



802.11 Data Rates

Revised: September 4, 2014

This appendix lists data rates for 802.11an/ac rates in 5 GHz and 802.11bgn in 2.4GHz.

IEEE 802.11a/n/ac

The channel identifiers, channel center frequencies, and regulatory domains of each IEEE 802.11a 20-MHz-wide channel are listed in [Table C-1](#).

Table C-1 Channels for IEEE 802.11a

Channel Identifier	Frequency in MHz	Regulatory Domains			
		Americas (-A)	Japan (-J)	Singapore (-S)	Taiwan (-T)
34	5170	-	X	-	-
36	5180	X	-	X	-
38	5190	-	X	-	-
40	5200	X	-	X	-
42	5210	-	X	-	-
44	5220	X	-	X	-
46	5230	-	X	-	-
48	5240	X	-	X	-
52	5260	X	-	-	X
56	5280	X	-	-	X
60	5300	X	-	-	X
64	5320	X	-	-	X
149	5745	-	-	-	-
153	5765	-	-	-	-
157	5785	-	-	-	-
161	5805	-	-	-	-

**Note**

All channel sets are restricted to indoor usage except the Americas (-A), which allows for indoor and outdoor use on channels 52 through 64 in the United States.

IEEE 802.11b/g/n

The channel identifiers, channel center frequencies, and regulatory domains of each IEEE 802.11b 22-MHz-wide channel are listed in [Table C-2](#).

Table C-2 Channels for IEEE 802.11b

Channel Identifier	Frequency in MHz	Regulatory Domains				
		Americas (-A)	EMEA (-E)	Israel (-I)	China (-C)	Japan (-J)
1	2412	X	X	-	X	X
2	2417	X	X	-	X	X
3	2422	X	X	X	X	X
4	2427	X	X	X	X	X
5	2432	X	X	X	X	X
6	2437	X	X	X	X	X
7	2442	X	X	X	X	X
8	2447	X	X	X	X	X
9	2452	X	X	X	X	X
10	2457	X	X	-	X	X
11	2462	X	X	-	X	X
12	2467	-	X	-	-	X
13	2472	-	X	-	-	X
14	2484	-	-	-	-	X

**Note**

Mexico is included in the Americas regulatory domain; however channels 1 through 8 are for indoor use only while channels 9 through 11 can be used indoors and outdoors. Users are responsible for ensuring that the channel set configuration complies with the regulatory standards of Mexico.

**Note**

France is included in the EMEA regulatory domain; however only channels 10 through 13 can be used in France. Users are responsible for ensuring that the channel set configuration complies with the regulatory standards of France.

Maximum Power Levels and Antenna Gains

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An improper combination of power level and antenna gain can result in Effective Isotropic Radiated Power (EIRP) above the amount allowed per regulatory domain. [Table C-3](#) indicates the maximum power levels and antenna gains allowed for each IEEE 802.11a regulatory domain.

Table C-3 Maximum Power Levels Per Antenna Gain for IEEE 802.11a

Regulatory Domain	Maximum Power Level (mW) with 6-dBi Antenna Gain
Americas (-A) (200 mW to 800 mw, see below)	40
Japan (-J) (10 mW/MHz EIRP maximum)	40
Singapore (-S) (100 mW EIRP maximum)	20
Taiwan (-T) (800 mW EIRP maximum)	40

In addition, Americas (-A) domain regulation provide different maximum power level for channels as shown in [Table C-4](#).

Table C-4 Maximum Transmit Power IEEE 802.11a

Regulatory Domain	EIRP Maximum
UNII-1 Low Indoor	200 mW
UNII-2 Mid	1 W
UNII Indoor/Outdoor DFS	1 W
UNII-3 Upper	200 W

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An improper combination of power level and antenna gain can result in EIRP above the amount allowed per regulatory domain. [Table C-5](#) indicates the maximum power levels and antenna gains allowed for each IEEE 802.11b regulatory domain.

Table C-5 Maximum Power Levels Per Antenna Gain for IEEE 802.11b

Regulatory Domain	Antenna Gain (dBi)	Maximum Power Level (mW)
Americas (-A) (4 W EIRP maximum)	0	100
	2.2	100
	5.2	100
	6	100
	8.5	100
	12	100
	13.5	100
	21	20
EMEA (-E) (100 mW EIRP maximum)	0	100
	2.2	50
	5.2	30
	6	30
	8.5	5
	12	5
	13.5	5
	21	1
Israel (-I) (100 mW EIRP maximum)	0	100
	2.2	50
	5.2	30
	6	30
	8.5	5
	12	5
	13.5	5
	21	1
China (-C) (10 mW EIRP maximum)	0	5
	2.2	5
	5.2	n/a
	6	n/a
	8.5	n/a
	12	n/a
	13.5	n/a
	21	n/a

Table C-5 *Maximum Power Levels Per Antenna Gain for IEEE 802.11b*

Japan (-J) (10 mW/MHz EIRP maximum)	0	50
	2.2	30
	5.2	30
	6	30
	8.5	n/a
	12	n/a
	13.5	5
	21	n/a

