

Operation Description

E6+ is a Helmet Smart HUD with 2.4G/BT/WIFI function

The EUT is working base on the MCU WIFI/BLE IC SC200Y, equipped with 2.4G IC NRF52840(Crystal: 32MHz) & BT IC QCC3034(Crystal: 32MHz).

Wireless technology, more technical information as follows:

Product Name:	Helmet Smart HUD			
Model/Type reference:	E6+			
Power supply:	Input: 5V--- 1A Battery: 3.8V 1400mAh 5.32Wh			
Hardware version:	V1.0			
Software version:	V1.0			
Testing sample ID:	CTA260407004-1# (Engineer sample) CTA260407004-2# (Normal sample)			
Bluetooth :				
Supported Type:	Bluetooth BR/EDR			
Modulation:	GFSK, $\pi/4$ DQPSK, 8DPSK			
Operation frequency:	2402MHz~2480MHz			
Channel number:	79			
Channel separation:	1MHz			
Antenna type:	PCB antenna			
Antenna gain:	0.95 dBi			
Bluetooth BLE				
Supported type:	Bluetooth low Energy			
Modulation:	GFSK			
Operation frequency:	2402MHz to 2480MHz			
Channel number:	40			
Channel separation:	2 MHz			
Antenna type:	PIFA antenna			
Antenna gain:	1.19 dBi			
2.4GWIFI :				
Supported type:	802.11b/802.11g/802.11n(HT20)/ 802.11n(HT40)			
Modulation:	802.11b: DSSS 802.11g/802.11n(HT20)/ 802.11n(HT40): OFDM			
Operation frequency:	802.11b/802.11g/802.11n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz			
Channel number:	802.11b/802.11g/802.11n(HT20): 11 802.11n(HT40):7			
Channel separation:	5MHz			
Antenna type:	PIFA antenna			
Antenna gain:	1.19 dBi			
5GWIFI				
Supported type:	20MHz system	40MHz system	80MHz system	160MHz system
	802.11a	802.11n	802.11ac	N/A

	802.11n 802.11ac	802.11ac		
Operation frequency:	5180MHz-5240MHz 5745MHz-5825MHz	5190MHz- 5230MHz 5755MHz- 5795MHz	5210MHz 5775MHz	N/A
Modulation:	OFDM	OFDM	OFDM	N/A
Channel number:	9	4	2	N/A
Channel separation:	20MHz	40MHz	80MHz	N/A
Antenna type:	PIFA Antenna			
Antenna gain:	1.45 dBi for 5180-5240MHz 1.60 dBi for 5745-5825MHz			
2.4G :				
Operation frequency	2405-2480MHz			
Modulation	GFSK			
Antenna Type	PIFA antenna			
Antenna Gain	1.77 dBi			

Manufacturing tolerance

Mode	Max. Peak Conducted Output Power (dBm)	Max. tune-up
BLE	-3.16	-3.0±1
BR/EDR	-0.13	0.0±1
2.4GWIFI	8.62	8.0±1
Mode	Max. Average Conducted Output Power (dBm)	Max. tune-up
5.2GWIFI	3.8	3.0±1
5.8GWIFI	4.18	3.5±1

Freq. (MHz)	Field strength(max)(dBuV/m)	EIRP (max) (dBm)	Turn-up Power (dB)
2405MHz	85.62	-9.64	-10.0±1

Simultaneous Transmission Possibilities: BT + BT LE/WiFi + SRD 2.4GHz.