

Operation Description

FCC ID: 2BGS9-XLFIVALIDATOR

This product is a Wifi Router with 2.4GWIFI /5.2GWIFI function.

The EUT works on the RF Chip RTL 8188FTV(Crystal oscillator 40M), RTL8852BE(Crystal oscillator 40M).

The EUT works on the MCU Intel Ice Lake-U42 (Crystal: 32.768KHz, 38.4MHz);

The EUT works on the 2 LAN Chip I225-LM (Crystal: 25MHz) and M.2 PCIE SSD (Crystal: 25MHz);

Detail as follows:

Description of Device (EUT)

EUT	: Wifi Router
Test Model	: xKValidator
Power Supply	: Input: 100-240V~, 50/60Hz
Hardware Version	: ICZB10_MB_R10
Software Version	: E.ICZB10.00E
WIFI(2.4G Band)	:
Frequency Range	: 2412MHz~2462MHz
Channel Spacing	: 5MHz
Channel Number	: 11 Channels for 20MHz bandwidth (2412~2462MHz) 7 Channels for 40MHz bandwidth (2422~2452MHz)
Modulation Type	: IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Description	: Ant1: PIFA Antenna, 1.86dBi(Max.) Ant2: PIFA Antenna, 1.99dBi(Max.)
WIFI(5.2G Band)	:
Frequency Range	: 5180MHz~5240MHz
Channel Number	: 4 Channels for 20MHz bandwidth(5180MHz~5240MHz) 2 channels for 40MHz bandwidth(5190MHz~5230MHz) 1 channels for 80MHz bandwidth(5210MHz)
Modulation Type	: IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Antenna Description	: Ant1: PIFA Antenna, 1.76dBi(Max.) Ant2: PIFA Antenna, 1.94dBi(Max.)

The DFS is Master device.

The device contains 2 WLAN modular, modular RTL8852BE support 2T2R MIMO technology while the device only use main antenna (antenna 1), auxiliary antenna port not connect antenna. Modular RTL8188FTV support only one antenna 2 .

Antenna 1 and antenna 2 can support simultaneously transmission.

[2.4G WIFI Ant1]

11B (Peak)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	15.0	15.0	15.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11G (Peak)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	14.0	14.0	14.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N20(Peak)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	13.0	13.0	13.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N40(Peak)			
Channel	Channel 3	Channel 6	Channel 9
Target (dBm)	12.0	12.0	12.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0

[2.4G WIFI Ant2]

11B (Peak)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	14.0	14.0	14.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11G (Peak)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	12.0	13.0	13.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N20(Peak)			
Channel	Channel 1	Channel 6	Channel 11
Target (dBm)	12.0	12.0	12.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N40(Peak)			
Channel	Channel 3	Channel 6	Channel 9
Target (dBm)	11.0	11.0	11.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0

[5.2G WIFI Ant1]

11A (AVG)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	13.0	12.0	12.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N20(AVG)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	11.0	12.0	11.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N40(AVG)			
Channel	Channel 38	Channel 46	
Target (dBm)	10.0	10.0	
Tolerance $\pm$ (dB)	1.0	1.0	
11AC20(AVG)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	11.0	12.0	12.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11AC40(AVG)			
Channel	Channel 38	Channel 46	
Target (dBm)	10.0	10.0	
Tolerance $\pm$ (dB)	1.0	1.0	
11AC80(AVG)			
Channel	Channel 42		
Target (dBm)	9.0		
Tolerance $\pm$ (dB)	1.0		

[5.2G WIFI Ant2]

11A (AVG)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	11.0	11.0	11.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N20(AVG)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	10.0	10.0	10.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11N40(AVG)			
Channel	Channel 38	Channel 46	
Target (dBm)	10.0	9.0	
Tolerance $\pm$ (dB)	1.0	1.0	
11AC20(AVG)			
Channel	Channel 36	Channel 40	Channel 48
Target (dBm)	10.0	10.0	10.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
11AC40(AVG)			
Channel	Channel 38	Channel 46	
Target (dBm)	10.0	9.0	
Tolerance $\pm$ (dB)	1.0	1.0	
11AC80(AVG)			
Channel	Channel 42		
Target (dBm)	8.0		
Tolerance $\pm$ (dB)	1.0		