

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 | | | |
| 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 | | | |

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Application Note

| 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 |
|------------------|-----------------------------|-------------------------------|------------------------------|-----------------------|-------|------------|-----------|
| 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 | | | |
| n90 | 2496 – 2690 | 2496 – 2690 | 2496 – 2690 | 194 | | | x |
| 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 | | | |

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|--------------------------|
| 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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