HORIZON COMPACT+

ALL-OUTDOOR HIGH CAPACITY PACKET MICROWAVE

SERVICE PROVIDERS CAN NOW DO MORE OUTDOORS WITH THE ZERO FOOTPRINT HORIZON COMPACT+ FROM DRAGONWAVE.

This high capacity packet microwave system delivers big performance in a small package. Because the radio and modem are integrated into a single highly compact outdoor unit, Horizon Compact+ is a zero footprint solution – eliminating rack congestion and minimizing collocation space. Equipped with DragonWave's Bandwidth Accelerator technology, the Horizon Compact+ achieves the highest degree of spectral efficiency, delivering more capacity per channel than any other all-outdoor microwave system.

With unmatched radio performance, simple installation and operation, as well as sophisticated remote management capability, the Horizon Compact+ delivers significant lifecycle cost savings for service providers and enterprises alike.

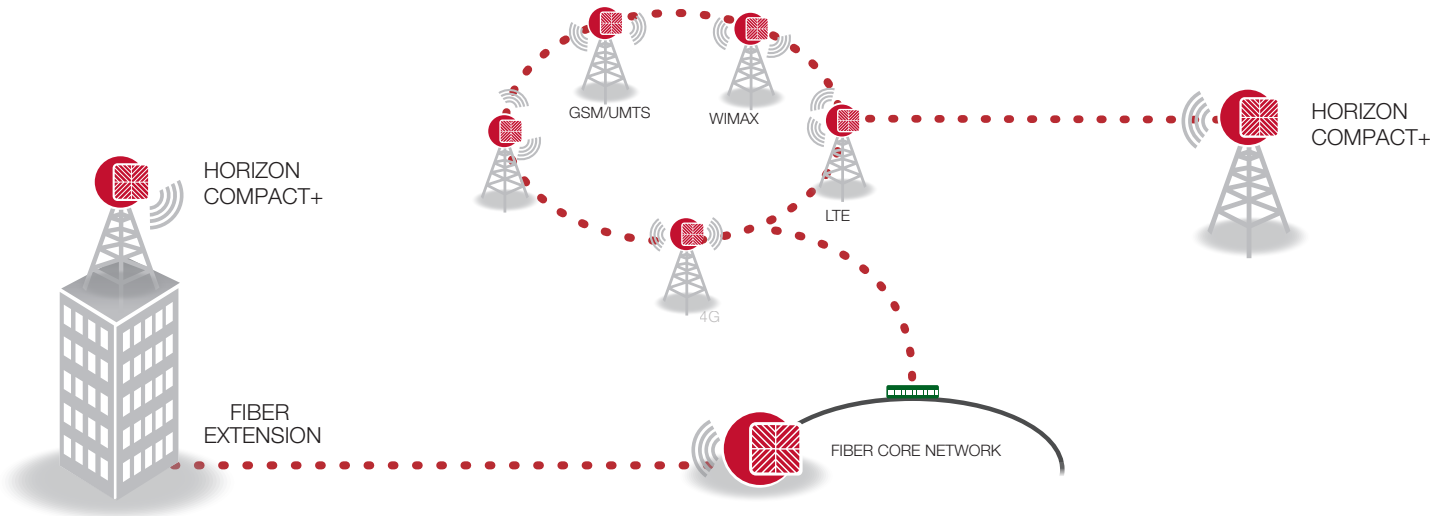
This innovative, carrier-grade packet microwave solution operates in licensed or unlicensed spectrum from 6 to 60 GHz.

SOLUTION HIGHLIGHTS

- Zero footprint, fully integrated all-outdoor unit
- 1 to 2 Gbps capacity with DragonWave's Bandwidth Accelerator
- Up to 2048QAM modulation support
- Service aware Hitless Automatic Adaptive Modulation (HAAM)
- SyncE support and optimized transport of 1588v2
- Pay-as-you-grow with automatic remote scalability
- Integrated 256-bit AES encryption; FIPS 140-2 Certified
- Comprehensive Ethernet OAM support (802.3ah, 802.1ag, Y.1731)
- Advanced QoS support with 8 levels of prioritization
- Comprehensive management and provisioning with Netviewer NMS
- Lowest total cost of ownership solution

KEY APPLICATIONS

- Mobile Backhaul
- Leased Line Replacement
- Last Mile Fiber Extension
- Private and Enterprise Networks



Product Sheet

HORIZON COMPACT+ PRODUCT SPECIFICATIONS

FREQUENCIES

6 GHz	FCC/IC/ETSI/ITU
11 GHz	FCC/IC/ETSI/ITU
13 GHz	ETSI/AUS/NZ/ITU
15 GHz	IC/ETSI/AUS/NZ/MX/ITU
18 GHz	FCC/IC /ETSI/AUS/NZ/ITU
23 GHz	FCC/IC/ETSI/AUS/NZ/ITU/MX
24 GHz	DEMS
26 GHz	ETSI
38 GHz	FCC/ETSI/AUS/NZ/MX
60 GHz	UNLICENSED

FEATURES

Capacity w/Accelerator	Variable from 10 to 1000 Mbps full duplex CIR 2x capacity up to 2 Gbps with Dual Pole Radio Mount (DPRM)
Base Capacity	Variable from 10 to 500 Mbps full duplex CIR 2x capacity up to 800 Mbps with DPRM
Latency GigE	120µs @ 256QAM. 50 MHz
Modulations	QPSK to 2048QAM
Modulation Shifting	Yes, Hitless
Loopback	Yes, Radio loopback
Encryption	Integrated 256-bit AES encryption

POWER

Input	-40.5 VDC to -56 VDC or +40.5 VDC to +56 VDC	
Optional Adapter	110/240 VAC	
Consumption*	6 GHz	55W
	11/13/15 GHz	47W
	18 GHz	49W
	23 GHz	48W
	38 GHz	43W

*Measured at the radio with 30M of CAT5E cable and 48V input to PonE.

MECHANICAL

Radio/Modem (without antenna)	10.2 cm x 24.3 cm x 22.1 cm; 3.4 kg 4" x 9.6" x 8.7"; 7.5 lbs
Power Adapter	15 cm x 7 cm x 3.5 cm 5.91" x 2.76" x 1.38"
Interface	2 x 10/100/1000bT (Optical SFP available)
Antenna Wind Loading	112 kph (70 mph) operational, 200 kph (125 mph) survival

MECHANICAL

Antenna Mount Adjustment	+/- 45° Azimuth; +/- 22° Elevation

CONNECTIONS

Power	-48V, Power on Ethernet
Payload (+ Inband NMS)	RJ45 or optical LC
NMS (when out-of-band)	RJ45

NETWORK MANAGEMENT (NMS)

Alarm Management	SNMP Traps, Enterprise MIB
NMS Compatibility	NetViewer
Security	3 Level Authentication
EMS	Web Based Management, SSL HTTP, SSH, Radius, Telnet, sFTP

ENVIRONMENTAL

Operating Temperature	-40°C to + 60°C (-40°F to +140° F)
Humidity	100 % Condensing
Altitude	4500 m (14,760 ft)
Water Tightness	Nema4X, IP66 (directed hose test)
Operational Shock	ETSI 300-019-1-4; 5g 11ms
Operational Vibration	ETSI 300-019-1-4 Class 4m5, NEBS GR-63
Earthquake	NEBS GR-63

ETHERNET

Packet Size	64 to 9600 Bytes
Flow Control	Yes
Prioritization	8 levels served by 8 hardware queues, based on 802.1p/q, MPLS, DSCP ToS Bits
Synchronization	Synchronous Ethernet

82-000057-04-08

DragonWave
www.dragonwaveinc.com

RADIO PERFORMANCE

6 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
56 MHz	QPSK	-83.9	71	99	142	28.7
	16 QAM	-76.5	166	232	332	26.1
	32 QAM	-73.2	214	300	428	26.4
	64 QAM	-70.1	261	365	522	25
	128 QAM	-67	308	431	616	25
	256 QAM	-64.1	356	498	712	24.5
	256 QAM	-61.6	356	498	712	24.5
	512 QAM	-62	403	564	806	23
	1024 QAM	-59.1	451	631	902	21
	2048 QAM	-56	490	686	980	19
28 MHz	QPSK	-86.7	38	53	76	28.7
	16 QAM	-79.3	88	123	176	26.1
	32 QAM	-76	113	158	226	26.4
	64 QAM	-72.9	138	193	276	25
	128 QAM	-69.8	163	228	326	25
	256 QAM	-66.9	188	263	376	25
	256 QAM	-64.4	201	281	402	25
	512 QAM	-63.8	213	298	426	25
	1024 QAM	-60.9	238	333	476	24
	2048 QAM	-57.8	259	363	518	23
30 MHz	QPSK	-86.5	39	55	78	28
	16 QAM	-79.1	92	129	184	26
	32 QAM	-75.8	118	165	236	26
	64 QAM	-72.7	144	202	288	25
	128 QAM	-69.6	170	238	340	25
	256 QAM	-64.2	209	293	418	25
	512 QAM	-63.6	222	311	444	25
	1024 QAM	-60.7	248	347	496	24
	2048 QAM	-57.6	270	378	540	23

6 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
10 MHz	QPSK	-91.6	12	17	24	28.7
	16 QAM	-84.2	28	39	56	26.1
	32 QAM	-80.9	36	50	72	26.4
	64 QAM	-77.8	44	62	88	25
	128 QAM	-74.7	52	73	104	25
	256 QAM	-71.8	60	84	120	25
	256 QAM	-69.4	64	90	128	25
	512 QAM	-68.7	67	94	134	25
	1024 QAM	-65.8	72	101	144	24.2
	2048 QAM	-62.8	80	112	160	23.1

11 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
56 MHz	QPSK	-84.9	71	99	142	25
	16 QAM	-77.5	166	232	332	23
	32 QAM	-74.2	214	300	428	23
	64 QAM	-71.1	261	365	522	23
	128 QAM	-68	308	431	616	23
	256 QAM	-65.1	356	498	712	23
	256 QAM	-62.6	380	532	760	23
	512 QAM	-62	403	564	806	23
	1024 QAM	-59.1	451	631	902	21
	2048 QAM	-56	490	686	980	19
28 MHz	QPSK	-87.7	38	53	76	25
	16 QAM	-80.3	88	123	176	23
	32 QAM	-77	113	158	226	23
	64 QAM	-73.9	138	193	276	23
	128 QAM	-70.8	163	228	326	23
	256 QAM	-67.9	188	263	376	23
	256 QAM	-65.4	201	281	402	23
	512 QAM	-64.8	213	298	426	23
	1024 QAM	-61.9	238	333	476	21
	2048 QAM	-58.8	259	363	518	19
14 MHz	QPSK	-90.7	19	27	38	25
	16 QAM	-83.3	43	60	86	23
	32 QAM	-80	56	78	112	23
	64 QAM	-76.9	68	95	136	23
	128 QAM	-73.8	80	112	160	23
	256 QAM	-70.9	93	130	186	23
	256 QAM	-68.5	99	139	198	23
	512 QAM	-67.8	105	147	210	23
	1024 QAM	-64.9	115	161	230	21
	2048 QAM	-61.9	123	172	246	19

11 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator		
				Typical Mobile Traffic Mix	Maximum Throughput	Tx Power
7 MHz	QPSK	-93.7	9	13	18	25
	16 QAM	-86.3	22	31	44	23
	32 QAM	-83	28	39	56	23
	64 QAM	-79.9	34	48	68	23
	128 QAM	-76.8	40	56	80	23
	256 QAM	-73.9	47	66	94	23
	256 QAM	-71.5	50	70	100	23
	512 QAM	-70.8	52	73	104	23
	1024 QAM	-67.9	56	78	112	21
	2048 QAM	-64.9	62	87	124	19
40 MHz	QPSK	-85.2	52	73	104	25
	16 QAM	-77.8	122	171	244	23
	32 QAM	-74.5	157	220	314	23
	64 QAM	-71.4	192	269	384	23
	128 QAM	-68.3	227	318	454	23
	256 QAM	-65.4	262	367	524	23
	256 QAM	-63	279	391	558	23
	512 QAM	-62.3	297	416	594	19
	1024 QAM	-59.4	332	465	664	19
	2048 QAM	-56.4	361	505	722	19
30 MHz	QPSK	-86.5	39	55	78	25
	16 QAM	-79.1	92	129	184	23
	32 QAM	-75.8	118	165	236	23
	64 QAM	-72.7	144	202	288	23
	128 QAM	-69.6	170	238	340	23
	256 QAM	-66.7	196	274	392	23
	256 QAM	-64.2	209	293	418	23
	512 QAM	-63.6	222	311	444	19
	1024 QAM	-60.7	248	347	496	19
	2048 QAM	-57.6	270	378	540	19

11 GHz

Modulation Channel Bandwidth		Rx Sensitivity	Base Throughput	With Bandwidth Accelerator		Tx Power
				Typical Mobile Traffic Mix	Maximum Throughput	
20 MHz	QPSK	-88.3	26	36	52	25
	16 QAM	-80.9	60	84	120	23
	32 QAM	-77.6	77	108	154	23
	64 QAM	-74.5	94	132	188	23
	128 QAM	-71.4	112	157	224	23
	256 QAM	-68.5	129	181	258	23
	256 QAM	-66	137	192	274	23
	512 QAM	-65.4	146	204	292	19
	1024 QAM	-62.5	161	225	322	19
	2048 QAM	-59.4	172	241	344	19
10 MHz	QPSK	-91.6	12	17	24	25
	16 QAM	-84.2	28	39	56	23
	32 QAM	-80.9	36	50	72	23
	64 QAM	-77.8	44	62	88	23
	128 QAM	-74.7	52	73	104	23
	256 QAM	-71.8	60	84	120	23
	256 QAM	-69.4	64	90	128	23
	512 QAM	-68.7	67	94	134	19
	1024 QAM	-65.8	72	101	144	19
	2048 QAM	-62.8	80	112	160	19
"40 MHz (ETSI)"	16 QAM	-77.9	120	168	240	23
	32 QAM	-74.6	154	216	308	23
	64 QAM	-71.5	188	263	376	23
	128 QAM	-68.4	222	311	444	23
	256 QAM	-65.5	256	358	512	23
	256 QAM	-63.1	273	382	546	23
	512 QAM	-62.4	290	406	580	23
	1024 QAM	-59.5	324	454	648	21
	2048 QAM	-56.5	353	494	706	19
"10 MHz (Japan)"	64 QAM	-69.7	167	234	334	22.3
	QPSK	-82.6	56	78	112	26
	16 QAM	-78.7	56	78	112	23.4
	QPSK	-85.6	28	39	56	26

13 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator		Tx Power
				Typical Mobile Traffic Mix	Maximum Throughput	
56 MHz	QPSK	-83	71	99	142	25
	16 QAM	-77.5	166	232	332	23
	32 QAM	-73	214	300	428	23
	64 QAM	-71.5	261	365	522	23
	128 QAM	-68	308	431	616	23
	256 QAM	-65	356	498	712	23
	256 QAM	-63	380	532	760	23
	512 QAM	-61.5	403	564	806	23
	1024 QAM	-59	451	631	902	21
	2048 QAM	-54.5	490	686	980	19
28 MHz	QPSK	-86	38	53	76	25
	16 QAM	-79.5	88	123	176	23
	32 QAM	-74.5	113	158	226	23
	64 QAM	-73	138	193	276	23
	128 QAM	-69	163	228	326	23
	256 QAM	-66	188	263	376	23
	256 QAM	-64.5	201	281	402	23
	512 QAM	-62.5	213	298	426	23
	1024 QAM	-60	238	333	476	21
	2048 QAM	-55	259	363	518	19
14 MHz	QPSK	-88.5	19	27	38	25
	16 QAM	-82.5	43	60	86	23
	32 QAM	-78	56	78	112	23
	64 QAM	-76	68	95	136	23
	128 QAM	-72.5	80	112	160	23
	256 QAM	-69.5	93	130	186	23
	256 QAM	-68	99	139	198	23
	512 QAM	-64.5	105	147	210	23
	1024 QAM	-63	115	161	230	21
	2048 QAM	-59.5	123	172	246	19

13 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
7 MHz	QPSK	-89	9	13	18	25
	16 QAM	-84.5	22	31	44	23
	32 QAM	-80.5	28	39	56	23
	64 QAM	-78.5	34	48	68	23
	128 QAM	-75	40	56	80	23
	256 QAM	-72	47	66	94	23
	256 QAM	-70.5	50	70	100	23
	512 QAM	-69	52	73	104	23
	1024 QAM	-66	56	78	112	21
	2048 QAM	-62	62	87	124	19
50 MHz	QPSK	-84.2	66	92	132	25
	16 QAM	-76.8	154	216	308	23
	32 QAM	-73.5	198	277	396	23
	64 QAM	-70.4	241	337	482	23
	128 QAM	-67.3	285	399	570	23
	256 QAM	-64.4	329	461	658	23
	256 QAM	-62	351	491	702	23
	512 QAM	-61.3	373	522	746	23
	1024 QAM	-58.4	417	584	834	21
	2048 QAM	-55.4	454	636	908	19

15 GHz

				With Bandwidth Accelerator		
	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	Typical Mobile Traffic Mix	Maximum Throughput	Tx Power
50 MHz	QPSK	-84.2	66	92	132	25
	16 QAM	-76.8	154	216	308	24
	32 QAM	-73.5	198	277	396	24
	64 QAM	-70.4	241	337	482	24
	128 QAM	-67.3	285	399	570	24
	256 QAM	-64.4	329	461	658	24
	256 QAM	-62	351	491	702	24
	512 QAM	-61.3	373	522	746	24
	1024 QAM	-58.4	417	584	834	21
	2048 QAM	-55.4	454	636	908	19
40 MHz	QPSK	-85.2	52	73	104	25
	16 QAM	-77.8	122	171	244	23
	32 QAM	-74.5	157	220	314	23
	64 QAM	-71.4	192	269	384	23
	64 QAM (Japan Only)	-69.7	167	234	334	24.3
	128 QAM	-68.3	227	318	454	23
	256 QAM	-65.4	262	367	524	23
	256 QAM	-63	279	391	558	23
	512 QAM	-61	297	416	594	23
	1024 QAM	-58	332	465	664	21
	2048 QAM	-54	361	505	722	19
30 MHz	QPSK	-86.5	39	55	78	25
	16 QAM	-79.1	92	129	184	23
	32 QAM	-75.8	118	165	236	23
	64 QAM	-72.7	144	202	288	23
	128 QAM	-69.6	170	238	340	23
	256 QAM	-66.7	196	274	392	23
	256 QAM	-64.2	209	293	418	23
	512 QAM	-63.6	222	311	444	23
	1024 QAM	-60.7	248	347	496	21
	2048 QAM	-57.6	270	378	540	19

15 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
20 MHz	QPSK	-88.3	26	36	52	25
	QPSK (Japan Only)	-78.7	56	78	112	25.4
	16 QAM	-80.9	60	84	120	23
	32 QAM	-77.6	77	108	154	23
	64 QAM	-74.5	94	132	188	23
	128 QAM	-71.4	112	157	224	23
	256 QAM	-68.5	129	181	258	23
	256 QAM	-66	137	192	274	23
	512 QAM	-65.4	146	204	292	23
	1024 QAM	-62.5	161	225	322	21
	2048 QAM	-59.4	172	241	344	19
10 MHz	QPSK	-91.6	12	17	24	25
	16 QAM	-84.2	28	39	56	23
	32 QAM	-80.9	36	50	72	23
	64 QAM	-77.8	44	62	88	23
	128 QAM	-74.7	52	73	104	23
	256 QAM	-70.8	60	84	120	23
	256 QAM	-69.4	64	90	128	23
	512 QAM	-68.7	67	94	134	23
	1024 QAM	-65.8	72	101	144	21
	2048 QAM	-62.8	80	112	160	19
56 MHz	QPSK	-83.9	71	99	142	25
	16 QAM	-76.5	166	232	332	23
	32 QAM	-73.2	214	300	428	23
	64 QAM	-70.1	261	365	522	23
	128 QAM	-66	308	431	616	23
	256 QAM	-63	356	498	712	23
	256 QAM	-61.6	380	532	760	23
	512 QAM	-61	403	564	806	23
	1024 QAM	-58.1	451	631	902	21
	2048 QAM	-53	490	686	980	19

15 GHz

Modulation Channel Bandwidth		Rx Sensitivity	Base Throughput	With Bandwidth Accelerator		Tx Power
				Typical Mobile Traffic Mix	Maximum Throughput	
28 MHz	QPSK	-86.7	38	53	76	25
	16 QAM	-79.3	88	123	176	23
	32 QAM	-76	113	158	226	23
	64 QAM	-72.9	138	193	276	23
	128 QAM	-69.8	163	228	326	23
	256 QAM	-66.9	188	263	376	23
	256 QAM	-64.4	201	281	402	23
	512 QAM	-62.8	213	298	426	23
	1024 QAM	-59.9	238	333	476	21
	2048 QAM	-56	259	363	518	19
14 MHz	QPSK	-89.7	19	27	38	25
	16 QAM	-82.3	43	60	86	23
	32 QAM	-79	56	78	112	23
	64 QAM	-75.9	68	95	136	23
	128 QAM	-72.8	80	112	160	23
	256 QAM	-69.9	93	130	186	23
	256 QAM	-67.5	99	139	198	23
	512 QAM	-66.8	105	147	210	23
	1024 QAM	-63.9	115	161	230	21
	2048 QAM	-60.9	123	172	246	19
7 MHz	QPSK	-92.7	9	13	18	25
	16 QAM	-85.3	22	31	44	23
	32 QAM	-82	28	39	56	23
	64 QAM	-78.9	34	48	68	23
	128 QAM	-75.8	40	56	80	23
	256 QAM	-72.9	47	66	94	23
	256 QAM	-70.5	50	70	100	23
	512 QAM	-69.8	52	73	104	23
	1024 QAM	-66.9	56	78	112	21
	2048 QAM	-63.9	62	87	124	19

18 GHz

Modulation Channel Bandwidth		Rx Sensitivity	Base Throughput	With Bandwidth Accelerator		Tx Power
				Typical Mobile Traffic Mix	Maximum Throughput	
50 MHz	QPSK	-83.2	66	92	132	25
	16 QAM	-75.8	154	216	308	23
	32 QAM	-72.5	198	277	396	23
	64 QAM	-69.4	241	337	482	23
	128 QAM	-66.3	285	399	570	23
	256 QAM	-62.5	329	461	658	21
	256 QAM	-60.5	351	491	702	21
	512 QAM	-58	373	522	746	21
	1024 QAM	-56	417	584	834	21
	2048 QAM	-52	454	636	908	19
40 MHz	QPSK (Japan Only)	-85.9	27	38	54	26
	QPSK	-83.5	52	73	104	25
	16 QAM	-76.8	122	171	244	23
	32 QAM	-73	157	220	314	23
	64 QAM (Japan Only)	-69.7	167	234	334	23
	64 QAM	-70.4	192	269	384	23
	128 QAM	-66.5	227	318	454	23
	256 QAM	-64	262	367	524	21
	256 QAM	-61.5	279	391	558	21
	512 QAM	-60.5	297	416	594	19
	1024 QAM	-57.5	332	465	664	19
	2048 QAM	-53	361	505	722	19
30 MHz	QPSK	-85	39	55	78	25
	16 QAM	-78.1	92	129	184	23
	32 QAM	-74	118	165	236	23
	64 QAM	-71.7	144	202	288	23
	128 QAM	-68.6	170	238	340	23
	256 QAM	-64	196	274	392	21
	256 QAM	-62.5	209	293	418	21
	512 QAM	-60.5	222	311	444	19
	1024 QAM	-59	248	347	496	19
	2048 QAM	-54.5	270	378	540	19

18 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
20 MHz	QPSK	-87.3	26	36	52	25
	16 QAM	-79.9	60	84	120	23
	32 QAM	-76	77	108	154	23
	64 QAM	-73.5	94	132	188	23
	128 QAM	-70	112	157	224	23
	256 QAM	-66	129	181	258	23
	256 QAM	-65	137	192	274	23
	512 QAM	-61.5	146	204	292	19
	1024 QAM	-61	161	225	322	19
	2048 QAM	-56.5	172	241	344	19
10 MHz	QPSK	-90.6	12	17	24	25
	16 QAM	-83.2	28	39	56	23
	32 QAM	-79	36	50	72	23
	64 QAM	-76.8	44	62	88	23
	128 QAM	-73	52	73	104	23
	256 QAM	-70	60	84	120	21
	256 QAM	-67.5	64	90	128	21
	512 QAM	-65	67	94	134	19
	1024 QAM	-63.5	72	101	144	19
	2048 QAM	-60	80	112	160	19
5 MHz	QPSK	-95	4	6	8	25
	16 QAM	-87.6	10	14	20	23
	32 QAM	-84.3	13	18	26	23
	64 QAM	-81.2	16	22	32	23
	128 QAM	-78.1	19	27	38	23
	256 QAM	-75.2	22	31	44	21
	256 QAM	-72.7	23	32	46	21
	512 QAM	-72.1	24	34	48	21
	1024 QAM	-69.2	26	36	52	21
	2048 QAM	-66.1	29	41	58	19
56 MHz	QPSK	-82.9	71	99	142	25
	16 QAM	-75.5	166	232	332	23
	32 QAM	-72.2	214	300	428	23
	64 QAM	-69.1	261	365	522	23
	128 QAM	-66	308	431	616	23
	256 QAM	-63.1	356	498	712	21
	256 QAM	-60.6	380	532	760	21
	512 QAM	-60	403	564	806	21
	1024 QAM	-57.1	451	631	902	21
	2048 QAM	-54	490	686	980	19

18 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator		Tx Power
				Typical Mobile Traffic Mix	Maximum Throughput	
28 MHz	QPSK	-85.7	38	53	76	25
	16 QAM	-78.3	88	123	176	23
	32 QAM	-75	113	158	226	23
	64 QAM	-71.9	138	193	276	23
	128 QAM	-68.8	163	228	326	23
	256 QAM	-65.9	188	263	376	21
	256 QAM	-63.4	201	281	402	21
	512 QAM	-62.8	213	298	426	21
	1024 QAM	-59.9	238	333	476	21
	2048 QAM	-56.8	259	363	518	19
14 MHz	QPSK	-88.7	19	27	38	25
	16 QAM	-81.3	43	60	86	23
	32 QAM	-78	56	78	112	23
	64 QAM	-74.9	68	95	136	23
	128 QAM	-71.8	80	112	160	23
	256 QAM	-68.9	93	130	186	21
	256 QAM	-66.5	99	139	198	21
	512 QAM	-65.8	105	147	210	21
	1024 QAM	-62.9	115	161	230	21
	2048 QAM	-59.9	123	172	246	19
7 MHz	QPSK	-91.7	9	13	18	25
	16 QAM	-84.3	22	31	44	23
	32 QAM	-81	28	39	56	23
	64 QAM	-77.9	34	48	68	23
	128 QAM	-74.8	40	56	80	23
	256 QAM	-71.9	47	66	94	21
	256 QAM	-69.5	50	70	100	21
	512 QAM	-68.8	52	73	104	21
	1024 QAM	-65.9	56	78	112	21
	2048 QAM	-62.9	62	87	124	19

18 GHz

				With Bandwidth Accelerator		
	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	Typical Mobile Traffic Mix	Maximum Throughput	Tx Power
3.5 MHz	QPSK	-94	5	7	10	25
	16 QAM	-87.4	11	15	22	23
	32 QAM	-84.1	14	20	28	23
	64 QAM	-81	17	24	34	23
	128 QAM	-77.9	20	28	40	23
	256 QAM	-75	23	32	46	21
	256 QAM	-72.6	24	34	48	21
	512 QAM	-71.9	25	35	50	21
	1024 QAM	-69	28	39	56	21
	2048 QAM	-66	30	42	60	19

23 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
50 MHz	QPSK	-83.2	66	92	132	25
	16 QAM	-75.8	154	216	308	23
	32 QAM	-72.5	198	277	396	23
	64 QAM	-69.4	241	337	482	23
	128 QAM	-66.3	285	399	570	23
	256 QAM	-63.4	329	461	658	22
	256 QAM	-61	351	491	702	22
	512 QAM	-60.3	373	522	746	18
	1024 QAM	-57.4	417	584	834	18
	2048 QAM	-54.4	454	636	908	18
40 MHz	QPSK	-84.2	52	73	104	25
	16 QAM	-76.8	122	171	244	23
	32 QAM	-73.5	157	220	314	23
	64 QAM	-70.4	192	269	384	23
	128 QAM	-67.3	227	318	454	23
	256 QAM	-64.4	262	367	524	23
	256 QAM	-62	279	391	558	23
	512 QAM	-61.3	297	416	594	23
	1024 QAM	-58.4	332	465	664	21
	2048 QAM	-55.4	361	505	722	18
30 MHz	QPSK	-85.5	39	55	78	25
	16 QAM	-78.1	92	129	184	23
	32 QAM	-74.8	118	165	236	23
	64 QAM	-71.7	144	202	288	23
	128 QAM	-68.6	170	238	340	23
	256 QAM	-65.7	196	274	392	22
	256 QAM	-63.2	209	293	418	22
	512 QAM	-62.6	222	311	444	22
	1024 QAM	-59.7	248	347	496	21
	2048 QAM	-56.6	270	378	540	18

23 GHz

				With Bandwidth Accelerator		
	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	Typical Mobile Traffic Mix	Maximum Throughput	Tx Power
20 MHz	QPSK	-87.3	26	36	52	25
	16 QAM	-79.9	60	84	120	23
	32 QAM	-76.6	77	108	154	23
	64 QAM	-73.5	94	132	188	23
	128 QAM	-70.4	112	157	224	23
	256 QAM	-67.5	129	181	258	22
	256 QAM	-65	137	192	274	22
	512 QAM	-64.4	146	204	292	22
	1024 QAM	-61.5	161	225	322	21
	2048 QAM	-58.4	172	241	344	18
10 MHz	QPSK	-90.6	12	17	24	25
	16 QAM	-83.2	28	39	56	23
	32 QAM	-79.9	36	50	72	23
	64 QAM	-76.8	44	62	88	23
	128 QAM	-73.7	52	73	104	23
	256 QAM	-70.8	60	84	120	22
	256 QAM	-68.4	64	90	128	22
	512 QAM	-67.7	67	94	134	22
	1024 QAM	-64.8	72	101	144	21
	2048 QAM	-61.8	80	112	160	18
5 MHz	QPSK	-95	4	6	8	25
	16 QAM	-87.6	10	14	20	23
	32 QAM	-84.3	13	18	26	23
	64 QAM	-81.2	16	22	32	23
	128 QAM	-78.1	19	27	38	23
	256 QAM	-75.2	22	31	44	22
	256 QAM	-72.7	23	32	46	22
	512 QAM	-72.1	24	34	48	22
	1024 QAM	-69.2	26	36	52	21
	2048 QAM	-66.1	29	41	58	18

23 GHz

				With Bandwidth Accelerator		
	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	Typical Mobile Traffic Mix	Maximum Throughput	Tx Power
56 MHz	QPSK	-82.9	71	99	142	25
	16 QAM	-75.5	166	232	332	23
	32 QAM	-72.2	214	300	428	23
	64 QAM	-69.1	261	365	522	23
	128 QAM	-66	308	431	616	23
	256 QAM	-63.1	356	498	712	22
	256 QAM	-60.6	380	532	760	22
	512 QAM	-60	403	564	806	22
	1024 QAM	-57.1	451	631	902	21
	2048 QAM	-54	490	686	980	18
28 MHz	QPSK	-85.7	38	53	76	25
	16 QAM	-78.3	88	123	176	23
	32 QAM	-75	113	158	226	23
	64 QAM	-71.9	138	193	276	23
	128 QAM	-68.8	163	228	326	23
	256 QAM	-65.9	188	263	376	22
	256 QAM	-63.4	201	281	402	22
	512 QAM	-62.8	213	298	426	22
	1024 QAM	-59.9	238	333	476	21
	2048 QAM	-56.8	259	363	518	18
14 MHz	QPSK	-88.7	19	27	38	25
	16 QAM	-81.3	43	60	86	23
	32 QAM	-78	56	78	112	23
	64 QAM	-74.9	68	95	136	23
	128 QAM	-71.8	80	112	160	23
	256 QAM	-68.9	93	130	186	22
	256 QAM	-66.5	99	139	198	22
	512 QAM	-65.8	105	147	210	22
	1024 QAM	-62.9	115	161	230	21
	2048 QAM	-59.9	123	172	246	18

23 GHz

Modulation Channel Bandwidth		Rx Sensitivity	Base Throughput	With Bandwidth Accelerator		Tx Power
				Typical Mobile Traffic Mix	Maximum Throughput	
7 MHz	QPSK	-91.7	9	13	18	25
	16 QAM	-84.3	22	31	44	23
	32 QAM	-81	28	39	56	23
	64 QAM	-77.9	34	48	68	23
	128 QAM	-74.8	40	56	80	23
	256 QAM	-71.9	47	66	94	22
	256 QAM	-69.5	50	70	100	22
	512 QAM	-68.8	52	73	104	22
	1024 QAM	-65.9	56	78	112	21
	2048 QAM	-62.9	62	87	124	18

38 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
50 MHz	QPSK	-82.2	66	92	132	21
	16 QAM	-74.8	154	216	308	20
	32 QAM	-71.5	198	277	396	20
	64 QAM	-68.4	241	337	482	20
	128 QAM	-65.3	285	399	570	20
	256 QAM	-62.4	329	461	658	20
	256 QAM	-60	351	491	702	20
	512 QAM	-59.3	373	522	746	18
	1024 QAM	-56.4	417	584	834	16
	2048 QAM	-53.4	454	636	908	14
25 MHz	QPSK	-85.3	32	45	64	21
	16 QAM	-77.9	75	105	150	20
	32 QAM	-74.6	97	136	194	20
	64 QAM	-71.5	118	165	236	20
	128 QAM	-68.4	140	196	280	20
	256 QAM	-65.5	161	225	322	20
	256 QAM	-63.1	172	241	344	20
	512 QAM	-62.4	182	255	364	18
	1024 QAM	-59.5	201	281	402	16
	2048 QAM	-56.5	215	301	430	14
10 MHz	QPSK	-89.6	12	17	24	21
	16 QAM	-82.2	28	39	56	20
	32 QAM	-78.9	36	50	72	20
	64 QAM	-75.8	44	62	88	20
	128 QAM	-72.7	52	73	104	20
	256 QAM	-69.8	60	84	120	20
	256 QAM	-67.4	64	90	128	20
	512 QAM	-66.7	67	94	134	18
	1024 QAM	-63.8	72	101	144	16
	2048 QAM	-60.8	80	112	160	14

38 GHz

Modulation Channel Bandwidth		Rx Sensitivity	Base Throughput	With Bandwidth Accelerator		Tx Power
				Typical Mobile Traffic Mix	Maximum Throughput	
56 MHz	QPSK	-81.9	71	99	142	21
	16 QAM	-74.5	166	232	332	20
	32 QAM	-71.2	214	300	428	20
	64 QAM	-68.1	261	365	522	20
	128 QAM	-65	308	431	616	20
	256 QAM	-62.1	356	498	712	20
	256 QAM	-59.6	380	532	760	20
	512 QAM	-59	403	564	806	20
	1024 QAM	-56.1	451	631	902	17
	2048 QAM	-53	490	686	980	15
28 MHz	QPSK	-84.7	38	53	76	21
	16 QAM	-77.3	88	123	176	20
	32 QAM	-74	113	158	226	20
	64 QAM	-70.9	138	193	276	20
	128 QAM	-67.8	163	228	326	20
	256 QAM	-64.9	188	263	376	20
	256 QAM	-62.4	201	281	402	20
	512 QAM	-61.8	213	298	426	20
	1024 QAM	-58.9	238	333	476	17
	2048 QAM	-55.8	259	363	518	15
14 MHz	QPSK	-87.7	19	27	38	21
	16 QAM	-80.3	43	60	86	20
	32 QAM	-77	56	78	112	20
	64 QAM	-73.9	68	95	136	20
	128 QAM	-70.8	80	112	160	20
	256 QAM	-67.9	93	130	186	20
	256 QAM	-65.5	99	139	198	20
	512 QAM	-64.8	105	147	210	18
	1024 QAM	-61.9	115	161	230	16
	2048 QAM	-58.9	123	172	246	14

38 GHz

	Modulation Channel Bandwidth	Rx Sensitivity	Base Throughput	With Bandwidth Accelerator: Typical Mobile Traffic Mix	With Bandwidth Accelerator: Maximum Throughput	Tx Power
7 MHz	QPSK	-90.7	9	13	18	21
	16 QAM	-83.3	22	31	44	20
	32 QAM	-80	28	39	56	20
	64 QAM	-76.9	34	48	68	20
	128 QAM	-73.8	40	56	80	20
	256 QAM	-70.9	47	66	94	20
	256 QAM	-68.5	50	70	100	20
	512 QAM	-67.8	52	73	104	18
	1024 QAM	-64.9	56	78	112	16
	2048 QAM	-61.9	62	87	124	14

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