



4,5G FREKANS BANDLARI

Band	Name	Mode	Downlink (MHz)			Bandwidth DL/UL (MHz)	Uplink (MHz)			Duplex spacing (MHz)	Geographical area	3GPP release	Channel bandwidth (MHz)					
			Low	Middle	High		Low	Middle	High				1.4	3	5	10	15	20
			Earfcn				Earfcn											
1	2100	FDD	2110 0	2140 300	2170 599	60	1920 18000	1950 18300	1980 18599	190	Global	8			5	10	15	20
2	1900 PCS	FDD	1930 600	1960 900	1990 1199	60	1850 18600	1880 18900	1910 19199	80	NAR	8	1.4	3	5	10	15	20
3	1800+	FDD	1805 1200	1842.5 1575	1880 1949	75	1710 19200	1747.5 19575	1785 19949	95	Global	8	1.4	3	5	10	15	20
4	AWS-1	FDD	2110 1950	2132.5 2175	2155 2399	45	1710 19950	1732.5 20175	1755 20399	400	NAR	8	1.4	3	5	10	15	20
5	850	FDD	869 2400	881.5 2525	894 2649	25	824 20400	836.5 20525	849 20649	45	NAR	8	1.4	3	5	10		
7	2600	FDD	2620 2750	2655 3100	2690 3449	70	2500 20750	2535 21100	2570 21449	120	EMEA	8			5	10	15	20
8	900 GSM	FDD	925 3450	942.5 3625	960 3799	35	880 21450	897.5 21625	915 21799	45	Global	8	1.4	3	5	10		
9	1800	FDD	1844.9 3800	1862.5 3975	1879.9 4149	35	1749.9 21800	1767.5 21975	1784.9 22149	95	APAC	8			5	10	15	20
10	AWS-1+	FDD	2110 4150	2140 4450	2170 4749	60	1710 22150	1740 22450	1770 22749	400	NAR	8			5	10	15	20
11	1500 Lower	FDD	1475.9 4750	1486 4850	1495.9 4949	20	1427.9 22750	1438 22850	1447.9 22949	48	Japan	8			5	10		
12	700 a	FDD	729 5010	737.5 5095	746 5179	17	699 23010	707.5 23095	716 23179	30	NAR	8.4	1.4	3	5	10		
13	700 c	FDD	746 5180	751 5230	756 5279	10	777 23180	782 23230	787 23279	-31	NAR	8			5	10		
14	700 PS	FDD	758 5280	763 5330	768 5379	10	788 23280	793 23330	798 23379	-30	NAR	8			5	10		
17	700 b	FDD	734 5730	740 5790	746 5849	12	704 23730	710 23790	716 23849	30	NAR	8.3			5	10		
18	800 Lower	FDD	860	867.5	875	15	815	822.5	830	45	Japan	9			5	10	15	

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			Low	Middle	High		Low	Middle	High				1.4	3	5	10	15	20
			Earfcn				Earfcn											
			5850	5925	5999		23850	23925	23999									
19	800 Upper	FDD	875 6000	882.5 6075	890 6149	15	830 24000	837.5 24075	845 24149	45	Japan	9			5	10	15	
20	800 DD	FDD	791 6150	806 6300	821 6449	30	832 24150	847 24300	862 24449	-41	EMEA	9			5	10	15	20
21	1500 Upper	FDD	1495.9 6450	1503.5 6525	1510.9 6599	15	1447.9 24450	1455.5 24525	1462.9 24599	48	Japan	9			5	10	15	
22	3500	FDD	3510 6600	3550 7000	3590 7399	80	3410 24600	3450 25000	3490 25399	100	EMEA	10.4			5	10	15	20
24	1600 L-band	FDD	1525 7700	1542 7870	1559 8039	34	1626.5 25700	1643.5 25870	1660.5 26039	-101.5	NAR	10.1			5	10		
25	1900+	FDD	1930 8040	1962.5 8365	1995 8689	65	1850 26040	1882.5 26365	1915 26689	80	NAR	10	1.4	3	5	10	15	20
26	850+	FDD	859 8690	876.5 8865	894 9039	35	814 26690	831.5 26865	849 27039	45	NAR	11.0	1.4	3	5	10	15	
27	800 SMR	FDD	852 9040	860.5 9125	869 9209	17	807 27040	815.5 27125	824 27209	45	NAR	11.1	1.4	3	5	10		
28	700 APT	FDD	758 9210	780.5 9435	803 9659	45	703 27210	725.5 27435	748 27659	55	APAC,EU	11.1		3	5	10	15	20
29	700 d	SDL	717 9660	722.5 9715	728 9769	11	Downlink only				NAR	11.3		3	5	10		
30	2300 WCS	FDD	2350 9770	2355 9820	2360 9869	10	2305 27660	2310 27710	2315 27759	45	NAR	12.0			5	10		
31	450	FDD	462.5 9870	465 9895	467.5 9919	5	452.5 27760	455 27785	457.5 27809	10	Global	12.0	1.4	3	5			
32	1500 L-band	SDL	1452 9920	1474 10140	1496 10359	44	Downlink only				EMEA	12.4			5	10	15	20
33	TD 1900	TDD	1900 36000	1910 36100	1920 36199	20					EMEA	8			5	10	15	20
34	TD 2000	TDD	2010 36200	2017.5 36275	2025 36349	15					EMEA	8			5	10	15	
35	TD PCS Lower	TDD	1850 36350	1880 36650	1910 36949	60					NAR	8	1.4	3	5	10	15	20
36	TD PCS Upper	TDD	1930	1960	1990	60					NAR	8	1.4	3	5	10	15	20

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			Low	Middle	High		Low	Middle	High				1.4	3	5	10	15	20
			Earfcn				Earfcn											
			36950	37250	37549													
37	TD PCS Center gap	TDD	1910 37550	1920 37650	1930 37749	20				NAR	8			5	10	15	20	
38	TD 2600	TDD	2570 37750	2595 38000	2620 38249	50				EMEA	8			5	10	15	20	
39	TD 1900+	TDD	1880 38250	1900 38450	1920 38649	40				China	8			5	10	15	20	
40	TD 2300	TDD	2300 38650	2350 39150	2400 39649	100				China	8			5	10	15	20	
41	TD 2600+	TDD	2496 39650	2593 40620	2690 41589	194				Global	10			5	10	15	20	
42	TD 3500	TDD	3400 41590	3500 42590	3600 43589	200					10			5	10	15	20	
43	TD 3700	TDD	3600 43590	3700 44590	3800 45589	200					10			5	10	15	20	
44	TD 700	TDD	703 45590	753 46090	803 46589	100				APAC	11.1		3	5	10	15	20	
45	TD 1500	TDD	1447 46590	1457 46690	1467 46789	20				China	13.2			5	10	15	20	
46	TD Unlicensed	TDD	5150 46790	5537.5 50665	5925 54539	775				Global	13.2				10		20	
47	TD V2X	TDD	5855 54540	5890 54890	5925 55239	70				Global	14.1				10		20	
48	TD 3600	TDD	3550 55240	3625 55990	3700 56739	150				Global	14.2			5	10	15	20	
49	TD 3600r	TDD	3550 56740	3625 57490	3700 58239	150				Global	15.1				10		20	
50	TD 1500+	TDD	1432 58240	1474.5 58665	1517 59089	85					15.0		3	5	10	15	20	
51	TD 1500-	TDD	1427 59090	1429.5 59115	1432 59139	5					15.0		3	5				
52	TD 3300	TDD	3300 59140	3350 59640	3400 60139	100					15.2			5	10	15	20	
53	TD 2500	TDD	2483.5	2489.5	2495	11.5					16.0	1.4	3	5	10			

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			Low	Middle	High		Low	Middle	High				1.4	3	5	10	15	20
			Earfcn				Earfcn											
			60140	60197	60254													
65	2100+	FDD	2110 65536	2155 65986	2200 66435	90	1920 131072	1965 131522	2010 131971	190	Global	13.2	1.4	3	5	10	15	20
66	AWS-3	FDD	2110 66436	2155 66886	2200 67335	90 / 70	1710 131972	1745 132322	1780 132671	400	NAR	13.2	1.4	3	5	10	15	20
67	700 EU	SDL	738 67336	748 67436	758 67535	20	Downlink only				EMEA	13.2			5	10	15	20
68	700 ME	FDD	753 67536	768 67686	783 67835	30	698 132672	713 132822	728 132971	55	EMEA	13.3			5	10	15	
69	DL B38	SDL	2570 67836	2595 68086	2620 68335	50	Downlink only					14.0			5	10	15	20
70	AWS-4	FDD	1995 68336	2007.5 68461	2020 68585	25 / 15	1695 132972	1702.5 133047	1710 133121	300	NAR	14.0			5	10	15	20
71	600	FDD	617 68586	634.5 68761	652 68935	35	663 133122	680.5 133297	698 133471	-46	NAR	15.0			5	10	15	20
72	450 PMR/PAMR	FDD	461 68936	463.5 68961	466 68985	5	451 133472	453.5 133497	456 133521	10	EMEA	15.0	1.4	3	5			
73	450 APAC	FDD	460 68986	462.5 69011	465 69035	5	450 133522	452.5 133547	455 133571	10	APAC	15.0	1.4	3	5			
74	L-band	FDD	1475 69036	1496.5 69251	1518 69465	43	1427 133572	1448.5 133787	1470 134001	48	NAR	15.0	1.4	3	5	10	15	20
75	DL B50	SDL	1432 69466	1474.5 69891	1517 70315	85	Downlink only				NAR	15.0			5	10	15	20
76	DL B51	SDL	1427 70316	1429.5 70341	1432 70365	5	Downlink only				NAR	15.0			5	10	15	20
85	700 a+	FDD	728 70366	737 70456	746 70545	18	698 134002	707 134092	716 134181	30	NAR	15.2			5	10		
87	410	FDD	420 70546	422.5 70571	425 70595	5	410 134182	412.5 134207	415 134231	10	EMEA	16.2	1.4	3	5			
88	410+	FDD	422 70596	424.5 70621	427 70645	5	412 134232	414.5 134257	417 134281	10	EMEA	16.2	1.4	3	5			
103	NB-IoT	FDD	757 70646	757.5 70651	758 70655	1	787 134282	787.5 134287	788 134291	-30		17.5						

Band 66 : The range 2180-2200 MHz of the DL operating band is restricted to E-UTRA operation when carrier aggregation is configured

APAC : Asia and Pacific

APT : Asia Pacific Telecommunity

CALA : Central America Latin America

CBRS : Citizens Broadband Radio Service 3550-3700 MHz

DD : Digital Dividend

EMEA : Europe Middle East and Africa

EU : Europe

NAR : North America Region

PAMR : Public Access Mobile Radio

PS : Public Safety

700 xy : See xy blocks

+ : Extended band