

# Application Note

## Sub-6 Cellular LTE/5G NR Frequency Band Guide

5G cellular, or 5G NR, supports two frequency ranges, FR1, from 410 MHz to 7125 MHz, and FR2 from 24.45 GHz to 52.6 GHz. The FR1 range, also referred to as “Sub-6,” generally overlaps LTE cellular frequencies. The LTE/5G frequency band chart combines the 3GPP LTE and Sub-6 5G bands into a common table for easy reference and application.

### Sub-6 LTE/5G NR Band Frequencies

Operating Band #	Uplink Operating Band (MHz)	Downlink Operating Band (MHz)	Overall Operating Band (MHz)	Total Bandwidth (MHz)	LTE-M	LTE NB-IoT	5G NB-IoT
1	1920 - 1980	2110 - 2170	1920 - 2170	250	x	x	x
2	1850 - 1910	1930 - 1990	1850 - 1990	140	x	x	x
3	1710 - 1785	1805 - 1880	1710 - 1880	170	x	x	x
4	1710 - 1755	2110 - 2155	1710 - 2155	445	x	x	
5	824 - 849	869 - 894	824 - 894	70	x	x	x
7	2500 - 2570	2620 - 2690	2500 - 2690	190	x	x	x
8	880 - 915	925 - 960	880 - 960	80	x	x	x
9	1749.9 - 1784.9	1844.9 - 1879.9	1749.9 - 1879.9	130	-	-	-
10	1710 - 1770	2110 - 2170	1710 - 2170	460	-	-	-
11	1427.9 - 1447.9	1475.9 - 1495.9	1427.9 - 1495.9	68	x	x	-
12	699 - 716	729 - 746	699 - 746	47	x	x	x
13	777 - 787	746 - 756	746 - 787	41	x	x	-
14	788 - 798	758 - 768	758 - 798	40	x	x	x
17	704 - 716	734 - 746	704 - 746	42	-	x	-
18	815 - 830	860 - 875	815 - 875	60	x	x	x
19	830 - 845	875 - 890	830 - 890	60	x	x	-
20	832 - 862	791 - 821	791 - 862	71	x	x	x
21	1447.9 - 1462.9	1495.9 - 1510.9	1447.9 - 1510.9	63	x	x	-
22	3410 - 3490	3510 - 3590	3410 - 3590	180	-	-	-
24	1626.5 - 1660.5	1525 - 1559	1525 - 1660.5	135.5	-	-	-
25	1850 - 1915	1930 - 1995	1850 - 1995	145	x	x	x
26	814 - 849	859 - 894	814 - 894	80	x	x	-
27	807 - 824	852 - 869	807 - 869	62	x	-	-
28	703 - 748	758 - 803	703 - 803	100	x	x	x
29	N/A	717 - 728	717 - 728	11	-	-	-
30	2305 - 2315	2350 - 2360	2305 - 2360	55	-	-	-
31	452.5 - 457.5	462.5 - 467.5	452.5 - 467.5	15	x	x	-
32	N/A	1452 - 1496	1452 - 1496	44	-	-	-
33	1900 - 1920	1900 - 1920	1900 - 1920	20	-	-	-
34	2010 - 2025	2010 - 2025	2010 - 2025	15	-	-	-
35	1850 - 1910	1850 - 1910	1850 - 1910	60	-	-	-

Operating Band #	Uplink Operating Band (MHz)	Downlink Operating Band (MHz)	Overall Operating Band (MHz)	Total Bandwidth (MHz)	LTE-M	LTE NB-IoT	5G NB-IoT
36	1930 - 1990	1930 - 1990	1930 - 1990	60	-	-	-
37	1910 - 1930	1910 - 1930	1910 - 1930	20	-	-	-
38	2570 - 2620	2570 - 2620	2570 - 2620	50	-	-	-
39	1880 - 1920	1880 - 1920	1880 - 1920	40	-	-	-
40	2300 - 2400	2300 - 2400	2300 - 2400	100	-	-	-
41	2496 - 2690	2496 - 2690	2496 - 2690	194	-	x	x
42	3400 - 3600	3400 - 3600	3400 - 3600	200	-	x	-
43	3600 - 3800	3600 - 3800	3600 - 3800	200	-	x	-
44	703 - 803	703 - 803	703 - 803	100	-	-	-
45	1447 - 1467	1447 - 1467	1447 - 1467	20	-	-	-
46	5150 - 5925	5150 - 5925	5150 - 5925	775	-	-	-
47	5855 - 5925	5855 - 5925	5855 - 5925	70	-	-	-
48	3550 - 3700	3550 - 3700	3550 - 3700	150	-	-	-
49	3550 - 3700	3550 - 3700	3550 - 3700	150	-	-	-
50	1432 - 1517	1432 - 1517	1432 - 1517	85	-	-	-
51	1427 - 1432	1427 - 1432	1427 - 1432	5	-	-	-
52	3300 - 3400	3300 - 3400	3300 - 3400	100	-	-	-
53	2483.5 - 2495	2483.5 - 2495	2483.5 - 2495	11.5	-	-	-
65	1920 - 2010	2110 - 2200	1920 - 2200	280	-	x	x
66	1710 - 1780	2110 - 2200	1710 - 2200	490	x	x	x
67	N/A	738 - 758	738 - 758	20	-	-	-
68	698 - 728	753 - 783	698 - 783	85	-	-	-
69	N/A	2570 - 2620	2570 - 2620	50	-	-	-
70	1695 - 1710	1995 - 2020	1695 - 2020	325	-	x	x
71	663 - 698	617 - 652	617 - 698	81	x	x	x
72	451 - 456	461 - 466	451 - 466	15	x	x	-
73	450 - 455	460 - 465	450 - 465	15	x	x	-
74	1427 - 1470	1475 - 1518	1427 - 1518	91	x	x	x
75	N/A	1432 - 1517	1432 - 1517	85	-	-	-
76	N/A	1427 - 1432	1427 - 1432	5	-	-	-
n77	3300 - 4200	3300 - 4200	3300 - 4200	900	-	-	-
n78	3300 - 3800	3300 - 3800	3300 - 3800	500	-	-	-
n79	4400 - 5000	4400 - 5000	4400 - 5000	600	-	-	-
n80	1710 - 1785	N/A	1710 - 1785	75	-	-	-
n81	880 - 915	N/A	880 - 915	35	-	-	-
n82	832 - 862	N/A	832 - 862	30	-	-	-
n83	703 - 748	N/A	703 - 748	45	-	-	-
n84	1920 - 1980	N/A	1920 - 1980	60	-	-	-
85	698 - 716	728 - 746	698 - 746	48	x	x	-
n86	1710 - 1780	N/A	1710 - 1780	70	-	-	-
87	410 - 415	420 - 425	410 - 425	15	x	x	-
88	412 - 417	422 - 427	412 - 427	15	x	x	-
n89	824 - 849	N/A	824 - 849	25	-	-	-

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n90	2496 - 2690	2496 - 2690	2496 - 2690	194	-	-	-
n91	832 - 862	1427 - 1432	832 - 1432	600	-	-	-
n92	832 - 862	1432 - 1517	832 - 1517	685	-	-	-
n93	880 - 915	1427 - 1432	880 - 1432	552	-	-	-
n94	880 - 915	1432 - 1517	880 - 1517	637	-	-	-
n95	2010 - 2025	N/A	2010 - 2025	15	-	-	-

#### LTE-only Bands

5G NR-only Bands

Both LTE and 5G NR Bands

LTE: 3GPP TS 36.101 V16.5.0 (2020-03), 5G NR: 3GPP TS 38.104 V16.3.0 (2020-03)

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