Declaración de Información Comercial y Técnica - Chile

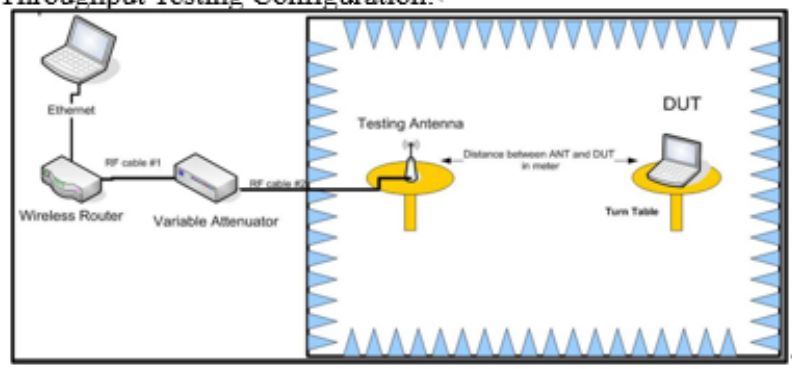
Información Comercial	
Fecha	2026/07/22
Nombre comercial del equipo	MAG X870E TOMAHAWK MAX WIFI
Fabricante	Micro-Star INT'L CO., LTD.
Importador o representante en Chile	Samual Rojas
Domicilio (en Chile) del fabricante	Nevado de Chillan 19413, Santiago
Correo electrónico de contacto	Samuelrojas@msi.com
Sitio web	https://latam.msi.com/

Características técnicas	
Tipo de equipo	Placa Madre
Marca	MSI
Modelo	MAG X870E TOMAHAWK MAX WIFI
Tecnología / Modulación	Bluetooth/Wi-Fi
Bandas de frecuencias	BT/BLE: 2402-2483.5MHz; WLAN 2.4G: 2402-2483.5MHz; WLAN 5G: 5.2G 5150-5350MHz 5.6G 5470-5725MHz 5.8G 5725-5895MHz WLAN 6G: 5925-7125MHz
Ganancia de antena (dBi)	BT/WLAN 2.4G: < 2.42 dBi WLAN 5G: < 4.92 dBi WLAN 6G: 6.2GHz 5925-6425MHz < 4.76 dBi 6.5GHz 6425-6525MHz < 4.29 dBi 6.7GHz 6525-6875MHz < 4.61 dBi 7.0 GHz 6875-7125MHz < 4.09 dBi
Max EIRP	BT/WLAN 2.4G: < 36 dBm WLAN 5G: 5150-5350MHz < 30dBm 5470-5725MHz < 30dBm 5725-5895MHz < 36dBm WLAN 6G: 5945-6425MHz <24dBm

Módulos RF usados	Chip: MT7927 Wi-Fi 7 - 802.11 a/b/g/n/ac/ax /be Bluetooth 5.4
Declaración de conformidad	El equipo previamente individualizado cumple con las disposiciones establecidas en la Norma Técnica de Equipos de alcance reducido, aprobada por la resolución exenta N° 1.985, de 2017, de la Subsecretaría de Telecomunicaciones

1. WLAN Throughput Test

1-1 WLAN Throughput Testing Configuration:



Total Attenuation=Air Loss (path loss) + Loss of 2 cables + Attenuator - Testing antenna gain = 75dB

1-2 WLAN Waterfall Throughput Test (Worst channel)

☐ (1) 802. 11n 40MHz (2.4 – 2.5GHz)

Throughput (Mbps)

2.4 GHz chamber total path loss value	63.0 dB
AP Transmit power	28.0 dBm
Channel bandwidth	40 MHz
Access point	ASUS AXE 11000
Access point software version	
Antenna height from the ground	135~140 CM
Turntable continuous rotation speed	1 RPM

	Receive Level (dB) = AP TX - TPL - Att		RX	Channel			
Attenuator setting (dB)	Total loss (Chamber + Attenuator)	2.4GHz Receive Level (dBm)	2X2 Spec (40MHz BW)	1	6	11	RX Result (Mbps)
19	82	-54	180	266.6	242.5	236.8	248.6
31	94	-66	110	156.6	161.2	151.2	156.3
37	100	-72	60	118.6	121.1	117.5	119.1
40	103	-75	35	90.6	91.2	89.6	90.5

	Receive Level (dB) = AP TX - TPL - Att		TX	Channel			
Attenuator setting (dB)	Total loss (Chamber + Attenuator)	2.4GHz Receive Level (dBm)	2X2 Spec (40MHz BW)	1	6	11	TX Result (Mbps)
19	82	-54	180	223.6	229.8	207.9	220.4
31	94	-66	110	199.6	210.6	208.7	206.3
37	100	-72	60	143.2	152.6	130.5	142.1
40	103	-75	35	108.6	105.6	103.6	105.9

Run Burnin 3D 90%	RX Spec	1	6	11	RX Result (Mbps)
Total attenuator setting (dB) : 94 dB	50	152.6	162.3	142.5	152.5

☒(1) 802. 11AC 80MHz (5.15 – 5.85GHz)

Throughput (Mbps)

5 GHz chamber total path loss value	76.0 dB
AP Transmit power	23.0 dBm
Channel bandwidth	80 MHz
Access point	ASUS AXE 11000
Access point software version	
Antenna height from the ground	135~140 CM
Turntable continuous rotation speed	1 RPM

Receive Level (dB) = AP TX - TPL - Att		RX	Channel			
Total loss (Chamber + Attenuator)	5GHz Receive Level (dBm)	2X2 Spec 80MHz BW	US - 36	TW/EU-64	US - 149	RX Result (Mbps)
79	-56	400	572.6	565.5	571.2	569.8
91	-68	300	444.6	432.5	452.6	443.2
97	-74	250	326.6	315.6	333.5	325.2
100	-77	180	222.6	242.6	265.8	243.7

Receive Level (dB) = AP TX - TPL - Att		TX	Channel			
Total loss (Chamber + Attenuator)	5GHz Receive Level (dBm)	2X2 Spec 80MHz BW	US - 36	TW/EU-64	US - 149	TX Result (Mbps)
79	-56	300	565.6	536.6	512.6	538.3
91	-68	220	320.5	333.6	342.1	332.1
97	-74	130	229.8	212.6	200.6	214.3
100	-77	90	158.6	152.4	154.5	155.2

Run Burnin 3D 90%	RX Spec	US - 36	TW/EU-64	US - 149	RX Result (Mbps)
Total attenuator setting (dB) : 94 dB	50	172.6	182.6	184.2	179.8

☒(1) 802.11 BE 160MHz (5.925 – 7.125GHz)

Throughput (Mbps)

6 GHz chamber total path loss value	84.0 dB
AP Transmit power	25.0 dBm
Channel bandwidth	160 MHz
Access point	ASUS AXE 11000
Access point software version	
Antenna height from the ground	135~140 CM
Turntable continuous rotation speed	1 RPM

	Receive Level (dB) = AP TX - TPL - Att		RX	Channel			
Attenuator setting (dB)	Total loss (Chamber + Attenuator)	6GHz Receive Level (dBm)	2X2 Spec 160MHz BW	Ch 37	Ch 117	Ch 213	RX Result (Mbps)
Directly	62	-37	1250	1398.2	1402.6	1356.8	1385.9
1	85	-60	900	1112.3	1236.6	1095.6	1148.2
7	91	-66	350	812.6	809.6	814.5	812.2
16	100	-75	200	385.6	345.6	368.1	366.4
22	106	-81	100	133.2	125.5	132.5	130.4

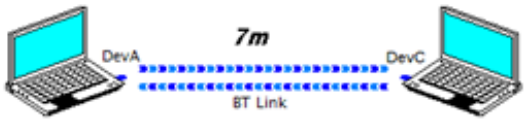
	Receive Level (dB) = AP TX - TPL - Att		TX	Channel			
Attenuator setting (dB)	Total loss (Chamber + Attenuator)	6GHz Receive Level (dBm)	2X2 Spec 160MHz BW	Ch 37	Ch 117	Ch 213	TX Result (Mbps)
Directly	62	-37	800	999.5	975.6	983.5	986.2
1	85	-60	350	723.6	729.5	769..6	726.6
7	91	-66	150	523.6	498.8	425.6	482.7
16	100	-75	80	325.6	333.6	345.5	334.9
22	106	-81	50	142.3	136.9	134.7	138.0

Run Burnin 3D 90%	RX Spec	Ch 37	Ch 117	Ch 213	RX Result (Mbps)
Total attenuator setting (dB) : 94 dB	50	265.6	242.3	255.6	254.5

2. Bluetooth Throughput Test

2-1 Bluetooth Throughput Testing Configuration:

A. Test tool: IxChariot v5.40 or later
B. BT use PAN profile link
C. Distance between 2 DUT : 7m
D. Pass criteria > 0.3 Mbps
E. Open space test



PS: No barriers between the two DUT

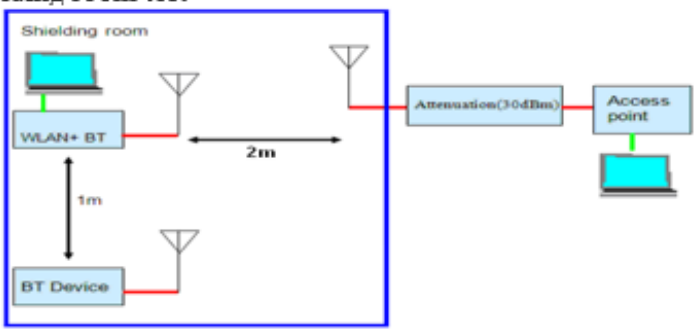
2-2 Bluetooth Throughput Test Result

BT Profile	Degree	UL Throughput (Mbps)	DL Throughput (Mbps)	Criteria
PAN				>0.3Mbps
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				
PAN				

3. WLAN & BT Coexistence Test

3-1 WLAN & BT Coexistence Testing Configuration:

1. Antenna isolation > 15 dB (recommended > 20 dB)
2. Combo module (BT+WLAN) antenna isolation > 20 dB
3. In the shielding room test



3-2 WLAN & BT Coexistence Test Result: (Wi-Fi Lab 1)

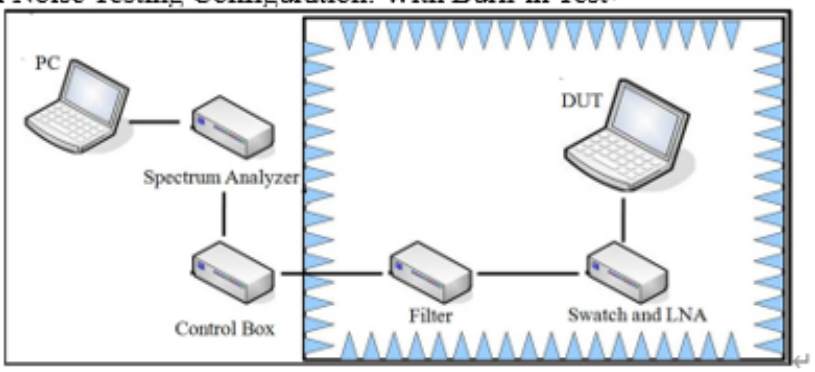
☐11n 20M		☐11n 40M		Spec.			
Att. (dB)	Receive Level	CH1		20M		40M	
		WLAN Throughput (Mbps)		1 X 1	2 X 2	1 X 1	2 X 2
66	-38	TX	127.4	23	40	40	60
		RX	94.1				
76	-48	TX	90.1	18	25	31	45
		RX	63.2				
86	-58	TX	88.6	12	18	12	25
		RX	55.6				
96	-68	TX	X	0	0	0	0
		RX	X				
101	-73	TX	X	0	0	0	0
		RX	X				

Att. (dB)	Receive Level	CH6		Spec.			
		WLAN Throughput (Mbps)		1 X 1	2 X 2	1 X 1	2 X 2
66	-38	TX	133.6	30	44	42	58
		RX	109.6				
76	-48	TX	113.1	17	26	30	41
		RX	80.5				
86	-58	TX	90.6	10	15	13	26
		RX	56.4				
96	-68	TX	X	0	0	0	0
		RX	X				
101	-73	TX	X	0	0	0	0
		RX	X				

Att. (dB)	Receive Level	CH11		Spec.			
		WLAN Throughput (Mbps)		1 X 1	2 X 2	1 X 1	2 X 2
66	-38	TX	135.4	30	44	36	56
		RX	114.6				
76	-48	TX	100.7	17	22	26	43
		RX	86.5				
86	-58	TX	66.6	13	16	12	28
		RX	30.5				
96	-68	TX	X	0	0	0	0
		RX	X				
101	-73	TX	X	0	0	0	0
		RX	X				

4. Platform Noise Test

4-1 Platform Noise Testing Configuration: With Burn-in Test



4-2 Platform Noise Test Result:

WLAN(2.4G): Start(2.4GHz) ~ Stop(2.5GHz) for Main Antenna	
☐ MAX : -97dB / -87dB (Board Band/ Narrow Band)	☒ Average : -107dB / -97dB (Board Band/ Narrow Band)

WLAN(5G): Start(5.1GHz) ~ Stop(5.8GHz) for Main Antenna	
☐ MAX : -97dB / -87dB (Board Band/ Narrow Band)	☒ Average : -107dB / -97dB (Board Band/ Narrow Band)

WLAN(6E): Start(5.925GHz) ~ Stop(7.125GHz) for Main Antenna	
☐MAX : -97dB / -87dB (Board Band/ Narrow Band)	☒Average : -107dB / -97dB (Board Band/ Narrow Band)

WLAN(6E) : Start(5.925GHz) ~ Stop(7.125GHz) for Aux	
☐MAX : -97dB / -87dB (Board / Narrow)	☒Average : -107dB / -97dB (Board / Narrow)