi
Version	BT V4.1

WiFi Specs:

Frequency range	2412 MHz – 2462 MHz,		
IEEE	802.11b,802.11g,802.11nHT20, 11nHT40		
RF power 802.11b	$\leqslant$18dBm		
RF power 802.11g	$\leqslant$16dBm		
RF power 802.11n20/40	$\leqslant$14dBm		
Antenna gain	$\leqslant$2dBi		
Modulation	DSSS/OFDM/16QAM/64QAM		
Number of channels	13		
Channel spacing	5MHz		
Support	hotspot	Peer-to-Peer	DFS detection
	Y	Y	N/A

Note：The Wlan channel 12/13 has been closed by software

Frequency range	5180 MHz ~5320 MHz		
	5500MHz~ 5700MHz		
	5745MHz~5825MHz		
IEEE	802.11a/n/ac		
RF power 802.11a	$\leqslant$18dBm		
RF power 802.11n HT20	$\leqslant$19dBm		
RF power 802.11n HT40	$\leqslant$19dBm		
RF power 802.11ac VHT20	$\leqslant$19dBm		
RF power 802.11ac VHT40	$\leqslant$19dBm		
Modulation	OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)		
Antenna gain	$\leqslant$2dBi		
Number of channels	19		
Channel spacing	20/40MHz		
Support	hotspot	Peer-to-Peer	DFS detection
	N/A	N/A	N/A

Frequency range	5745MHz~5825MHz		
IEEE	802.11a/n/ac		
RF power 802.11a	≤17dBm		
RF power 802.11n HT20	≤17dBm		
RF power 802.11n HT40	≤17dBm		
RF power 802.11ac VHT20	≤17dBm		
RF power 802.11ac VHT40	≤17dBm		
Modulation	OFDM(256QAM, 64QAM, 16QAM, QPSK, BPSK)		
Antenna gain	≤2dBi		
Number of channels	5		
Channel spacing	20MHz/40MHz		
Support	hotspot	Peer-to-Peer	DFS detection
	N/A	N/A	N/A