



TR-398 Test Report

Summary Results

DUT Brand Name	dutId
DUT Model Name	dutModel
DUT Firmware Version	dutRevision
Total Run Time (HH:MM:SS)	10:04:06
Date	Thu Feb 04 2021 18:23:11 GMT-0500 (Eastern Standard Time)
Test Name	Test Result
6.2.1 Maximum Connection Test	24g_ax:PASS 24g_n:PASS 5g_ac:PASS 5g_ax:PASS
6.2.2 Maximum Throughput Test	24g_ax:PASS 24g_n:PASS 5g_ac:PASS 5g_ax:PASS
6.2.3 Airtime Fairness Test	24g_ax:FAIL 24g_n:FAIL 5g_ac:FAIL 5g_ax:FAIL
6.2.4 Dual-band Throughput Test	24g_ax_5g_ax:PASS 24g_n_5g_ac:PASS
6.2.5 Bidirectional Throughput Test	24g_ax:FAIL 24g_n:FAIL 5g_ac:PASS 5g_ax:PASS
6.3.1 Range Versus Rate Test	24g_ax:FAIL 24g_n:FAIL 5g_ac:PASS 5g_ax:PASS
6.3.2 Spatial Consistency Test	24g_ax:PASS 24g_n:PASS 5g_ac:PASS 5g_ax:PASS
6.4.1 Multiple STAs Performance Test	24g_ax:PASS 24g_n:PASS 5g_ac:PASS 5g_ax:PASS
6.4.2 Multiple Association/Disassociation Stability Test	24g_ax:PASS 24g_n:PASS 5g_ac:PASS 5g_ax:PASS

6.2.1 Maximum Connection Test

The Maximum Connection test intends to verify that the Wi-Fi AP can support 32 STAs simultaneously connected with minimal packet loss and no disassociations taking place.

Test Configuration Information

Config ID	Config Info	Bandwidth	Channel
1	802.11n (Nss=2)	20	6
2	802.11ax (2.4 GHz, Nss=2)	20	6
3	802.11ac (Nss=2)	80	36
4	802.11ax (5 GHz, Nss=2)	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.2
STA Index	1
STA Name	Pal6-B
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1

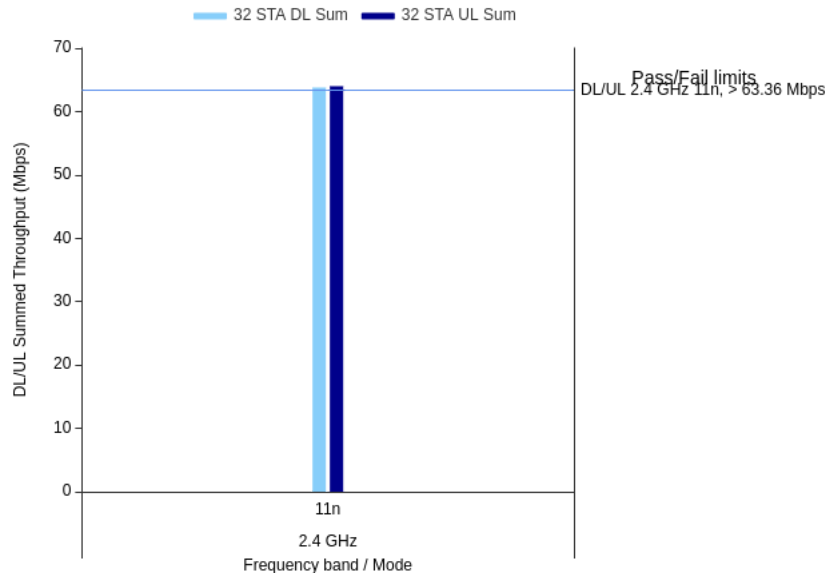
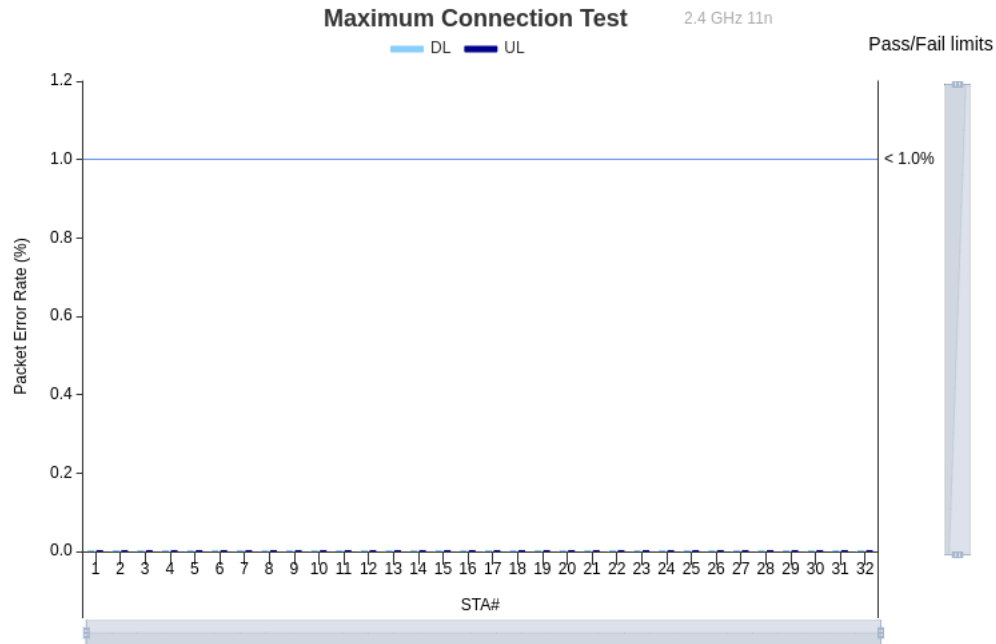
Test Result Summary

Test start time: 2021-02-03 19-21-12

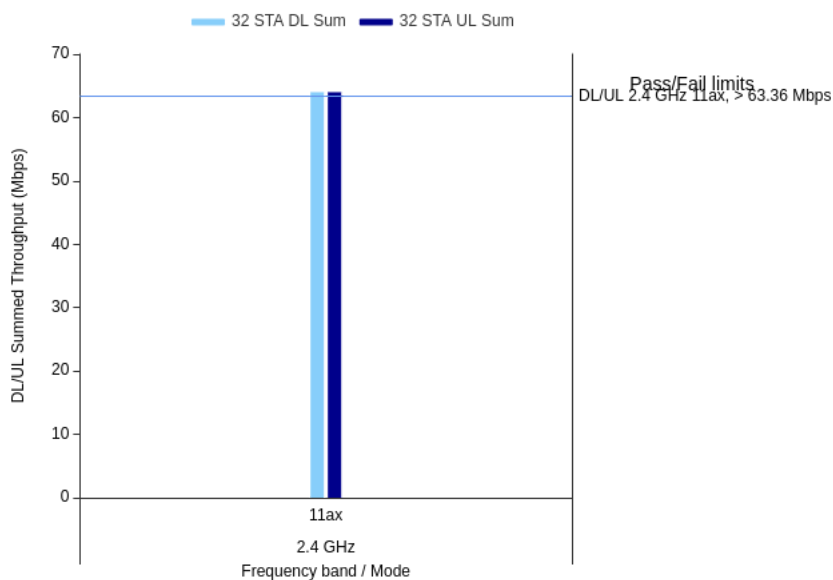
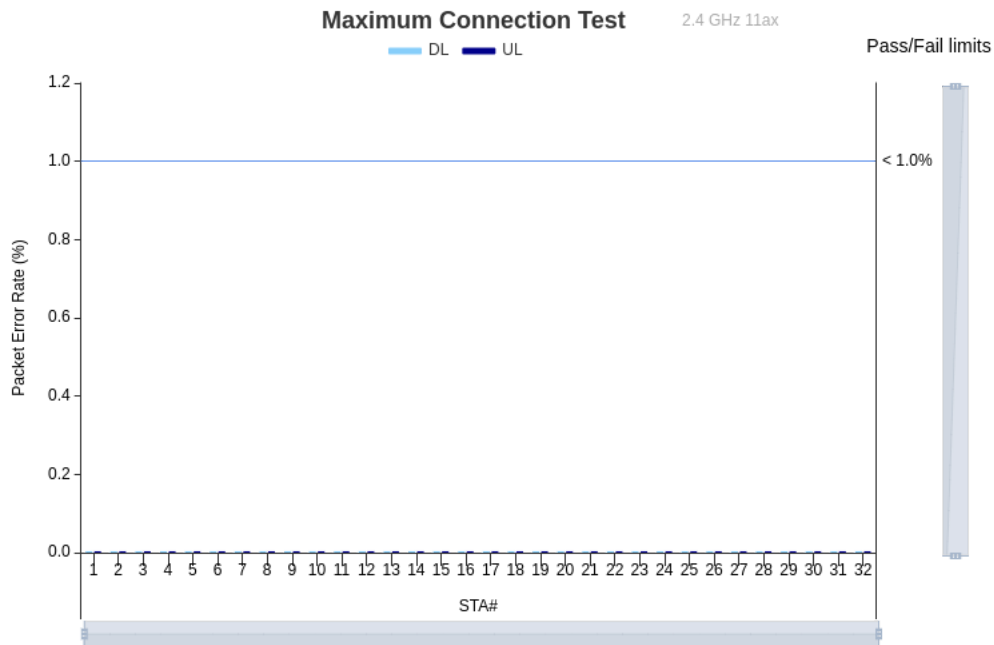
Test end time: 2021-02-03 19-55-38

Test execution time: 2065.83 seconds

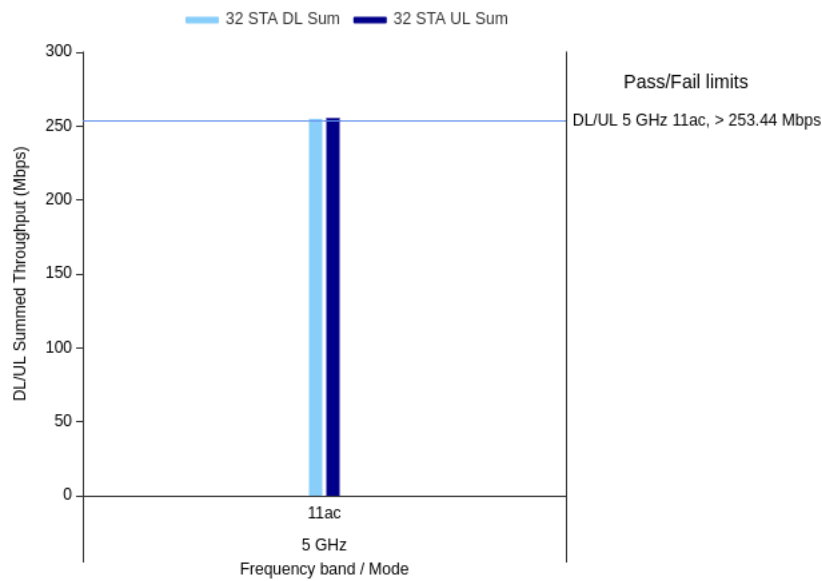
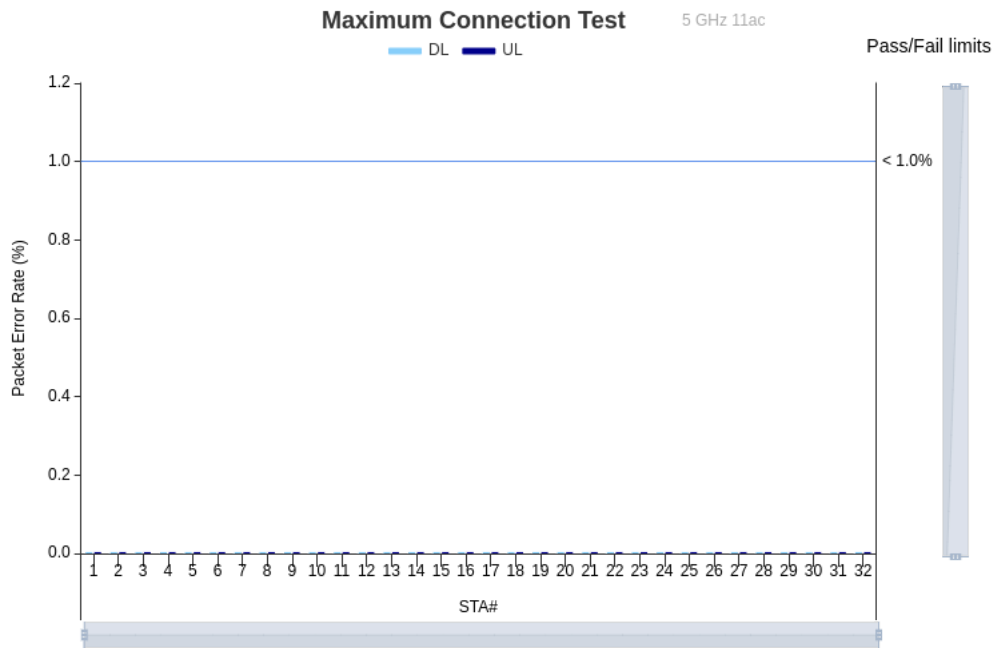
Throughput Direction	Downlink				Uplink			
Test Band Configuration	Expected Throughput	Actual Throughput	Expected PER Result	Actual PER Result	Expected Throughput	Actual Throughput	Expected PER Result	Actual PER Result
2.4 GHz 11n, Long GI	63.36	63.79 ✓	all STAs are < 1%	No STAs are >= 1% ✓	63.36	64 ✓	all STAs are < 1%	No STAs are >= 1% ✓



Throughput Direction	Downlink				Uplink			
Test Band Configuration	Expected Throughput	Actual Throughput	Expected PER Result	Actual PER Result	Expected Throughput	Actual Throughput	Expected PER Result	Actual PER Result
2.4 GHz 11ax, Long GI	63.36	64 ✓	all STAs are < 1%	No STAs are >= 1% ✓	63.36	64 ✓	all STAs are < 1%	No STAs are >= 1% ✓



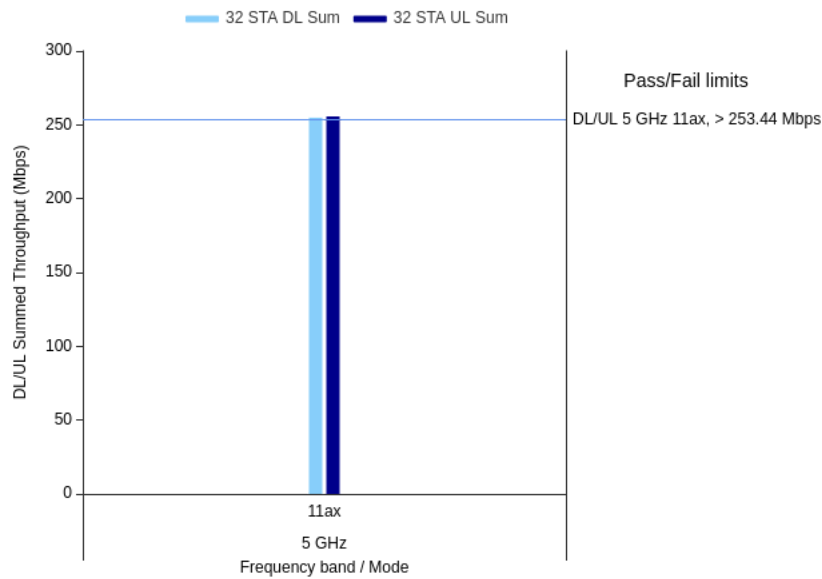
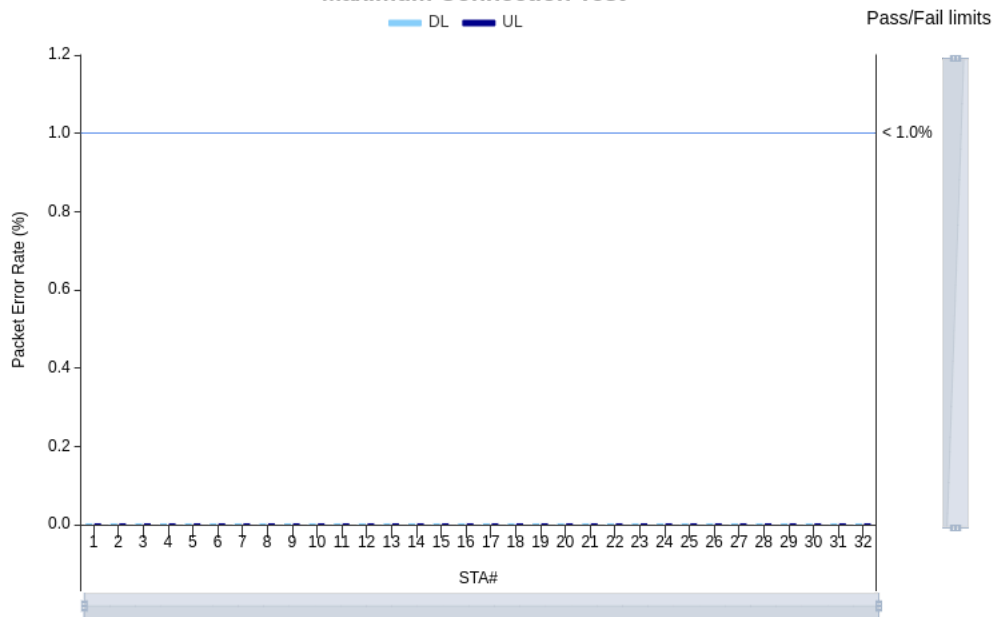
Throughput Direction	Downlink				Uplink			
Test Band Configuration	Expected Throughput	Actual Throughput	Expected PER Result	Actual PER Result	Expected Throughput	Actual Throughput	Expected PER Result	Actual PER Result
5 GHz 11ac, Long GI	253.44	254.89 ✓	all STAs are < 1%	No STAs are >= 1% ✓	253.44	255.44 ✓	all STAs are < 1%	No STAs are >= 1% ✓



Throughput Direction	Downlink				Uplink			
Test Band Configuration	Expected Throughput	Actual Throughput	Expected PER Result	Actual PER Result	Expected Throughput	Actual Throughput	Expected PER Result	Actual PER Result
5 GHz 11ax, Long GI	253.44	254.88 ✓	all STAs are < 1%	No STAs are >= 1% ✓	253.44	255.72 ✓	all STAs are < 1%	No STAs are >= 1% ✓

Maximum Connection Test

5 GHz 11ax



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6.2.2 Maximum Throughput Test

Maximum throughput test intends to measure the maximum throughput performance of the DUT. The test is conducted with connection by air interface in short distance (by considering the actual utilization of Wi-Fi).

Test Configuration Information

Config ID	Config Info	Bandwidth	Channel
1	802.11n (Nss=2)	20	6
2	802.11ax (2.4 GHz, Nss=2)	20	6
3	802.11ac (Nss=2)	80	36
4	802.11ax (5 GHz, Nss=2)	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.2
STA Index	1
STA Name	Pal6-B
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1

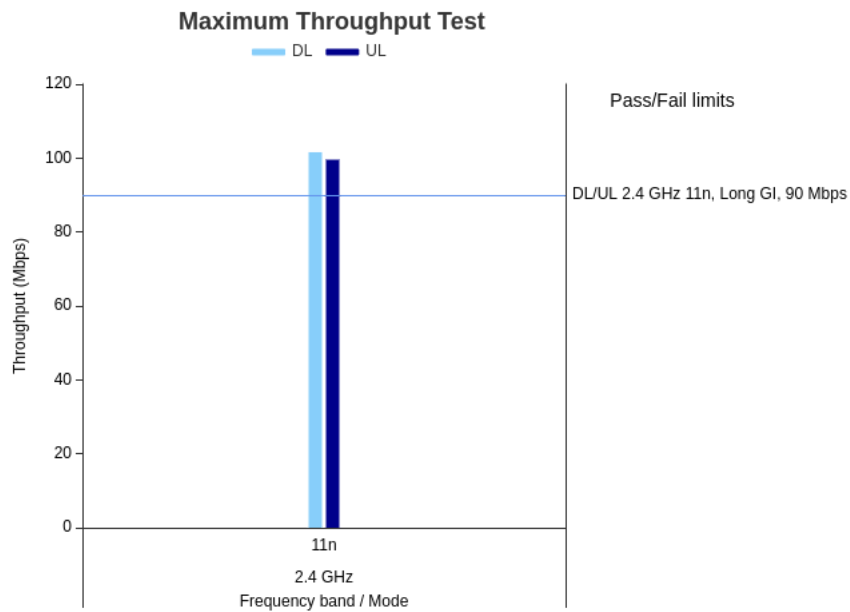
Test Result Summary

Test start time: 2021-02-03 19-56-04

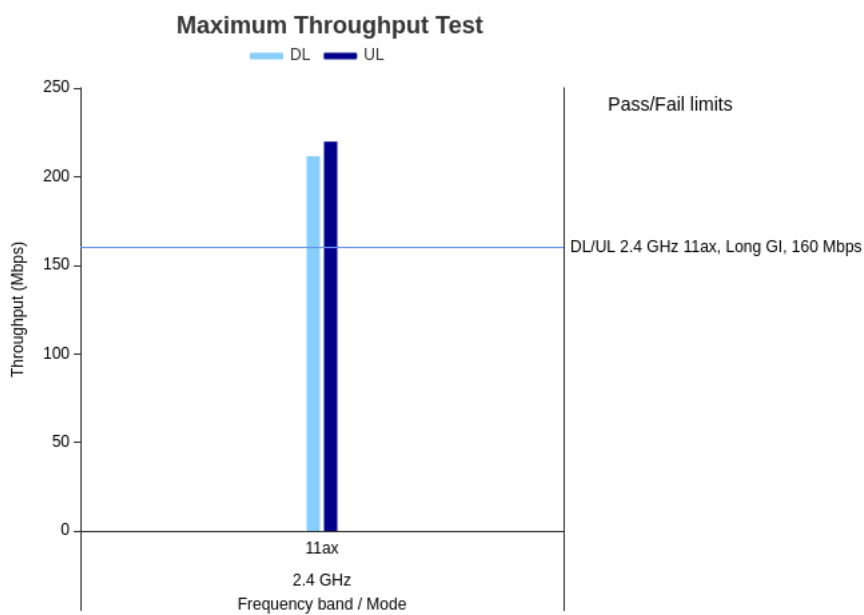
Test end time: 2021-02-03 20-11-09

Test execution time: 905.42 seconds

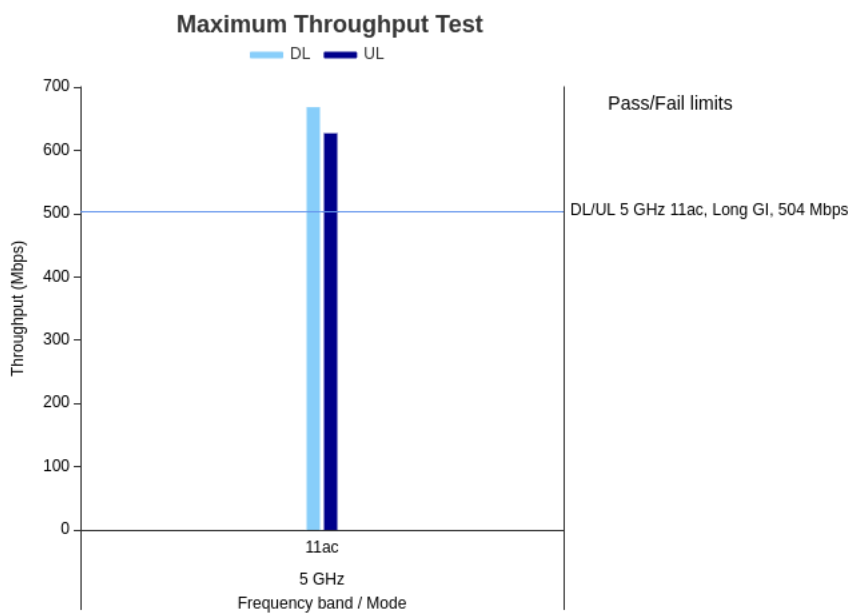
Throughput Direction	Downlink		Uplink	
Test Band Configuration	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
2.4 GHz 11n, Long GI	90	101.58 ✓	90	99.57 ✓



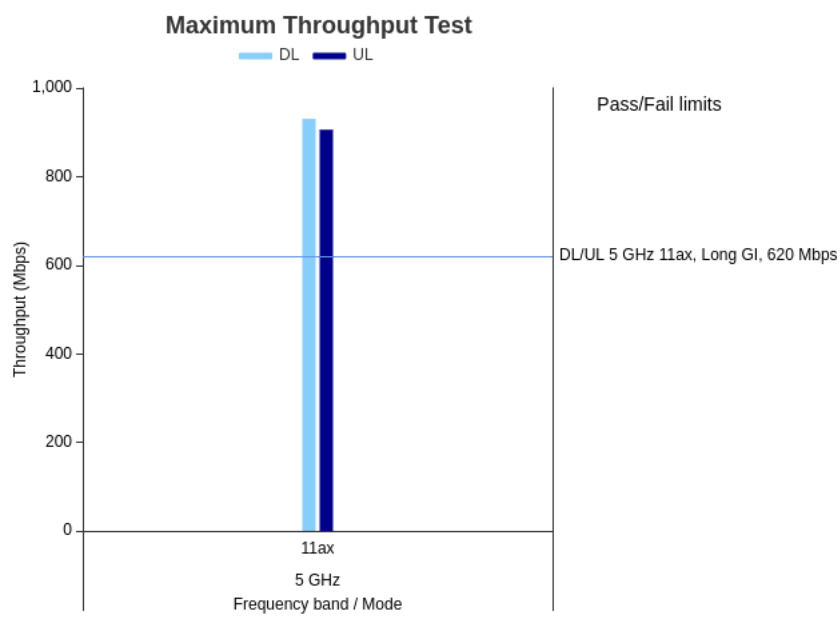
Throughput Direction	Downlink		Uplink	
Test Band Configuration	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
2.4 GHz 11ax, Long GI	160	211.6 ✓	160	219.76 ✓



Throughput Direction	Downlink		Uplink	
Test Band Configuration	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
5 GHz 11ac, Long GI	504	668.17 ✓	504	626.9 ✓



Throughput Direction	Downlink		Uplink	
Test Band Configuration	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
5 GHz 11ax, Long GI	620	930.43 ✓	620	905.94 ✓



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6.2.3 Airtime Fairness Test

Wi-Fi signal transmission can be seen as a multicast process since the STAs involved share the transmission medium. Air interface becomes a rare resource when dense connections or high throughput requests exist. Channel condition determines the MCS selection, therefore affecting the data throughput. In general, long distance to travel or obstacle penetration leads to larger attenuation, which makes the data rate in a low level. Occupying excessive air time of STA with small MCS will be unfair to the STAs with large MCS (here, assuming the QoS requirement is similar) when the air resources have already run out.

Airtime Fairness Test intends to verify the capability of Wi-Fi device to guarantee the fairness of airtime usage.

This test SHALL be MANDATORY for the test plan.

Test Configuration Information

Config ID	Config Info	Bandwidth	Channel
1	802.11n (Nss=2)	20	6
2	802.11ax (2.4 GHz, Nss=2)	20	6
3	802.11ac (Nss=2)	80	36
4	802.11ax (5 GHz, Nss=2)	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.4
STA Index	1
STA Name	Pal6-D
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1
STA2	
STA Management IP	172.16.27.3
STA Index	2
STA Name	Pal6-C
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1
STA3	
STA Management IP	172.16.27.3
STA Index	3
STA Name	Pal6-C
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1

Test Result Summary

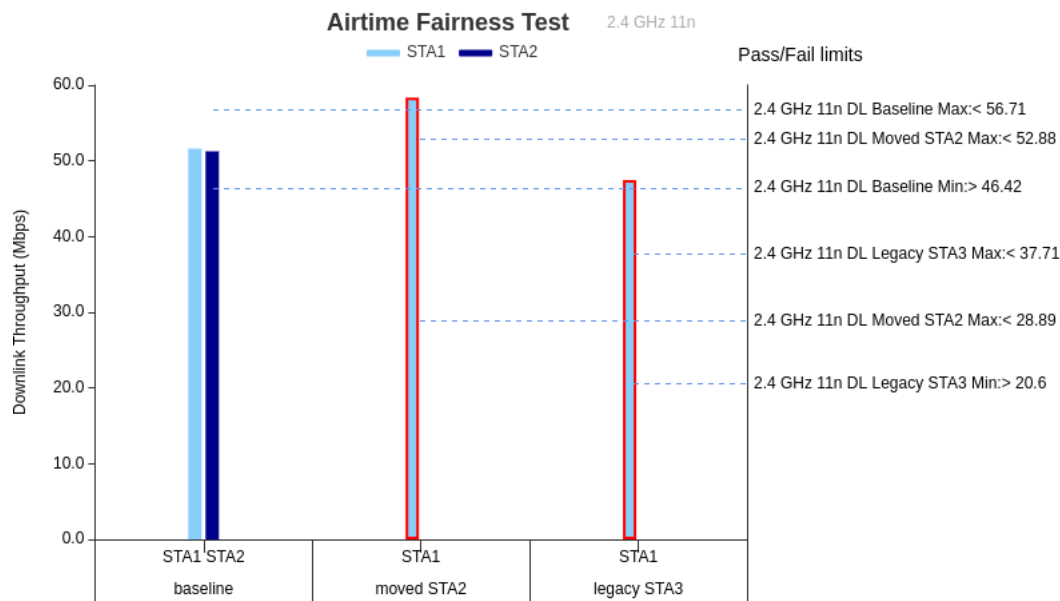
Test start time: 2021-02-03 20-11-35

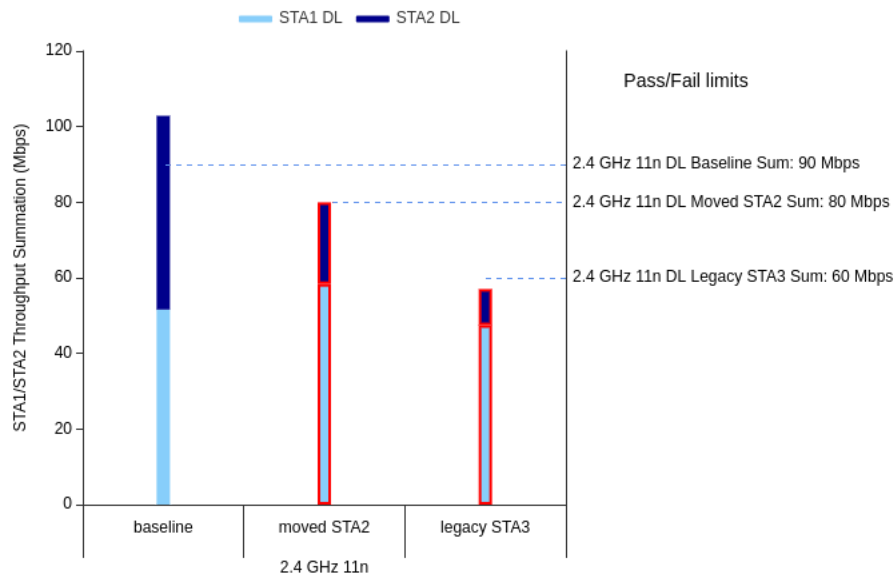
Test end time: 2021-02-03 20-35-38

Test execution time: 1443.41 seconds

2.4 GHz 11n					
Throughput Direction (DL)					
	STA1	STA2	STA3	Threshold	Summation
Baseline	51.61	51.26	N/A	90	102.87 ✓
Moved STA2	58.36	21.61	N/A	80	79.97 ✗
Legacy STA3	47.46	N/A	9.57	60	57.03 ✗

Variation				
		Min	Max	Measured
Baseline	STA1	48.86	54.01	51.61 ✓
Baseline	STA2	48.86	54.01	51.26 ✓
Moved STA2	STA1	33.99	45.98	58.36 ✗
Legacy STA3	STA1	24.24	32.79	47.46 ✗



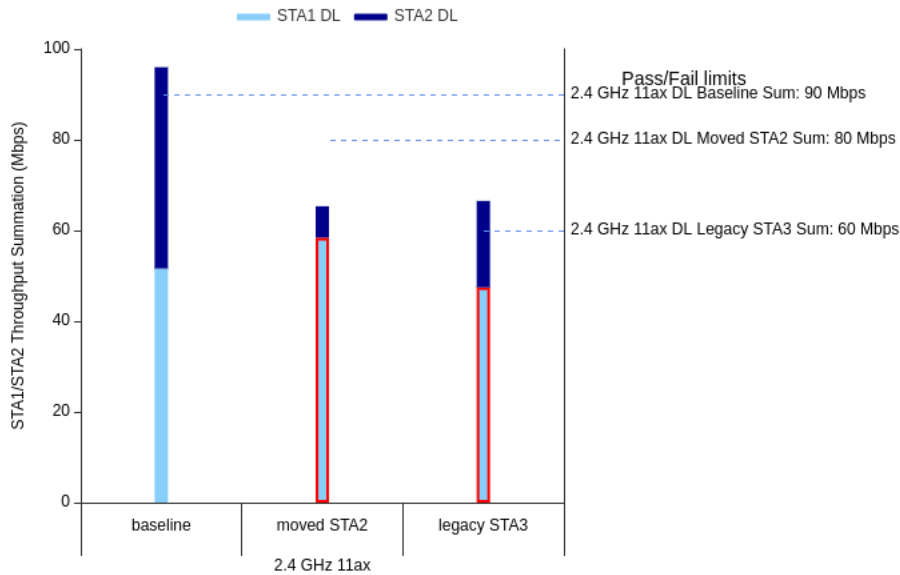
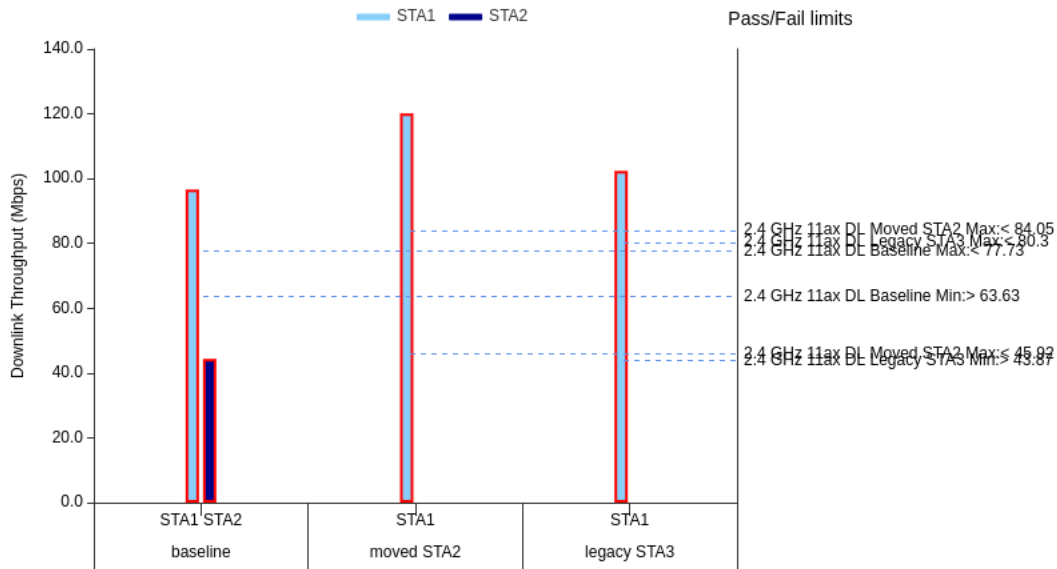


2.4 GHz 11ax					
Throughput Direction (DL)					
	STA1	STA2	STA3	Threshold	Summation
Baseline	96.63	44.38	N/A	undefined	102.87 ✓
Moved STA2	120.13	6.98	N/A	undefined	79.97 ✓
Legacy STA3	102.38	N/A	19.06	undefined	57.03 ✓

Variation				
		Min	Max	Measured
Baseline	STA1	48.86	54.01	96.63 ✗
Baseline	STA2	48.86	54.01	44.38 ✗
Moved STA2	STA1	33.99	45.98	120.13 ✗
Legacy STA3	STA1	24.24	32.79	102.38 ✗

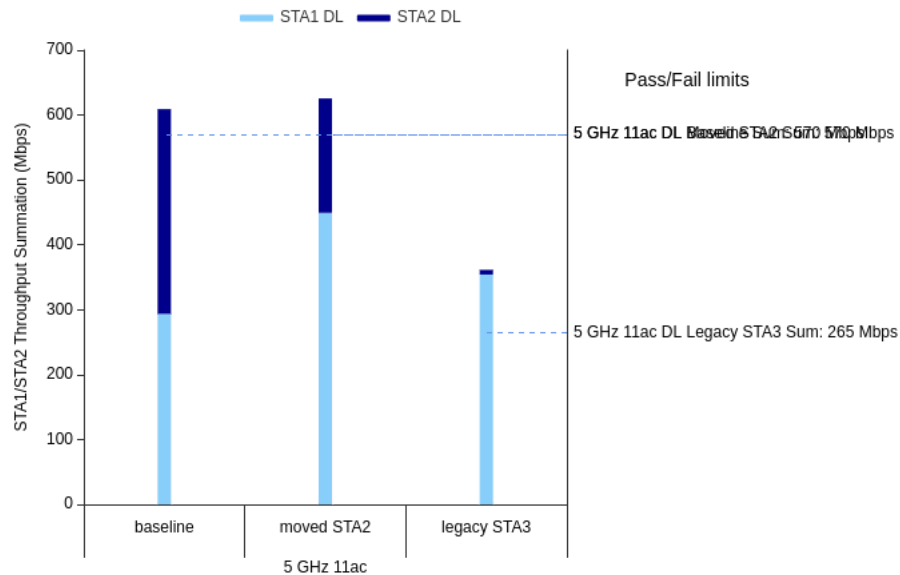
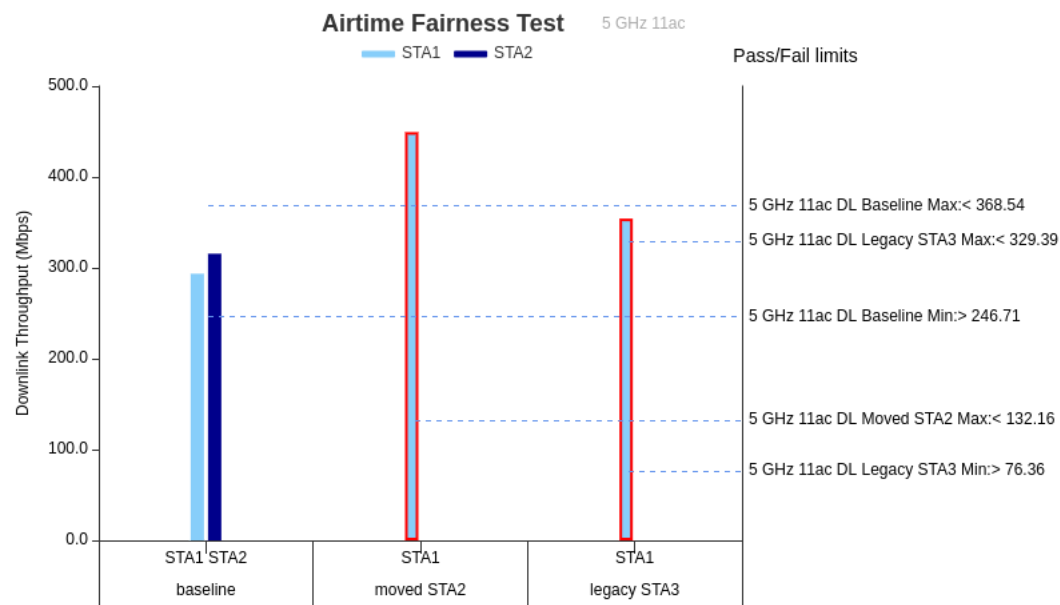
Airtime Fairness Test

2.4 GHz 11ax



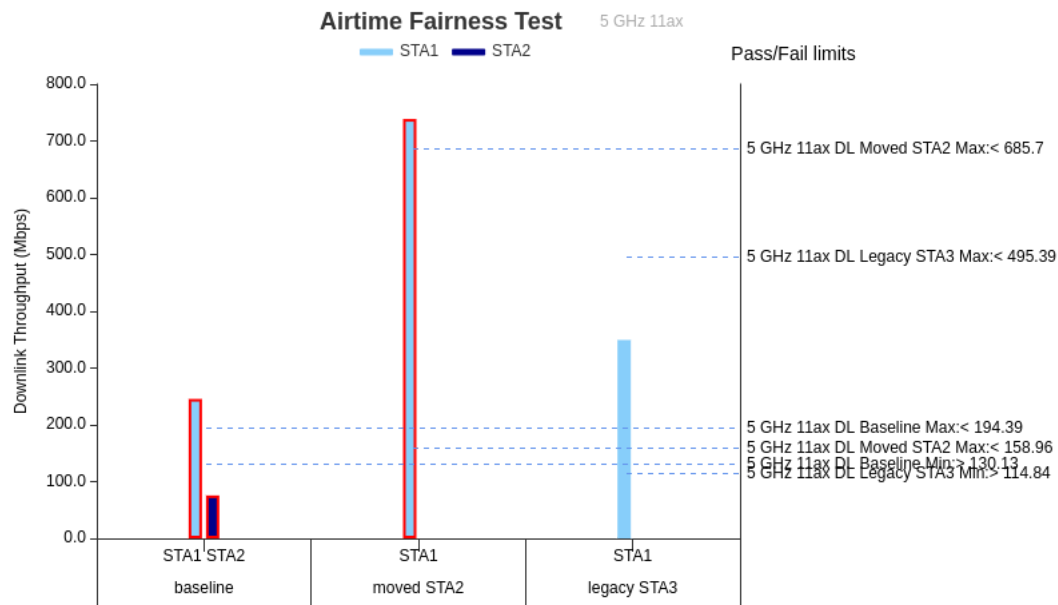
5 GHz 11ac					
Throughput Direction (DL)					
	STA1	STA2	STA3	Threshold	Summation
Baseline	293.56	315.59	N/A	undefined	102.87 ✓
Moved STA2	449.4	176.22	N/A	undefined	79.97 ✓
Legacy STA3	354.23	N/A	7.24	undefined	57.03 ✓

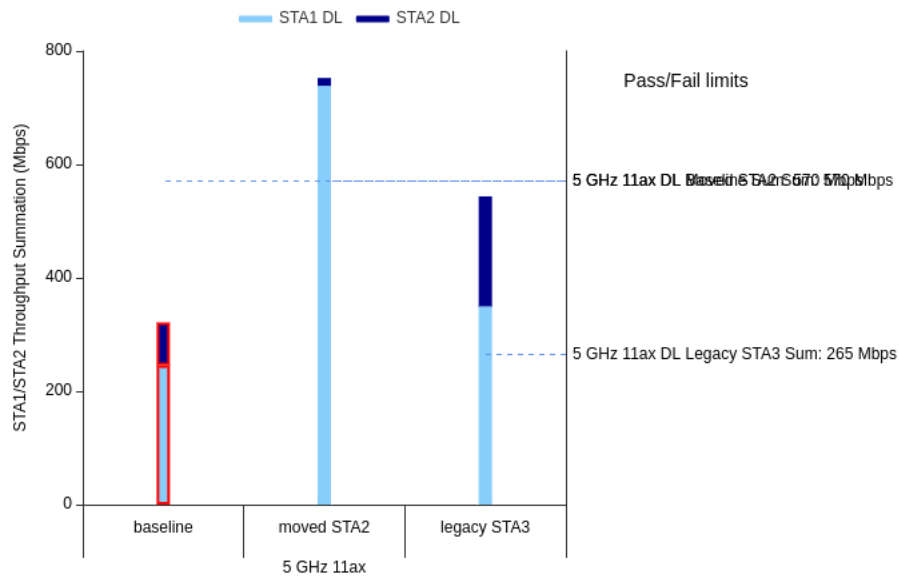
Variation				
		Min	Max	Measured
Baseline	STA1	48.86	54.01	293.56 ✖
Baseline	STA2	48.86	54.01	315.59 ✖
Moved STA2	STA1	33.99	45.98	449.4 ✖
Legacy STA3	STA1	24.24	32.79	354.23 ✖



5 GHz 11ax					
Throughput Direction (DL)					
	STA1	STA2	STA3	Threshold	Summation
Baseline	245.64	75.66	N/A	undefined	102.87 ✓
Moved STA2	738.62	13.86	N/A	undefined	79.97 ✓
Legacy STA3	349.5	N/A	194.14	undefined	57.03 ✓

Variation				
		Min	Max	Measured
Baseline	STA1	48.86	54.01	245.64 ✗
Baseline	STA2	48.86	54.01	75.66 ✗
Moved STA2	STA1	33.99	45.98	738.62 ✗
Legacy STA3	STA1	24.24	32.79	349.5 ✗





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6.2.4 Dual-band Throughput Test

The Dual-band Throughput Test is intended to measure the throughput the DUT can support when concurrently connected to multiple stations on both the 2.4 and 5 GHz bands, each operating with two spatial streams. The purpose of these additional test cases is to detect cross band interference of the DUT's transmitter on the receiver. The weak link is needed to ensure DUT and STA are transmitting at the highest power and causing the most potential interference when the receiver is more susceptible to noise (low SNR). Note, each station is connected using either the 2.4 or 5 GHz band, but not both bands simultaneously. This test requires at least 2 stations, located 2m from the DUT. The DUT will need to support at least 4 independent radio chains for this test case, two operating in the 2.4 GHz band and two operating in the 5 GHz band.

This test SHALL be MANDATORY for the test plan.

Test Configuration Information

Config ID	Config Info	Bandwidth (2.4 GHz)	Channel (2.4 GHz)	Bandwidth (5 GHz)	Channel (5 GHz)
1	802.11n (Nss=2) and 802.11ac (Nss=2)	20	6	80	36
2	802.11ax (2.4 GHz, Nss=2) and 802.11ax (5 GHz, Nss=2)	20	6	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.2
STA Index	1
STA Name	Pal6-B
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1
STA2	
STA Management IP	172.16.27.4
STA Index	2
STA Name	Pal6-D
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1

Test Result Summary.

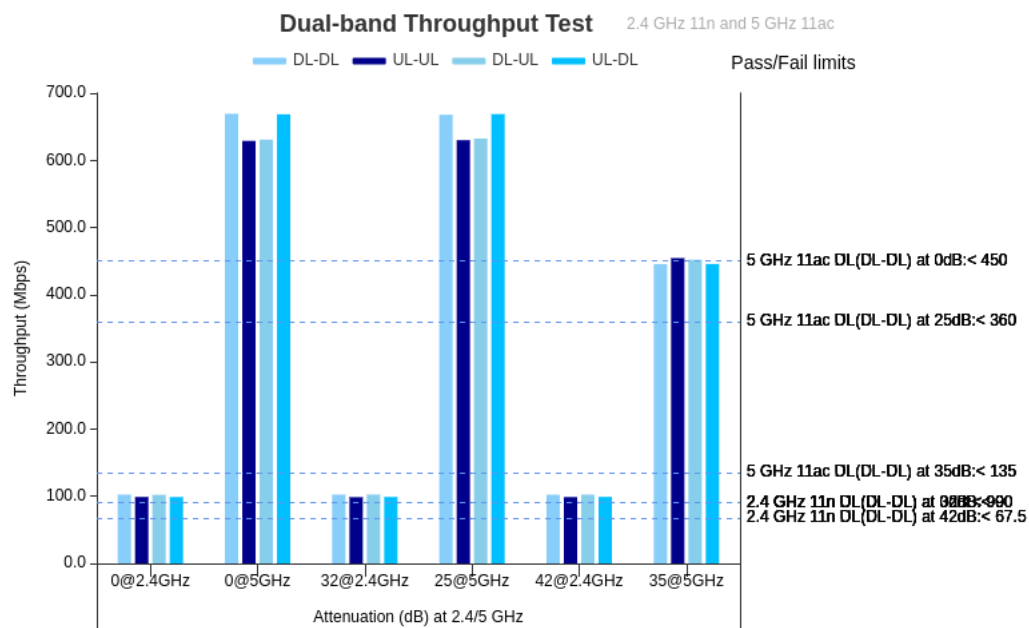
Test start time: 2021-02-03 20-36-07

Test end time: 2021-02-03 21-11-35

Test execution time: 2127.85 seconds

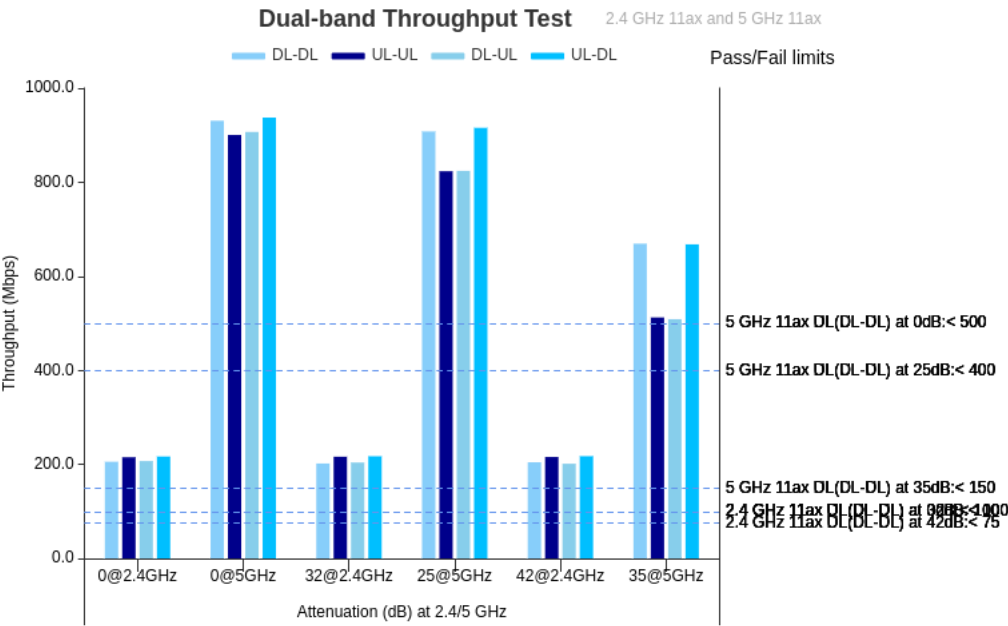
Test Point	Additional Attenuation (dB) in 2.4GHz/5GHz	Throughput Description	802.11n (GI:800ns)				802.11ac (GI:800ns)			
			Downlink		Uplink		Downlink		Uplink	
			Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
1	0/0	Simultaneous downlink on 802.11n and 802.11ac	90	102.49 ✓	N/A	N/A	450	669.39 ✓	N/A	N/A
2	0/0	Simultaneous uplink on 802.11n and 802.11ac	N/A	N/A	90	98.96 ✓	N/A	N/A	450	628.99 ✓
3	0/0	Downlink through 802.11n, uplink through 802.11ac	90	102.09 ✓	N/A	N/A	N/A	N/A	450	630.8 ✓
4	0/0	Uplink through 802.11n, downlink through 802.11ac	N/A	N/A	90	98.83 ✓	450	668.53 ✓	N/A	N/A
5	32/25	Simultaneous downlink on 802.11n and 802.11ac	90	102.48 ✓	N/A	N/A	360	667.86 ✓	N/A	N/A
6	32/25	Simultaneous uplink on 802.11n and 802.11ac	N/A	N/A	90	98.66 ✓	N/A	N/A	360	630.01 ✓
7	32/25	Downlink through 802.11n, uplink through 802.11ac	90	102.51 ✓	N/A	N/A	N/A	N/A	360	632.35 ✓
8	32/25	Uplink through 802.11n, downlink through 802.11ac	N/A	N/A	90	98.95 ✓	360	668.83 ✓	N/A	N/A
9	42/35	Simultaneous downlink on 802.11n and 802.11ac	67.5	102.26 ✓	N/A	N/A	135	445.63 ✓	N/A	N/A
10	42/35	Simultaneous uplink on 802.11n and 802.11ac	N/A	N/A	67.5	98.79 ✓	N/A	N/A	135	454.5 ✓
11	42/35	Downlink through 802.11n, uplink through 802.11ac	67.5	102.48 ✓	N/A	N/A	N/A	N/A	135	452.01 ✓

12	42/35	Uplink through 802.11n, downlink through 802.11ac	N/A	N/A	67.5	99.02 ✓	135	445.76 ✓	N/A	N/A
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Test Point	Additional Attenuation (dB) in 2.4GHz/5GHz	Throughput Description	802.11ax (GI:800ns)				802.11ax (GI:800ns)			
			Downlink		Uplink		Downlink		Uplink	
			Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
1	0/0	Simultaneous downlink on 802.11ax and 802.11ax	90	205.6 ✓	N/A	N/A	450	930.77 ✓	N/A	N/A
2	0/0	Simultaneous uplink on 802.11ax and 802.11ax	N/A	N/A	90	215.19 ✓	N/A	N/A	450	900.44 ✓
3	0/0	Downlink through 802.11ax, uplink through 802.11ax	90	207.03 ✓	N/A	N/A	N/A	N/A	450	906.91 ✓
4	0/0	Uplink through 802.11ax, downlink through 802.11ax	N/A	N/A	90	216.74 ✓	450	937.41 ✓	N/A	N/A
5	32/25	Simultaneous downlink on 802.11ax and 802.11ax	90	201.89 ✓	N/A	N/A	360	907.91 ✓	N/A	N/A
6	32/25	Simultaneous uplink on 802.11ax and 802.11ax	N/A	N/A	90	216.27 ✓	N/A	N/A	360	823.37 ✓
7	32/25	Downlink through 802.11ax, uplink through 802.11ax	90	203.93 ✓	N/A	N/A	N/A	N/A	360	824.02 ✓
8	32/25	Uplink through 802.11ax, downlink through 802.11ax	N/A	N/A	90	217.28 ✓	360	915.66 ✓	N/A	N/A
9	42/35	Simultaneous downlink on 802.11ax and 802.11ax	67.5	204.47 ✓	N/A	N/A	135	669.38 ✓	N/A	N/A
10	42/35	Simultaneous uplink on 802.11ax and 802.11ax	N/A	N/A	67.5	215.72 ✓	N/A	N/A	135	512.41 ✓
11	42/35	Downlink through 802.11ax, uplink through 802.11ax	67.5	201.38 ✓	N/A	N/A	N/A	N/A	135	508.72 ✓

12	42/35	Uplink through 802.11ax, downlink through 802.11ax	N/A	N/A	67.5	217.44 ✓	135	667.84 ✓	N/A	N/A
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6.2.5 Bidirectional Throughput Test

The Bidirectional Throughput Test measures the uplink and downlink simultaneously achieved through the DUT and a station.

This test SHALL be MANDATORY for the test plan.

Test Configuration Information

Config ID	Config Info	Bandwidth	Channel
1	802.11n (Nss=2)	20	6
2	802.11ax (2.4 GHz, Nss=2)	20	6
3	802.11ac (Nss=2)	80	36
4	802.11ax (5 GHz, Nss=2)	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.3
STA Index	1
STA Name	Pal6-C
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1

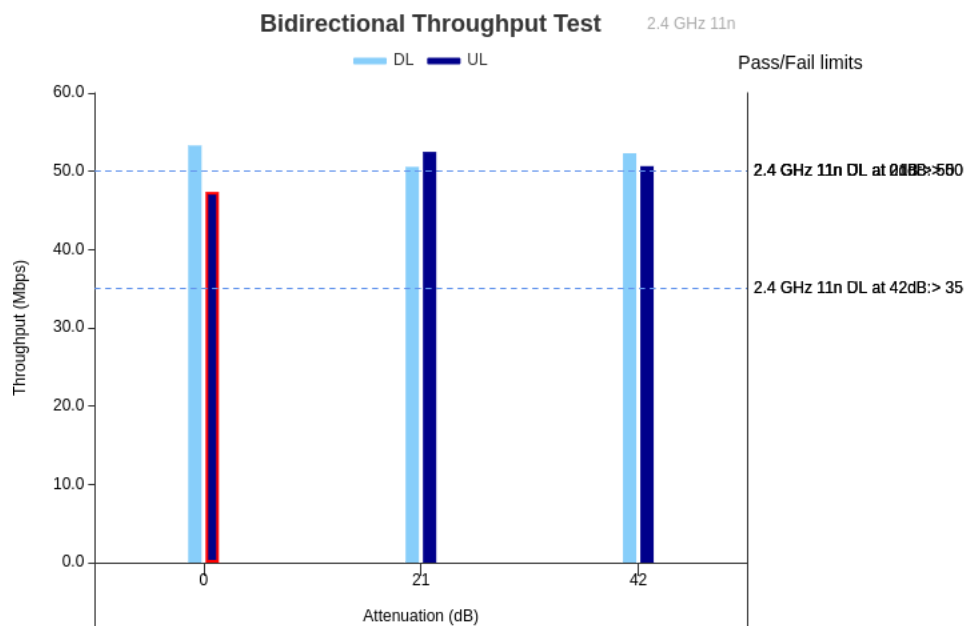
Test Result Summary

Test start time: 2021-02-03 21-12-00

Test end time: 2021-02-03 21-33-55

Test execution time: 1314.96 seconds

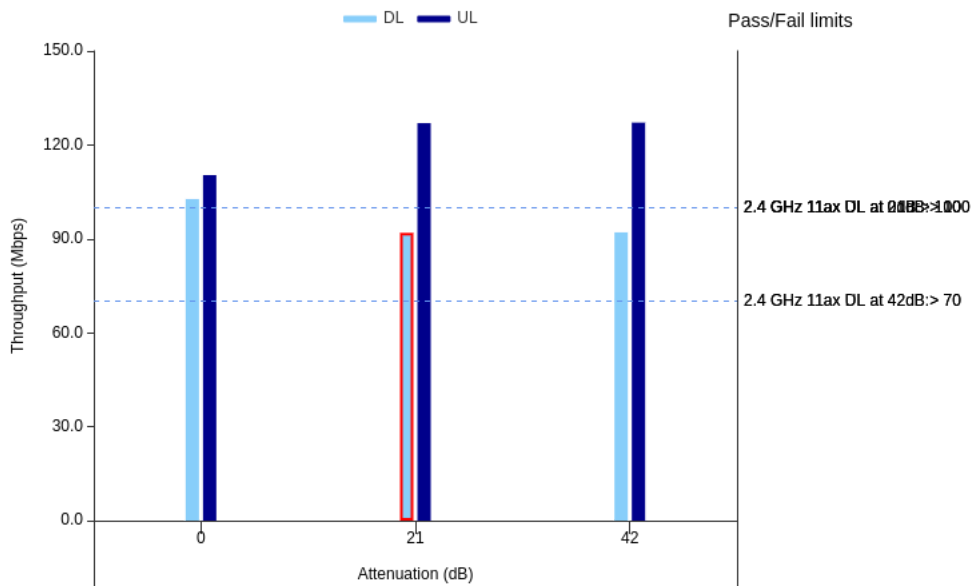
Test Band Configuration	Attenuation (dB)	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11n (Nss=2), 20MHz, Channel 6	0	50	53.3 ✓	50	47.36 ✗
	21	50	50.57 ✓	50	52.48 ✓
	42	35	52.33 ✓	35	50.66 ✓



Test Band Configuration	Attenuation (dB)	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ax (2.4 GHz, Nss=2), 20MHz, Channel 6	0	100	102.72 ✓	100	110.37 ✓
	21	100	91.92 ✗	100	126.97 ✓
	42	70	92.07 ✓	70	127.14 ✓

Bidirectional Throughput Test

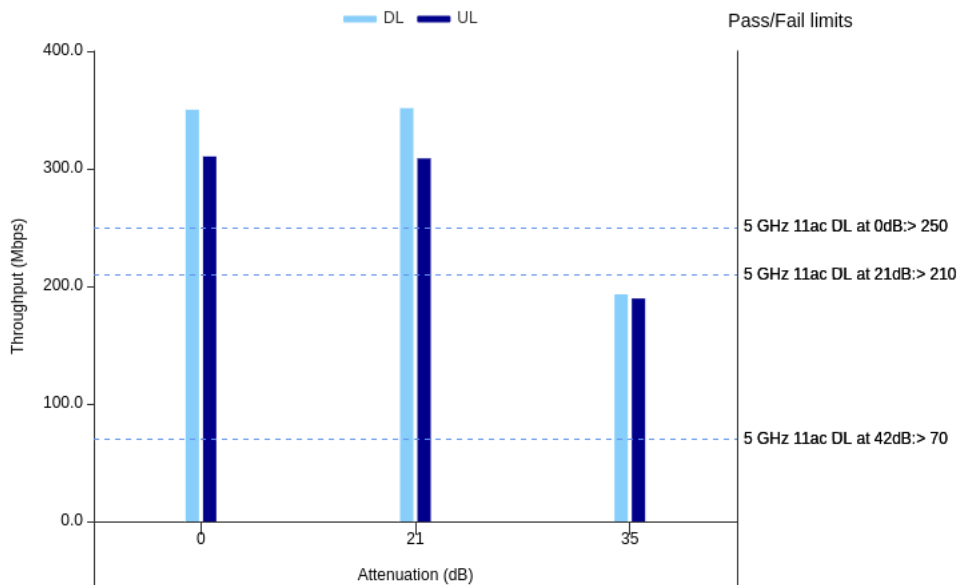
2.4 GHz 11ax



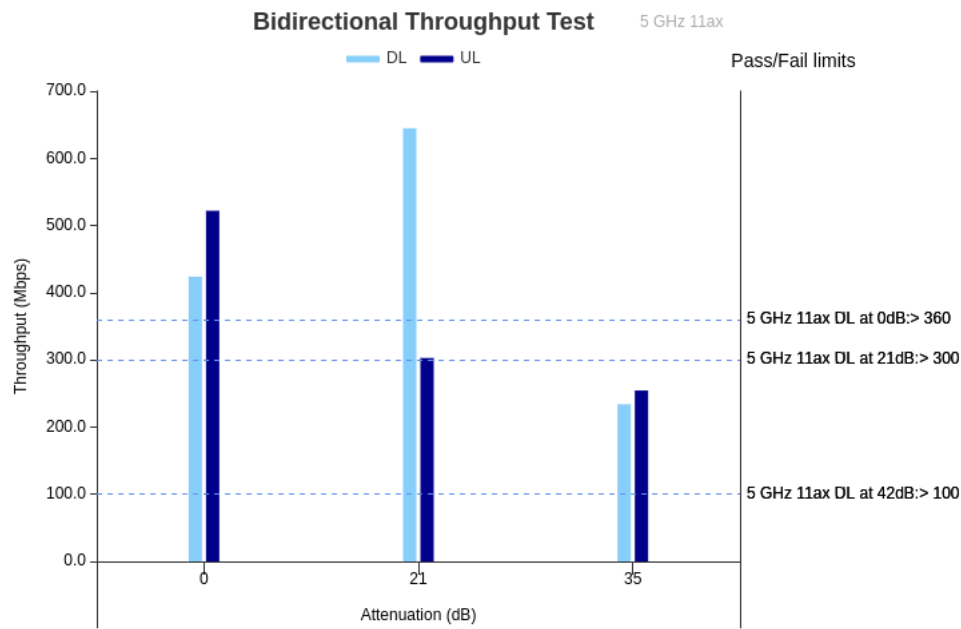
Test Band Configuration	Attenuation (dB)	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ac (Nss=2), 80MHz, Channel 36	0	250	350.13 ✓	250	310.44 ✓
	21	210	351.51 ✓	210	308.76 ✓
	42	70	193.18 ✓	70	189.64 ✓

Bidirectional Throughput Test

5 GHz 11ac



Test Band Configuration	Attenuation (dB)	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ax (5 GHz, Nss=2), 80MHz, Channel 36	0	360	423.85 ✓	360	521.99 ✓
	21	300	644.68 ✓	300	302.83 ✓
	42	100	233.89 ✓	100	254.42 ✓



6.3.1 Range Versus Rate Test

Range versus rate test intends to measure the baseband and RF chain performance of Wi-Fi device. The attenuation of signals due to range increase is achieved by using attenuator in the STA sides.

This test SHALL be MANDATORY for the test plan.

Test Configuration Information

Config ID	Config Info	Bandwidth	Channel
1	802.11n (Nss=2)	20	6
2	802.11ax (2.4 GHz, Nss=2)	20	6
3	802.11ac (Nss=2)	80	36
4	802.11ax (5 GHz, Nss=2)	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.2
STA Index	1
STA Name	Pal6-B
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1

Test Result Summary

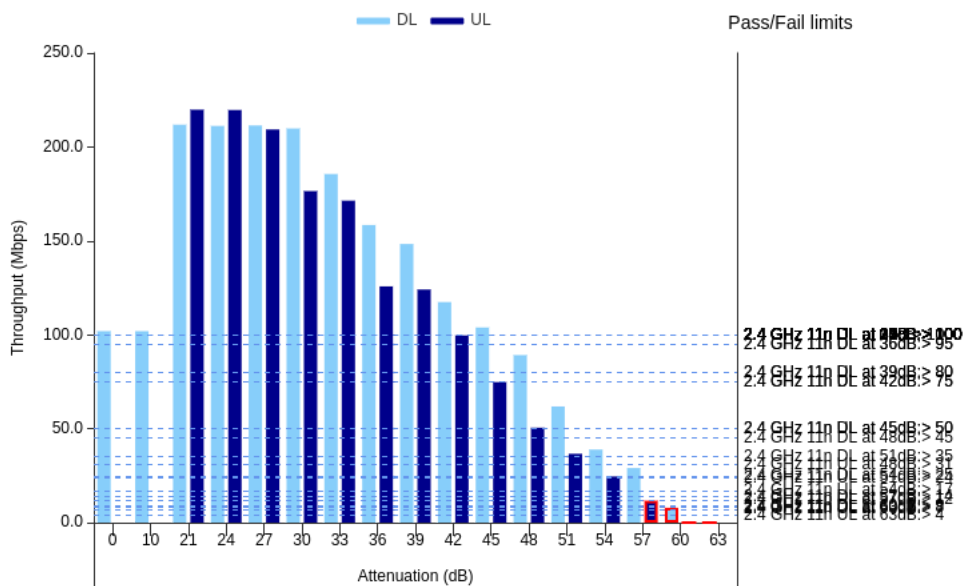
Test start time: 2021-02-03 21-34-21
Test end time: 2021-02-03 22-51-50
Test execution time: 4648.85 seconds

Test Band Configuration	Attenuation (dB)	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11n (Nss=2), 20MHz, Channel 6	0	100	101.94 ✓	100	NaN
	10	100	101.93 ✓	100	NaN
	21	100	211.86 ✓	100	219.86 ✓
	24	100	211.19 ✓	100	219.67 ✓
	27	100	211.44 ✓	100	209.31 ✓
	30	100	209.83 ✓	100	176.50 ✓
	33	100	185.60 ✓	100	171.42 ✓
	36	95	158.45 ✓	95	125.77 ✓
	39	80	148.33 ✓	80	124.10 ✓
	42	75	117.40 ✓	75	99.66 ✓
	45	50	103.88 ✓	50	74.81 ✓
	48	45	89.18 ✓	31	50.54 ✓
	51	35	61.81 ✓	24	36.65 ✓
	54	25	38.89 ✓	17	24.58 ✓
	57	14	29.03 ✓	12	11.68 ✗
	60	9	7.90 ✗	7	0.01 ✗
	63	8	0.00 ✗	4	NaN

Note: For each configuration, no more than 2 testing points fall below the throughput requirement

Range versus Rate Test

2.4 GHz 11n

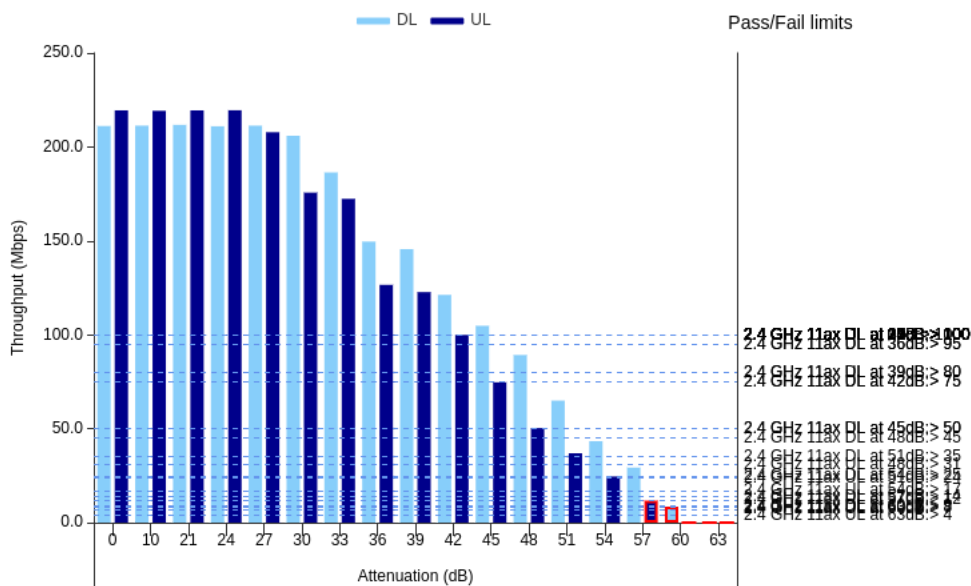


Test Band Configuration	Attenuation (dB)	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ax (2.4 GHz, Nss=2), 20MHz, Channel 6	0	100	211.14 ✓	100	219.48 ✓
	10	100	211.36 ✓	100	219.25 ✓
	21	100	211.76 ✓	100	219.47 ✓
	24	100	211.01 ✓	100	219.53 ✓
	27	100	211.36 ✓	100	207.84 ✓
	30	100	205.95 ✓	100	175.69 ✓
	33	100	186.41 ✓	100	172.38 ✓
	36	95	149.61 ✓	95	126.60 ✓
	39	80	145.62 ✓	80	122.71 ✓
	42	75	121.25 ✓	75	99.93 ✓
	45	50	104.80 ✓	50	74.69 ✓
	48	45	89.24 ✓	31	50.35 ✓
	51	35	64.95 ✓	24	36.93 ✓
	54	25	43.35 ✓	17	24.58 ✓
	57	14	29.29 ✓	12	11.71 ✗
	60	9	8.51 ✗	7	0.01 ✗
	63	8	0.00 ✗	4	0.00 ✗

Note: For each configuration, no more than 2 testing points fall below the throughput requirement

Range versus Rate Test

2.4 GHz 11ax

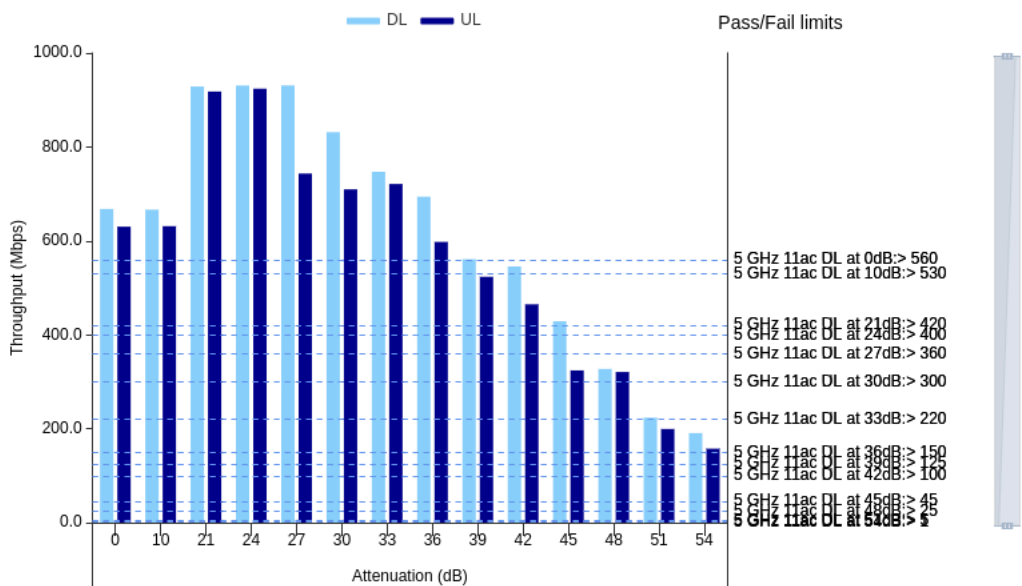


Test Band Configuration	Attenuation (dB)	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ac (Nss=2), 80MHz, Channel 36	0	560	667.98 ✓	560	630.24 ✓
	10	530	666.55 ✓	530	631.29 ✓
	21	420	928.78 ✓	420	917.99 ✓
	24	400	930.88 ✓	400	924.11 ✓
	27	360	931.10 ✓	360	743.45 ✓
	30	300	831.44 ✓	300	709.74 ✓
	33	220	747.23 ✓	220	721.12 ✓
	36	150	694.04 ✓	150	597.78 ✓
	39	125	560.86 ✓	125	523.59 ✓
	42	100	545.51 ✓	100	464.89 ✓
	45	45	428.77 ✓	45	324.12 ✓
	48	25	327.28 ✓	25	320.72 ✓
	51	5	223.48 ✓	5	199.42 ✓
	54	1	190.67 ✓	1	157.50 ✓

Note: For each configuration, no more than 2 testing points fall below the throughput requirement

Range versus Rate Test

5 GHz 11ac

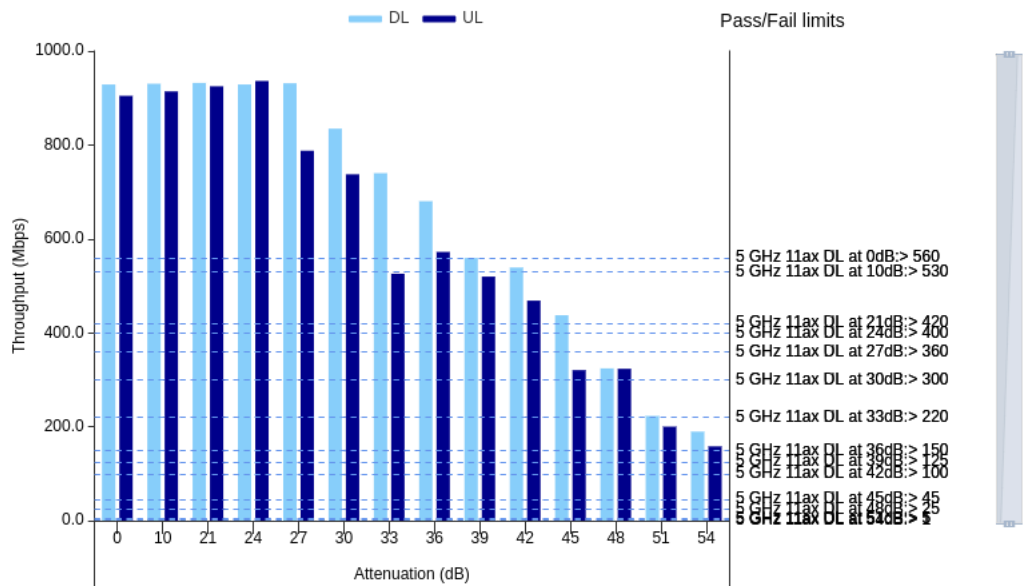


Test Band Configuration	Attenuation (dB)	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ax (5 GHz, Nss=2), 80MHz, Channel 36	0	560	928.79 ✓	560	904.71 ✓
	10	530	930.38 ✓	530	914.06 ✓
	21	420	932.10 ✓	420	924.95 ✓
	24	400	928.83 ✓	400	936.30 ✓
	27	360	931.43 ✓	360	787.77 ✓
	30	300	834.73 ✓	300	737.50 ✓
	33	220	739.89 ✓	220	525.76 ✓
	36	150	680.23 ✓	150	572.25 ✓
	39	125	559.36 ✓	125	519.64 ✓
	42	100	538.98 ✓	100	468.44 ✓
	45	45	437.36 ✓	45	320.48 ✓
	48	25	324.16 ✓	25	323.31 ✓
	51	5	222.91 ✓	5	200.18 ✓
	54	1	189.48 ✓	1	158.15 ✓

Note: For each configuration, no more than 2 testing points fall below the throughput requirement

Range versus Rate Test

5 GHz 11ax



6.3.2 Spatial Consistency Test

Spatial consistency test intends to verify the Wi-Fi signal consistency in spatial domain. This test SHALL be MANDATORY for the test plan.

Test Configuration Information

Config ID	Config Info	Bandwidth	Channel
1	802.11n (2.4 GHz Nss=2)	20	6
2	802.11ax (2.4 GHz, Nss=2)	20	6
3	802.11ac (5 GHz, Nss=2)	80	36
4	802.11ax (5 GHz, Nss=2)	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.2
STA Index	1
STA Name	Pal6-B
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1

Test Result Summary

Test start time: 2021-02-03 22-52-17

Test end time: 2021-02-04 04-25-12

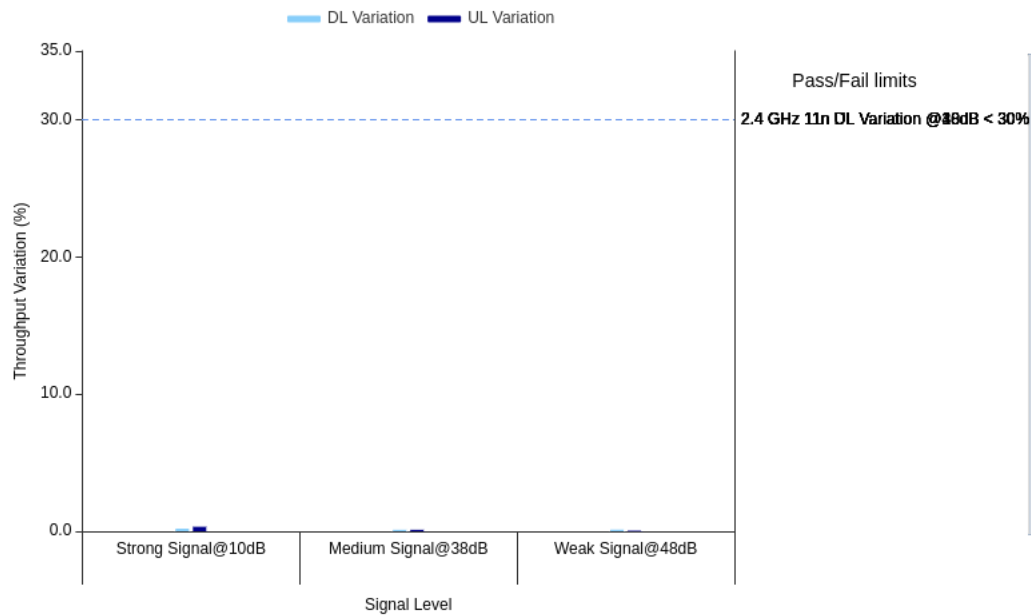
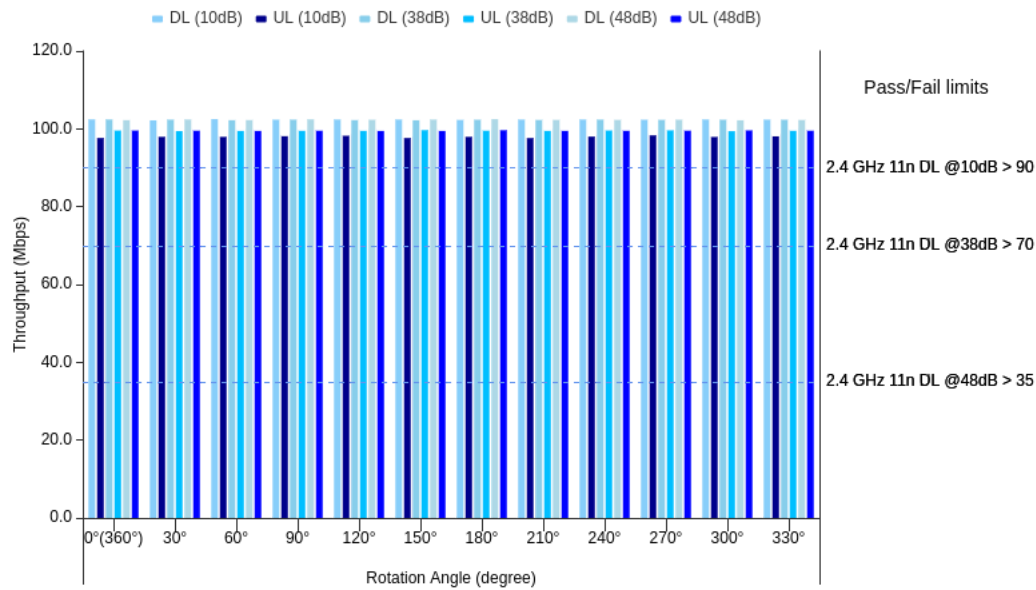
Test execution time: 19974.48 seconds

Test Band Configuration	Angle (Degree)	Throughput Requirement (Mbps)											
		Strong Singal				Medium Signal				Weak Signal			
		Downlink		Uplink		Downlink		Uplink		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11n (2.4 GHz Nss=2), 20MHz, Channel 6	0°(360°)	90	102.43 ✓	90	97.65 ✓	70	102.41 ✓	70	99.56 ✓	35	102.22 ✓	35	99.57 ✓
	30°	90	102.18 ✓	90	97.95 ✓	70	102.37 ✓	70	99.42 ✓	35	102.40 ✓	35	99.53 ✓
	60°	90	102.50 ✓	90	97.94 ✓	70	102.22 ✓	70	99.46 ✓	35	102.24 ✓	35	99.47 ✓
	90°	90	102.36 ✓	90	98.11 ✓	70	102.37 ✓	70	99.49 ✓	35	102.44 ✓	35	99.52 ✓
	120°	90	102.40 ✓	90	98.23 ✓	70	102.24 ✓	70	99.48 ✓	35	102.33 ✓	35	99.46 ✓
	150°	90	102.40 ✓	90	97.64 ✓	70	102.20 ✓	70	99.67 ✓	35	102.39 ✓	35	99.46 ✓
	180°	90	102.29 ✓	90	97.95 ✓	70	102.34 ✓	70	99.52 ✓	35	102.49 ✓	35	99.65 ✓
	210°	90	102.39 ✓	90	97.63 ✓	70	102.28 ✓	70	99.47 ✓	35	102.29 ✓	35	99.48 ✓
	240°	90	102.40 ✓	90	98.01 ✓	70	102.38 ✓	70	99.57 ✓	35	102.29 ✓	35	99.50 ✓
	270°	90	102.34 ✓	90	98.33 ✓	70	102.31 ✓	70	99.61 ✓	35	102.35 ✓	35	99.53 ✓
	300°	90	102.41 ✓	90	97.92 ✓	70	102.34 ✓	70	99.40 ✓	35	102.20 ✓	35	99.60 ✓
	330°	90	102.37 ✓	90	98.07 ✓	70	102.34 ✓	70	99.49 ✓	35	102.27 ✓	35	99.52 ✓

Test Band Configuration	Signal Level	Downlink				Uplink			
		Min. Throughput (Mbps)	Avg. Throughput (Mbps)	Variation Limit (%)	Variation Result (%)	Min. Throughput (Mbps)	Avg. Throughput (Mbps)	Variation Limit (%)	Variation Result (%)
802.11n (2.4 GHz Nss=2), 20MHz, Channel 6	Strong Signal@10dB	102.18	102.37	30	0.19 ✓	97.63	97.95	30	0.33 ✓
	Medium Signal@38dB	102.2	102.32	30	0.11 ✓	99.4	99.51	30	0.11 ✓
	Weak Signal@48dB	102.2	102.33	30	0.12 ✓	99.46	99.52	30	0.06 ✓

Spatial Consistency Test

2.4 GHz 11n

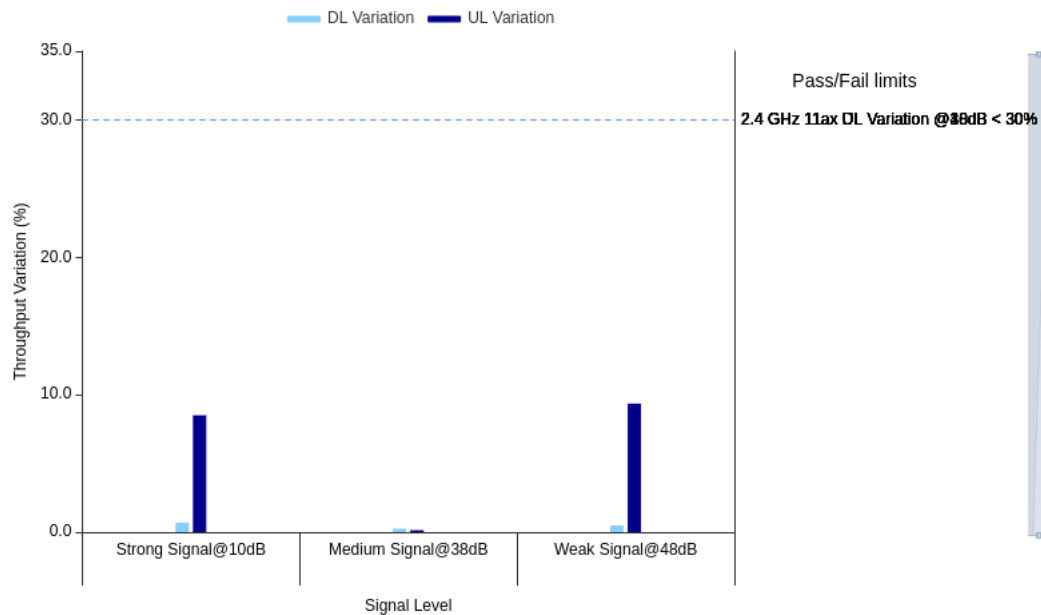
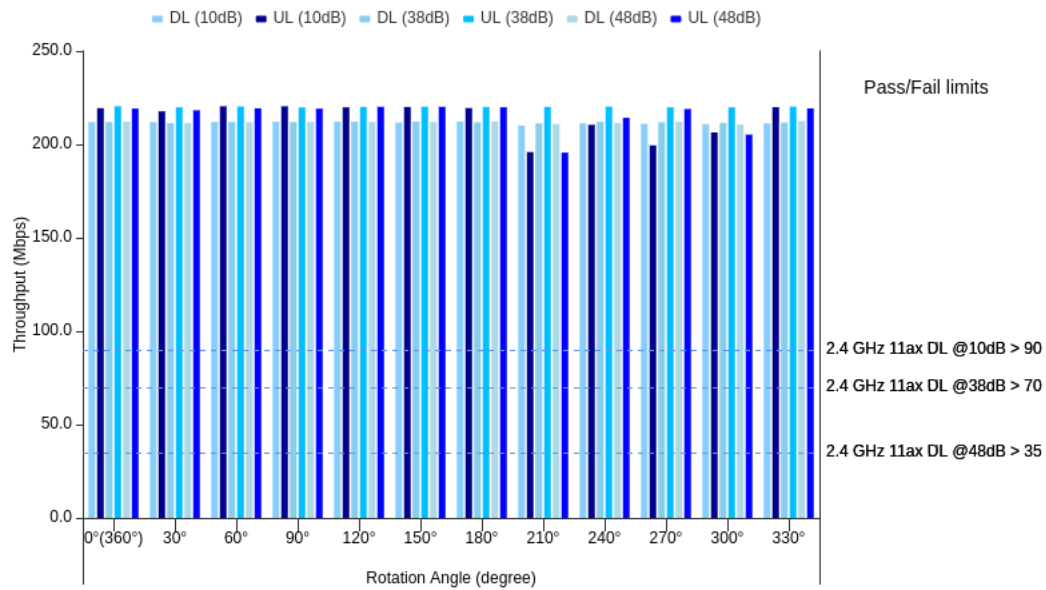


Test Band Configuration	Angle (Degree)	Throughput Requirement (Mbps)											
		Strong Singal				Medium Signal				Weak Signal			
		Downlink		Uplink		Downlink		Uplink		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ax (2.4 GHz, Nss=2), 20MHz, Channel 6	0°(360°)	90	211.93 ✓	90	219.41 ✓	70	211.90 ✓	70	220.41 ✓	35	212.09 ✓	35	219.19 ✓
	30°	90	211.88 ✓	90	217.70 ✓	70	211.40 ✓	70	219.89 ✓	35	211.48 ✓	35	218.27 ✓
	60°	90	212.02 ✓	90	220.40 ✓	70	211.99 ✓	70	220.31 ✓	35	211.88 ✓	35	219.33 ✓
	90°	90	212.10 ✓	90	220.41 ✓	70	211.94 ✓	70	219.79 ✓	35	211.98 ✓	35	219.15 ✓
	120°	90	212.19 ✓	90	219.86 ✓	70	212.13 ✓	70	220.06 ✓	35	211.94 ✓	35	220.15 ✓
	150°	90	211.72 ✓	90	220.06 ✓	70	212.15 ✓	70	220.20 ✓	35	211.99 ✓	35	220.15 ✓
	180°	90	212.29 ✓	90	219.47 ✓	70	211.80 ✓	70	220.08 ✓	35	212.26 ✓	35	219.90 ✓
	210°	90	210.09 ✓	90	195.92 ✓	70	211.28 ✓	70	220.08 ✓	35	210.84 ✓	35	195.60 ✓
	240°	90	211.32 ✓	90	210.48 ✓	70	212.07 ✓	70	220.23 ✓	35	211.48 ✓	35	214.21 ✓
	270°	90	210.99 ✓	90	199.47 ✓	70	211.85 ✓	70	219.89 ✓	35	212.06 ✓	35	218.95 ✓
	300°	90	210.88 ✓	90	206.43 ✓	70	211.54 ✓	70	219.87 ✓	35	210.72 ✓	35	205.25 ✓
	330°	90	211.27 ✓	90	219.94 ✓	70	211.72 ✓	70	220.25 ✓	35	212.38 ✓	35	219.26 ✓

Test Band Configuration	Signal Level	Downlink				Uplink			
		Min. Throughput (Mbps)	Avg. Throuhgput (Mbps)	Variation Limit (%)	Variation Result (%)	Min. Throughput (Mbps)	Avg. Throuhgput (Mbps)	Variation Limit (%)	Variation Result (%)
802.11ax (2.4 GHz, Nss=2), 20MHz, Channel 6	Strong Signal@10dB	210.09	211.56	30	0.69 ✓	195.92	214.13	30	8.50 ✓
	Medium Signal@38dB	211.28	211.81	30	0.25 ✓	219.79	220.09	30	0.14 ✓
	Weak Signal@48dB	210.72	211.76	30	0.49 ✓	195.6	215.78	30	9.35 ✓

Spatial Consistency Test

2.4 GHz 11ax

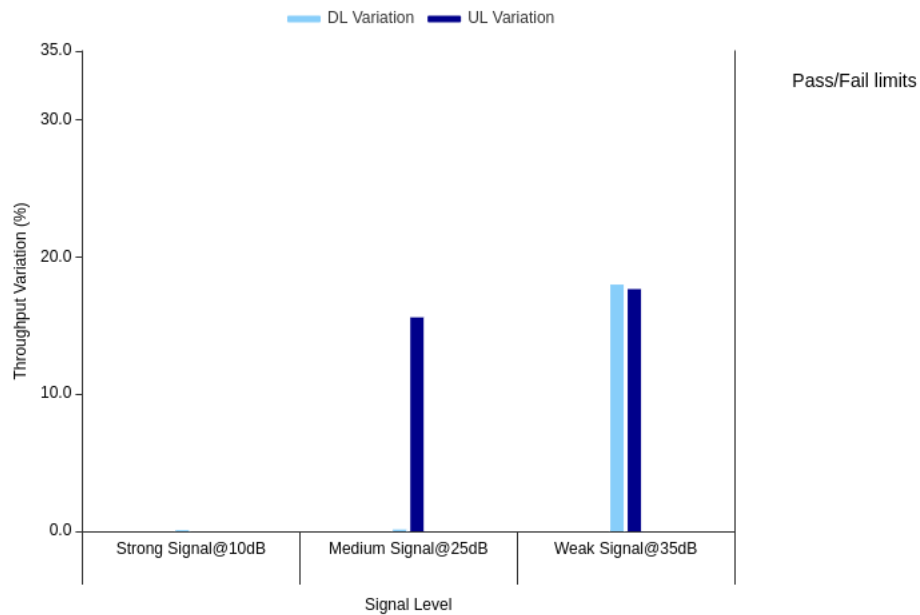
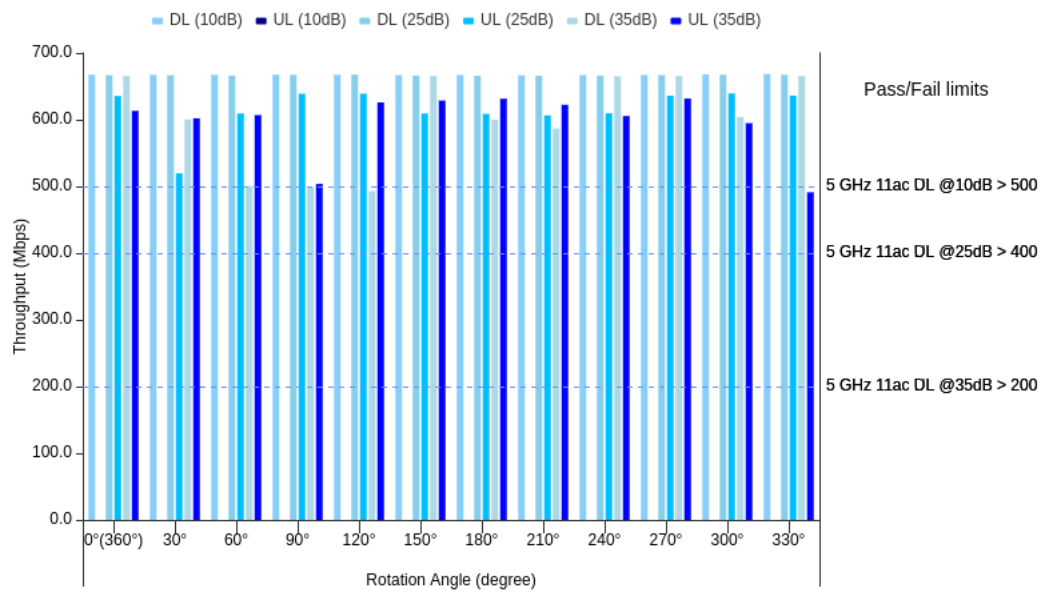


Test Band Configuration	Angle (Degree)	Throughput Requirement (Mbps)											
		Strong Singal				Medium Signal				Weak Signal			
		Downlink		Uplink		Downlink		Uplink		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ac (5 GHz, Nss=2), 80MHz, Channel 36	0°(360°)	500	667.44 ✓	500	NaN	400	666.83 ✓	400	635.58 ✓	200	665.65 ✓	200	613.32 ✓
	30°	500	667.18 ✓	500	NaN	400	666.68 ✓	400	519.74 ✓	200	600.42 ✓	200	602.16 ✓
	60°	500	667.31 ✓	500	NaN	400	666.24 ✓	400	609.38 ✓	200	500.59 ✓	200	607.01 ✓
	90°	500	667.41 ✓	500	NaN	400	667.40 ✓	400	638.90 ✓	200	498.27 ✓	200	503.71 ✓
	120°	500	667.39 ✓	500	NaN	400	667.59 ✓	400	639.11 ✓	200	492.81 ✓	200	625.92 ✓
	150°	500	666.88 ✓	500	NaN	400	666.29 ✓	400	609.48 ✓	200	665.60 ✓	200	628.75 ✓
	180°	500	667.12 ✓	500	NaN	400	665.82 ✓	400	608.87 ✓	200	600.12 ✓	200	631.51 ✓
	210°	500	666.73 ✓	500	NaN	400	665.86 ✓	400	606.40 ✓	200	586.79 ✓	200	622.42 ✓
	240°	500	666.92 ✓	500	NaN	400	666.20 ✓	400	609.72 ✓	200	665.02 ✓	200	605.53 ✓
	270°	500	667.01 ✓	500	NaN	400	666.93 ✓	400	636.10 ✓	200	665.46 ✓	200	631.72 ✓
	300°	500	668.09 ✓	500	NaN	400	667.35 ✓	400	639.41 ✓	200	603.91 ✓	200	594.80 ✓
	330°	500	668.43 ✓	500	NaN	400	667.37 ✓	400	636.10 ✓	200	665.63 ✓	200	491.23 ✓

Test Band Configuration	Signal Level	Downlink				Uplink			
		Min. Throughput (Mbps)	Avg. Throughput (Mbps)	Variation Limit (%)	Variation Result (%)	Min. Throughput (Mbps)	Avg. Throughput (Mbps)	Variation Limit (%)	Variation Result (%)
802.11ac (5 GHz, Nss=2), 80MHz, Channel 36	Strong Signal@10dB	666.73	667.33	40	0.09 ✓	Infinity	NaN	40	NaN
	Medium Signal@25dB	665.82	666.71	40	0.13 ✓	519.74	615.73	40	15.59 ✓
	Weak Signal@35dB	492.81	600.86	40	17.98 ✓	491.23	596.51	40	17.65 ✓

Spatial Consistency Test

5 GHz 11ac

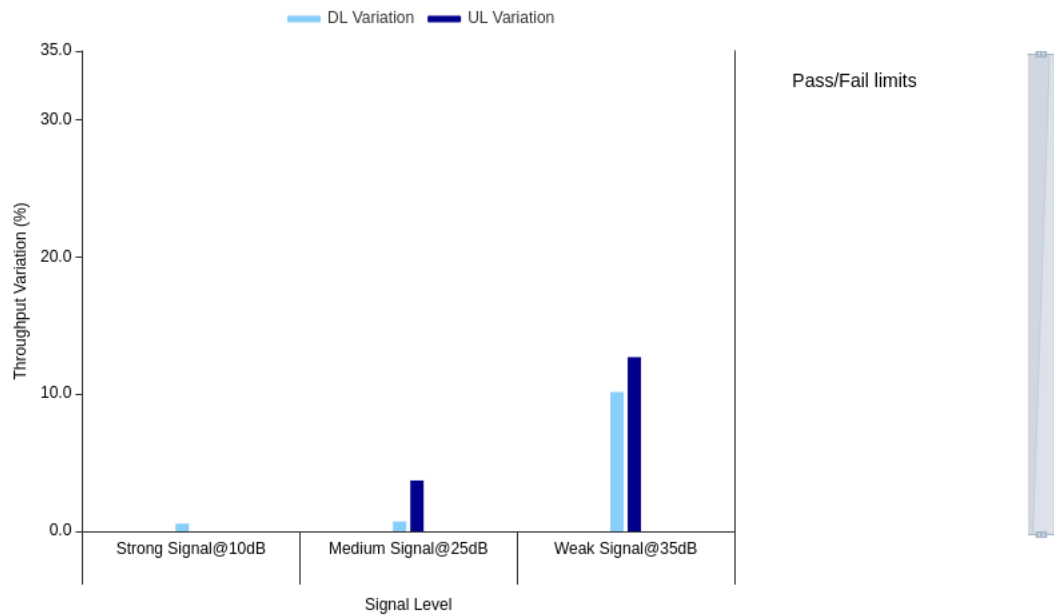
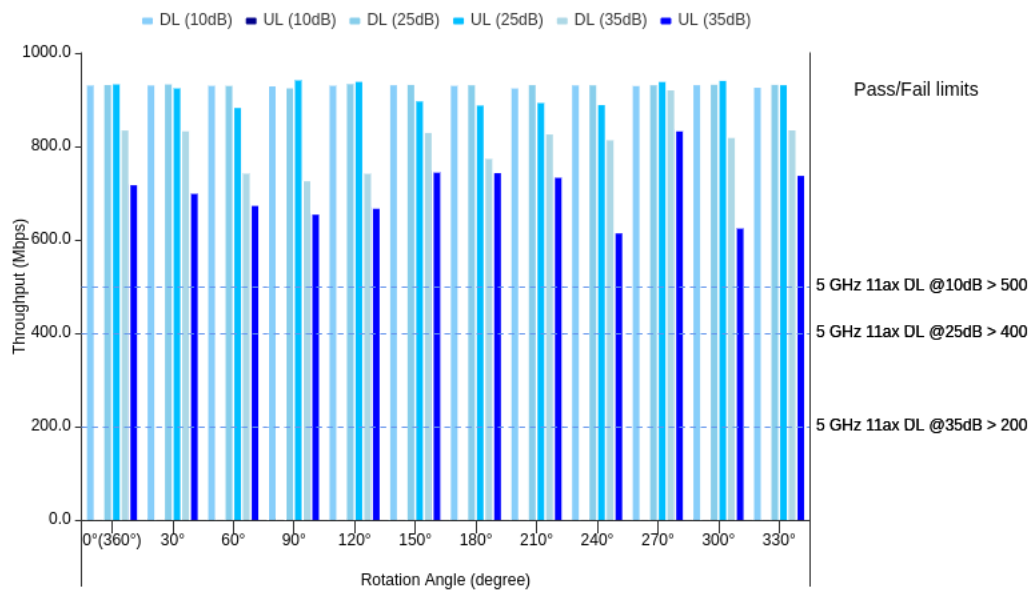


Test Band Configuration	Angle (Degree)	Throughput Requirement (Mbps)											
		Strong Singal				Medium Signal				Weak Signal			
		Downlink		Uplink		Downlink		Uplink		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ax (5 GHz, Nss=2), 80MHz, Channel 36	0°(360°)	500	930.36 ✓	500	NaN	400	931.38 ✓	400	932.71 ✓	200	834.06 ✓	200	716.83 ✓
	30°	500	930.48 ✓	500	NaN	400	932.62 ✓	400	924.10 ✓	200	832.20 ✓	200	698.35 ✓
	60°	500	929.58 ✓	500	NaN	400	929.40 ✓	400	882.20 ✓	200	741.57 ✓	200	672.55 ✓
	90°	500	928.55 ✓	500	NaN	400	924.23 ✓	400	941.35 ✓	200	725.33 ✓	200	653.75 ✓
	120°	500	929.77 ✓	500	NaN	400	933.35 ✓	400	938.21 ✓	200	741.20 ✓	200	666.51 ✓
	150°	500	930.97 ✓	500	NaN	400	931.58 ✓	400	896.22 ✓	200	828.79 ✓	200	743.80 ✓
	180°	500	929.55 ✓	500	NaN	400	930.84 ✓	400	887.41 ✓	200	773.04 ✓	200	742.72 ✓
	210°	500	923.97 ✓	500	NaN	400	931.17 ✓	400	892.89 ✓	200	825.54 ✓	200	732.74 ✓
	240°	500	930.59 ✓	500	NaN	400	930.77 ✓	400	888.45 ✓	200	812.96 ✓	200	613.65 ✓
	270°	500	929.15 ✓	500	NaN	400	930.90 ✓	400	937.97 ✓	200	919.98 ✓	200	832.11 ✓
	300°	500	931.15 ✓	500	NaN	400	931.92 ✓	400	940.23 ✓	200	817.97 ✓	200	623.99 ✓
	330°	500	925.55 ✓	500	NaN	400	931.70 ✓	400	931.07 ✓	200	834.25 ✓	200	736.82 ✓

Test Band Configuration	Signal Level	Downlink				Uplink			
		Min. Throughput (Mbps)	Avg. Throuhgput (Mbps)	Variation Limit (%)	Variation Result (%)	Min. Throughput (Mbps)	Avg. Throuhgput (Mbps)	Variation Limit (%)	Variation Result (%)
802.11ax (2.4 GHz, Nss=2), 20MHz, Channel 6	Strong Signal@10dB	923.97	929.14	40	0.56 ✓	Infinity	NaN	40	NaN
	Medium Signal@25dB	924.23	930.82	40	0.71 ✓	882.2	916.07	40	3.70 ✓
	Weak Signal@35dB	725.33	807.24	40	10.15 ✓	613.65	702.82	40	12.69 ✓

Spatial Consistency Test

5 GHz 11ax



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6.4.1 Multiple STAs Performance Test

Multiple STAs performance test intends to measure the performance of Wi-Fi device connected with multiple STAs simultaneously. To simulate a circumstance of real environment, various levels of signals reflecting various distance between Wi-Fi device and STA are considered in the test.

This test SHALL be MANDATORY for the test plan.

Test Configuration Information

Config ID	Config Info	Bandwidth	Channel
1	802.11n (2.4 GHz Nss=2)	20	6
2	802.11ax (2.4 GHz, Nss=2)	20	6
3	802.11ac (5 GHz, Nss=2)	80	36
4	802.11ax (5 GHz, Nss=2)	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.2
STA Index	1
STA Name	Pal6-B
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1
STA2	
STA Management IP	172.16.27.3
STA Index	2
STA Name	Pal6-C
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1
STA3	
STA Management IP	172.16.27.4
STA Index	3
STA Name	Pal6-D
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
undefined	1

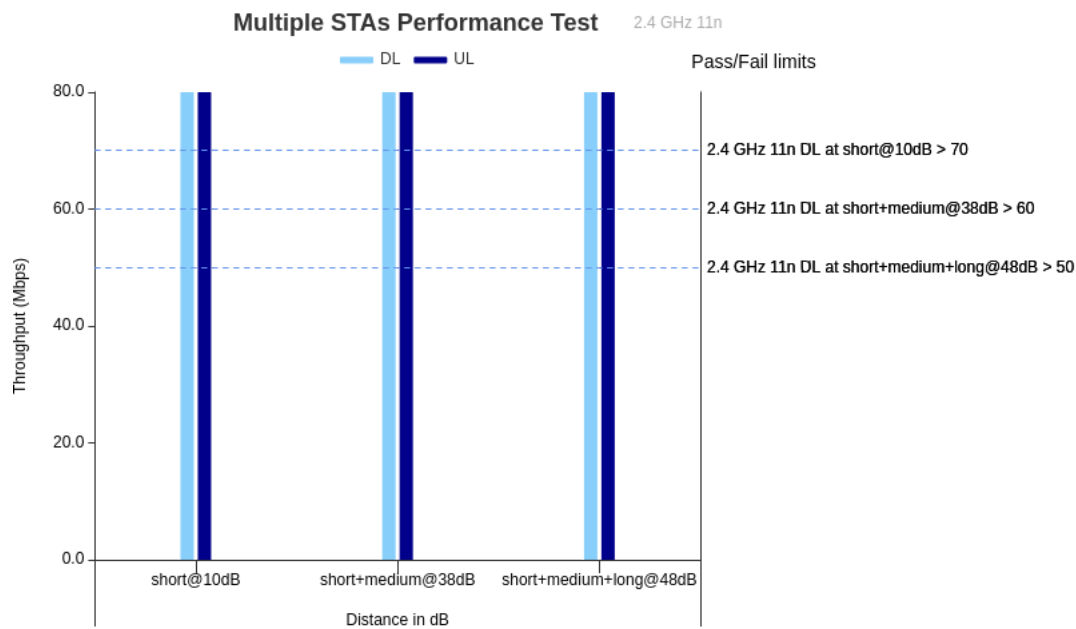
Test Result Summary

Test start time: 2021-02-04 16-48-46

Test end time: 2021-02-04 17-29-22

Test execution time: 2435.89 seconds

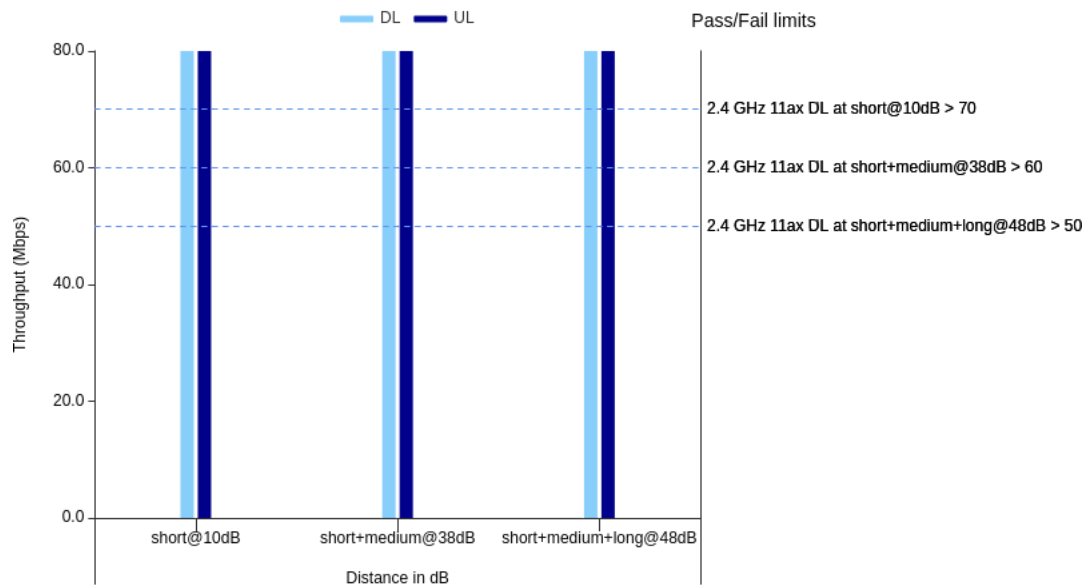
Test Band Configuration	Distance	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11n (2.4 GHz Nss=2), 20MHz, Channel 6	short at 10dB	70	105.1 ✓	70	96.83 ✓
	short+medium at 38dB	60	102.34 ✓	60	96.94 ✓
	short+medium+long at 48dB	50	102.56 ✓	50	93.12 ✓



Test Band Configuration	Distance	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ax (2.4 GHz, Nss=2), 20MHz, Channel 6	short at 10dB	70	208.44 ✓	70	214.0 ✓
	short+medium at 38dB	60	191.22 ✓	60	208.98 ✓
	short+medium+long at 48dB	50	180.72 ✓	50	200.92 ✓

Multiple STAs Performance Test

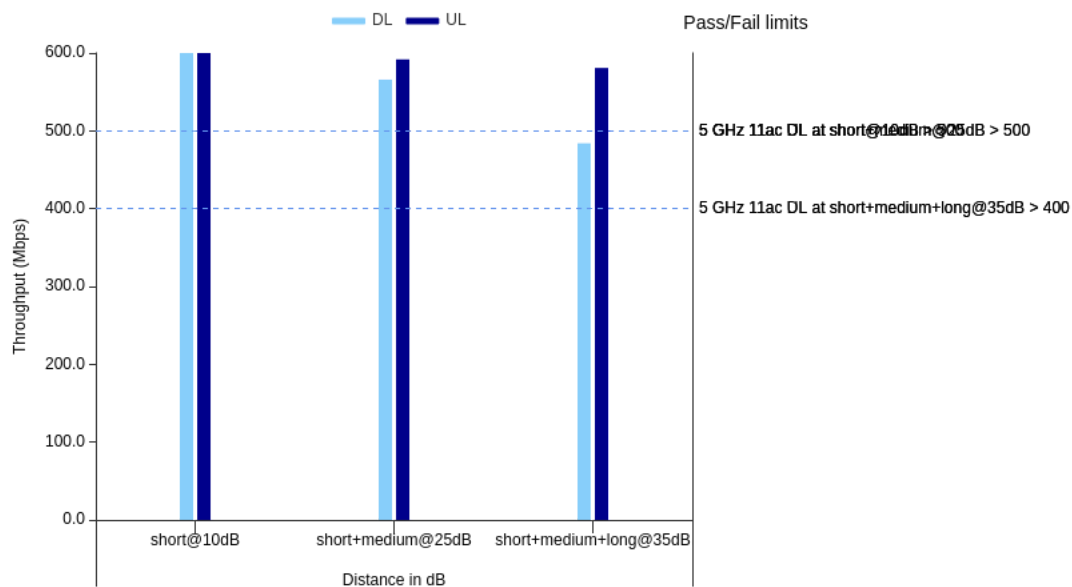
2.4 GHz 11ax



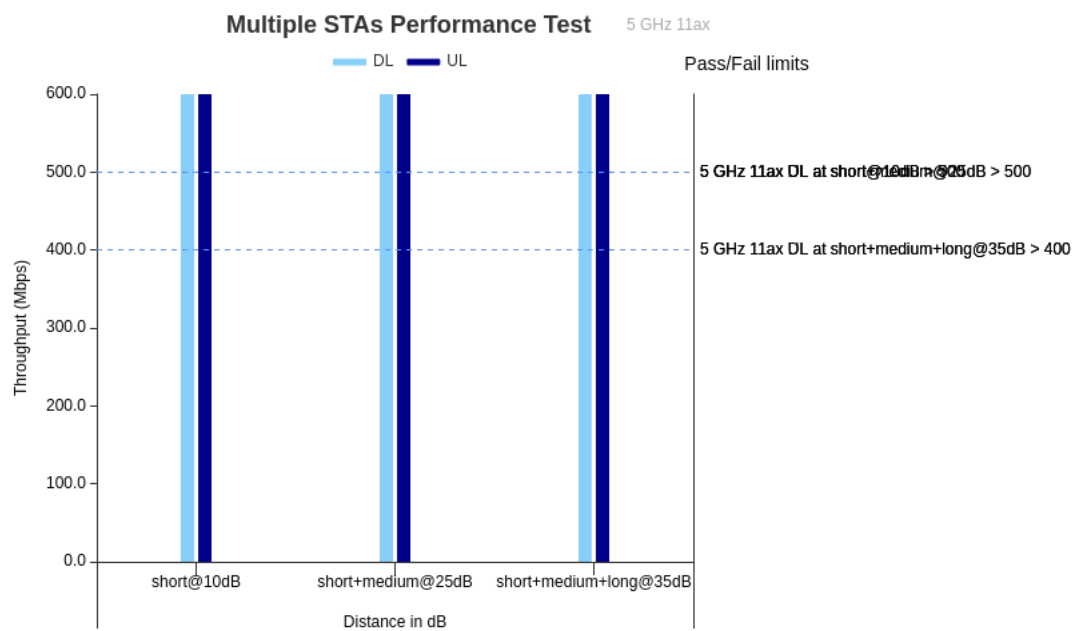
Test Band Configuration	Distance	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ac (5 GHz, Nss=2), 80MHz, Channel 36	short at 10dB	500	642.12 ✓	500	618.4 ✓
	short+medium at 25dB	500	565.77 ✓	500	591.83 ✓
	short+medium+long at 35dB	400	484.0 ✓	400	580.82 ✓

Multiple STAs Performance Test

5 GHz 11ac



Test Band Configuration	Distance	Throughput Requirement (Mbps)			
		Downlink		Uplink	
		Expected Throughput	Actual Throughput	Expected Throughput	Actual Throughput
802.11ax (5 GHz, Nss=2), 80MHz, Channel 36	short at 10dB	500	888.56 ✓	500	776.9 ✓
	short+medium at 25dB	500	786.28 ✓	500	743.33 ✓
	short+medium+long at 35dB	400	697.36 ✓	400	676.1 ✓



6.4.2 Multiple Association/Disassociation Stability Test

Multiple association/disassociation stability test intends to measure stability of Wi-Fi device under a dynamic environment with frequent change of connection status.

This test SHALL be MANDATORY for the test plan.

Test Configuration Information

Config ID	Config Info	Bandwidth	Channel
1	802.11n (2.4 GHz Nss=2)	20	6
2	802.11ax (2.4 GHz, Nss=2)	20	6
3	802.11ac (5 GHz, Nss=2)	80	36
4	802.11ax (5 GHz, Nss=2)	80	36

DUT Information

DUT Model	dutModel
DUT Chipset Firmware Version	dutRevision
DUT 2.4 GHz Channel	6
DUT 5 GHz Channel	36
DUT 2.4 GHz SSID	ASUS24
DUT 2.4 GHz Passphrase	12345678
DUT 2.4 GHz Security	SECURITY_WPA2
DUT 5 GHz SSID	ASUS5
DUT 5 GHz Passphrase	12345678
DUT 5 GHz Security	SECURITY_WPA2

Testbed STA Information

STA1	
STA Management IP	172.16.27.2
STA Index	1
STA Name	Pal6-B
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
Number of Virtual STAs	8
STA2	
STA Management IP	172.16.27.4
STA Index	2
STA Name	Pal6-D
STA Firmware Version	20201109-140431-pal6 : 20201231-093954-pal6
STA Chipset Version	2.0
Number of Virtual STAs	8

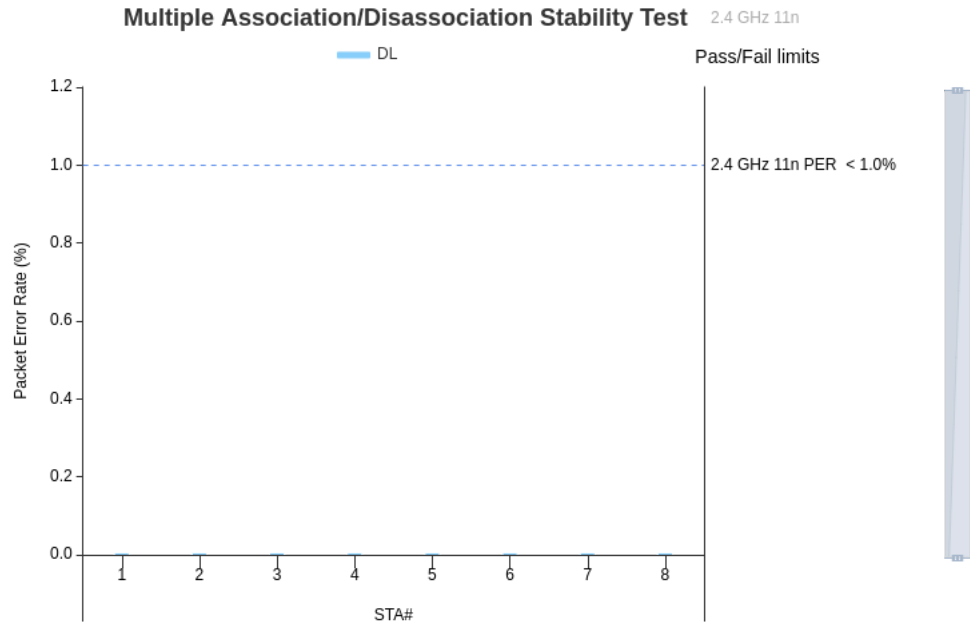
Test Result Summary

Test start time: 2021-02-04 16-21-54

Test end time: 2021-02-04 16-44-03

Test execution time: 1328.92 seconds

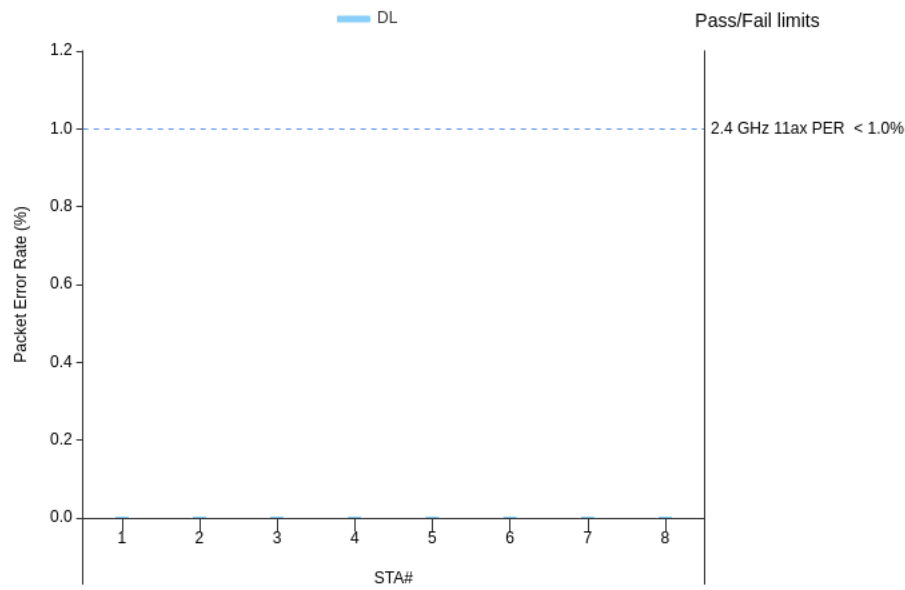
Test Band Configuration	PER Result	STA1	STA2	STA3	STA4	STA5	STA6	STA7	STA8
802.11n (2.4 GHz Nss=2), 20MHz, Channel 6	All STAs are < 1.0%	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓



Test Band Configuration	PER Result	STA1	STA2	STA3	STA4	STA5	STA6	STA7	STA8
802.11ax (2.4 GHz, Nss=2), 20MHz, Channel 6	All STAs are < 1.0%	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓

Multiple Association/Disassociation Stability Test

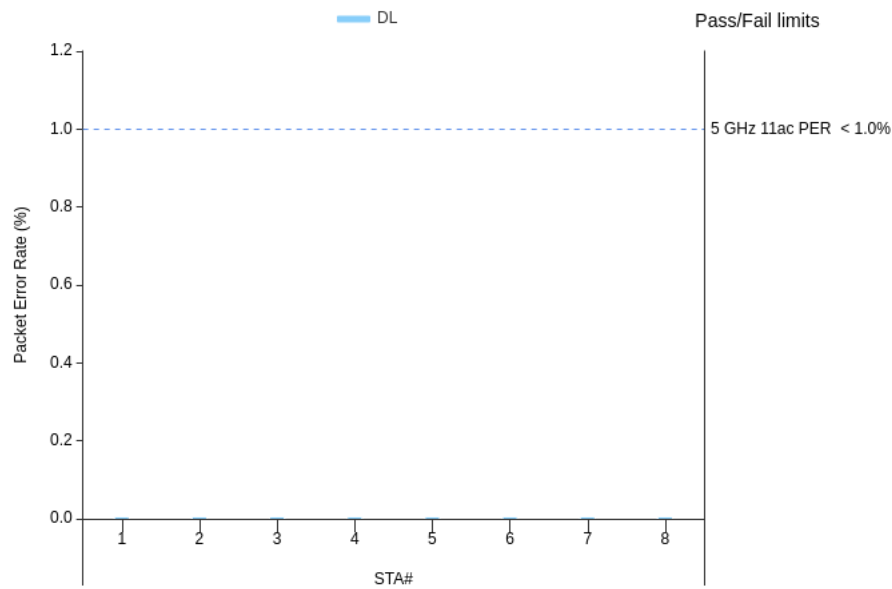
2.4 GHz 11ax



Test Band Configuration	PER Result	STA1	STA2	STA3	STA4	STA5	STA6	STA7	STA8
802.11ac (5 GHz, Nss=2), 80MHz, Channel 36	All STAs are < 1.0%	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓

Multiple Association/Disassociation Stability Test

5 GHz 11ax



Test Band Configuration	PER Result	STA1	STA2	STA3	STA4	STA5	STA6	STA7	STA8
802.11ax (5 GHz, Nss=2), 80MHz, Channel 36	All STAs are < 1.0%	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓	0.0% ✓

Multiple Association/Disassociation Stability Test

5 GHz 11ax

