



ITU-APT FOUNDATION OF INDIA (IAFI)¹

**FURTHER UPDATES TO THE WORKING DOCUMENT TOWARDS DRAFT
REVISION OF APT REPORT ON
“INFORMATION OF MOBILE OPERATORS’ FREQUENCIES, TECHNOLOGIES
AND LICENSE DURATIONS IN ASIA PACIFIC COUNTRIES” (REPORT NO.
APT/AWG/REP-15 -REV.6 EDITION: JULY 2019)**

1. Introduction

APT Wireless Group (AWG) is working on a Draft Revision of APT Report on “Information of Mobile Operators’ Frequencies, Technologies and License durations in Asia Pacific Countries” (Report no. APT/AWG/REP-15 -Rev.6 Edition: July 2019). Some of the information provided in the draft report is required to be updated to give the current status.

2. Proposal

IAFI is pleased to provide updates to the report regarding the information related to the Mobile Operators’ Frequencies, Technologies and License durations in India in various sections of the Report (in track change mode and **highlighted**). This information is compiled from publicly available sources in India.

¹ ITU-APT Foundation of India (IAFI) is a new Affiliate Member of APT. Further details of IAFI can be seen at www.itu-apt.org/



**APT REPORT ON
INFORMATION OF MOBILE OPERATORS' FREQUENCIES, TECHNOLOGIES
AND LICENSE DURATIONS IN ASIA PACIFIC COUNTRIES**

Contents

| | |
|---|----|
| 1. Introduction | 3 |
| 2. Questionnaire and Responses | 3 |
| 2.1 Questionnaire..... | 3 |
| 2.2 APT Member countries that submitted responses to APT during the development of this Report | 3 |
| 2.3 Responses to Question 1 | 4 |
| 2.4 Responses to Question 2 | 10 |

2 Introduction

APT Wireless Forum² (AWF) has started to develop the APT Frequency Information System (AFIS) based on the APT Recommendation “The APT Spectrum Database- Guidelines for Constructing and Maintaining the APT Frequency Information system (AFIS)” which was approved in 2006. The sharing of information on frequency allocation and spectrum usages will be beneficial to reach harmonization on spectrum usages among APT member countries. However, especially for IMT mobile usage, information on operators’ frequencies, technologies and license duration of each country is essential to achieve global/regional roaming with the purpose of improving economies of scale and is also very useful in considering migration path of IMT technologies in view of the situation in other countries.

In this regard, at the 7th meeting of AWF, it was agreed to develop an APT Report on information of mobile operators’ frequencies, technologies and license durations in Asia Pacific countries and also to develop a Questionnaire on information in relation to all terrestrial mobile operators, which was completed during the meeting. The first edition of the APT Report was adopted in the 9th meeting of AWF in September 2010. This APT Report was further updated to reflect the latest state of additional frequency bands released for terrestrial mobile cellular networks in some APT countries.

This APT report is a compilation of responses to the Questionnaire and would provide useful information to APT members and could be used for AFIS depending on the scope.

Questionnaire and Responses

2.1 Questionnaire

Questionnaire sent out to each of the APT Member Administration is shown below.

Question 1: What frequency band(s) is/are used for mobile technology (e.g. GSM, CDMA, IMT-2000, BWA) in your country/region?

Question 2: Which operator is using the frequency band(s) mentioned in Question 1 with what kind of technology mentioned in Question 1? Please provide operator name, detailed frequency band(s), used technology and license duration.

2.2 APT Member countries that submitted responses to APT during the development of this Report

The following member countries provided their responses to the Questionnaire.

- 1) Afghanistan, Islamic Republic of (as of January 2010)
- 2) Australia (as of September 2018)
- 3) Bangladesh (as of September 2018)
- 4) Bhutan (as of September 2014)
- 5) Brunei Darussalam (as of August 2014)
- 6) Cambodia (as of January 2010)
- 7) China, People’s Republic of (as of September 2018)
- 8) Hong Kong, China (as of March 2015)
- 9) India, Republic of (as of March 2021)
- 10) Indonesia, Republic of (as of April 2018)
- 11) Iran, Islamic Republic of (as of March 2015)

² AWF is now renamed as APT Wireless Group (AWG)

- 12) Japan (as of July 2019)
- 13) Korea, Republic of (as of September 2018)
- 14) Lao, People's Democratic Republic (as of March 2015)
- 15) Macao, China (as of January 2010)
- 16) Malaysia (as of September 2018)
- 17) Micronesia, The Federated States of (as of January 2010)
- 18) Mongolia (as of September 2016)
- 19) Myanmar (as of September 2018)
- 20) Nepal (as of September 2018)
- 21) New Zealand (as of September 2018)
- 22) Palau (as of January 2010)
- 23) Papua New Guinea (as of March 2015)
- 24) Philippines (as of March 2015)
- 25) Singapore (as of September 2018)
- 26) Thailand (as of September 2018)
- 27) Vietnam, Socialist Republic of (as of September 2014)

2.3 Responses to Question 1

| Technology | Frequency Band (MHz) |
|--|---|
| Afghanistan (Islamic Republic of) | |
| CDMA800 | 826.110 – 834.735 / 871.110 – 879.735 |
| P-GSM900 | 890.200 – 915.000 / 935.200 – 959.800 |
| E-GSM900 | 880.200 – 884.200 / 925.200 – 929.200 |
| GSM1800 | 1710.200 – 1748.400 / 1805.200 – 1843.400 |
| BWA | 2400 – 2500 / 3400 – 3600 |
| IMT 2000 | 1885 – 2025 / 2110 – 2200 |

| Australia | |
|------------------|---------------------------|
| LTE700 | 703-748 / 758-803 |
| LTE850 | 825-845 / 870-890 |
| UMTS (HSPA+) 850 | 825 – 845 / 870 – 890 |
| GSM900 | 890 – 915 / 935 – 960 |
| UMTS (HSPA+) 900 | 900 – 915 / 945 – 960 |
| GSM-R1800 | 1710 – 1785 / 1805 – 1880 |
| LTE1800 | 1710 – 1785 / 1805 – 1880 |
| UMTS(HSPA+) 2100 | 1920 – 1980 / 2110 – 2170 |
| TD-LTE | 2302 – 2400 |
| LTE2500/2600 | 2500-2570 / 2620-2690 |
| LTE3500 /WiMAX | 3400-3600 |

| Bangladesh | |
|--------------------------------|---------------------------|
| CDMA800 | 825 – 845 / 870 – 890 |
| E-GSM | 880 – 890 / 925 – 935 |
| GSM900 | 890 – 915 / 935 – 960 |
| GSM1800 | 1710 – 1785 / 1805 – 1880 |
| WCDMA2100 | 1920 – 1980 / 2110 – 2170 |
| BWA systems (Mobile WiMAX/LTE) | 2300 – 2400 (TDD) |
| BWA systems (Mobile WiMAX/LTE) | 2500 – 2690 (TDD) |

| Technology | Frequency Band (MHz) |
|-------------------|---------------------------|
| Bhutan | |
| GSM 900 | 880-915 / 925 – 960 |
| WCDMA 850 | 824 – 835 / 869 – 880 |
| GSM 1800/LTE 1800 | 1710 – 1785 / 1805 –1880 |
| WCDMA 2100 | 1920 – 1980 / 2110 – 2170 |
| WiMAX | 3400 - 3500 / 3500 – 3600 |

| Brunei Darussalam | |
|--------------------------|---------------------------|
| GSM900 | 900 - 915 / 945 – 960 |
| LTE1800 | 1710-1785 / 1805 – 1880 |
| UMTS (WCDMA) 2100 | 1920 – 1980 / 2110 – 2170 |

| Cambodia | |
|-----------------|---------------------------|
| CDMA450 | 453 – 457.5 / 463 – 467.5 |
| CDMA800 | 824 – 829.4 / 869 – 874.4 |
| EGSM900 | 880 – 915 / 925 – 960 |
| GSM1800 | 1710 – 1785 / 1805 – 1880 |
| UMTS(WCDMA)2100 | 1920 – 1980/2110 – 2170 |

| China (People’s Republic of) | |
|-------------------------------------|---------------------------|
| CDMA/LTE | 825 – 835 / 870 – 880 |
| GSM900/LTE | 889 – 915 / 934 – 960 |
| GSM1800/LTE | 1710 – 1785 / 1805 – 1880 |
| LTE | 1920 – 1940/2110 – 2130 |
| UMTS(WCDMA)/LTE | 1940 – 1965/2130 – 2155 |
| IMT | 1965 –1980 / 2155-2170 |
| TD-LTE | 1880 –1915 TDD |
| IMT | 1915 – 1920 TDD |
| TD-SCDMA | 2010 – 2025 TDD |
| TD-LTE | 2300 – 2400 TDD |
| TD-LTE | 2500 – 2690 TDD |

| Hong Kong, China | |
|-------------------------|-----------------------------------|
| CDMA2000 | 825 – 832.5 / 870 – 877.5 |
| UMTS850 | 832.5 – 837.5 / 877.5 – 882.5 |
| GSM900 / UMTS | 885 – 915 / 930 – 960 |
| GSM1800 / LTE | 1710.5 – 1784.9 / 1805.5 – 1879.9 |
| UMTS | 1920.3 – 1979.7 / 2110.3 – 2169.7 |
| LTE | 2500 – 2570 / 2620 – 2690 |
| UMTS TDD | 1904.9 – 1919.9 (TDD) |
| UMTS TDD | 2019.7 – 2024.7 (TDD) |
| TD-LTE | 2300 – 2390 (TDD) |

| Technology | Frequency Band (MHz) |
|------------------------------------|---|
| India (Republic of) | |
| LTE (3GPP Band 5) | 824 – 844 / 869 – 889 |
| GSM 900/UMTS 900/LTE (3GPP Band 8) | 890 – 915 / 935 – 960 |
| GSM1800/LTE (3GPP Band 3) | 1710 – 1785 / 1805 – 1880 |
| UMTS 2100/LTE (3GPP Band 1) | 1920 -1980 / 2110 -2170 |
| LTE (3GPP Band 40) | 2300 – 2400 (TDD) |
| LTE (3GPP Band 41) | 2535 - 2555 (TDD) and 2635 – 2655 (TDD) |

| Indonesia (Republic of) | |
|--|-------------------------------|
| CDMA450 | 450 – 452.5 / 460 – 462.5 |
| LTE (3GPP Band 31) | 452.5 – 457.5 / 462.5 – 467.5 |
| LTE (3GPP Band 26) | 824 – 835 / 869 – 880 |
| GSM 900 / UMTS (WCDMA) 900 / LTE (3GPP Band 8) | 880 – 915 / 925 – 960 |
| GSM 1800 / LTE (3GPP Band 3) | 1710 – 1785 / 1805 – 1880 |
| UMTS (WCDMA) 2100 / LTE (3GPP Band 1) | 1920 – 1980 / 2110 – 2170 |
| BWA / LTE (3GPP Band 40) | 2300 – 2390 (TDD) |

| Iran (Islamic Republic of) | |
|-----------------------------------|---|
| UMTS 900 MHz | 880 – 890 / 925 – 935 |
| GSM 900 MHz | 890-915 / 935-960 |
| GSM 1800 MHz | 1710-1714 / 1805-1809 1725-1740 / 1820-1840 1770-1785 / 1865-1880 |
| UMTS 1800 MHz | 1725-1740 / 1820-1840 1740-1750/ 1835-1845 1765-1785 / 1860-1880 |
| DECT 1800 MHz | 1880-1900 |
| UMTS 2100 MHz | 1935-1975 / 2125-2170 |
| LTE 2500 MHz | 2550-2570 / 2670-2690 FDD 2570-2620 TDD |
| BWA systems | 3422-3474.5 / 3479-3500 TDD 3522-3564.5 / 3569-3600 TDD |

| Japan | |
|------------------------------------|--|
| LTE | 718 – 748 / 773 – 803 |
| UMTS (WCDMA)800 / CDMA 2000 / LTE | 815 – 845 / 860 – 890 |
| UMTS (WCDMA)900 / LTE | 900 – 915 / 945 – 960 |
| LTE | 1427.9 – 1462.9 / 1475.9 – 1510.9 |
| LTE | 1710 – 1785 / 1805 – 1880 |
| PHS | 1884.5 – 1915.7 (TDD) |
| UMTS (WCDMA)2100 / LTE | 1920 – 1980 / 2110 – 2170 |
| BWA systems (WiMAX, AXGP, WiMAX2+) | 2545 – 2575 (TDD) 2595 – 2645 (TDD) |
| LTE | 3400 – 3600 (TDD) |

| | |
|----------------------------------|--|
| 5G (3GPP Release 15) (Note 1) | 3600 – 4100 (TDD) 4500 – 4600 (TDD) 27000 – 28200 (TDD) 29100 – 29500 (TDD) |
|----------------------------------|--|

Note 1: These bands have been already allocated to each mobile operator, but not in use as of June 25, 2019.

| Technology | Frequency Band (MHz) |
|----------------------------|--|
| Korea (Republic of) | |
| CDMA800 | 824 – 829 / 869 – 874 |
| CDMA | 1770 – 1780 / 1860 – 1870 |
| UMTS(WCDMA)2100 | 1950– 1960 / 2140 – 2150 1970– 1980 / – 2170 |
| Mobile WiMAX (WiBro) | 2300 – 2327 2330 – 2360 |
| LTE | 829 – 849 / 874 – 894 904.3 – 914.3 / 949.3 – 959.3 1715 – 1725 / 1810 – 1820 1730 – 1740 / 1820 – 1840 1745 – 1765 / 1840 - 1860 1920 – 1950 / 2110 -2140 1960 – 1970 / 2150 – 2160 2500 – 2550 / 2620 - 2670 |
| 5G (3GPP Release 15) | 3420 – 3700 |
| 5G (3GPP Release 15) | 26500 – 28900 |
| TBD | 819 – 824 / 864 – 869 |

| Lao PDR | |
|----------------|-------------------------------|
| CDMA 450 | 452.5-457.475 / 462.5-467.475 |
| eGSM 900 | 880 - 890 / 925 – 935 |
| GSM 900 | 890 – 915 / 935 – 960 |
| GSM 1800 | 1710 -1785 / 1805 – 1880 |
| IMT 2000 | 1920 – 1980 / 2110 – 2170 |

| Macao (China) | |
|----------------------|---------------------------|
| CDMA800 | 825 – 845/870 – 890 |
| GSM900 | 890 – 915 / 935 – 960 |
| GSM1800 | 1710 – 1785 / 1805 – 1880 |
| UMTS(WCDMA)2100 | 1920 – 1980 / 2110 – 2170 |

| Malaysia | |
|--------------------------------|--|
| CDMA450 | 452.0 – 456.475 / 462.0 – 466.475 |
| LTE | 824-829 / 869-874 |
| GSM900/UMTS(WCDMA)900 / LTE | 880 – 915 / 925 – 960 |
| GSM1800/ LTE | 1710 – 1785/ 1805 – 1880 |
| UMTS(WCDMA)2100 | 1920 – 1980/ 2110 – 2170 1915 – 1920 (TDD) 2010 – 2025 (TDD) |
| WiMAX / LTE | 2300 – 2400 (TDD) |

| | |
|-----|--|
| LTE | 2500 – 2570 / 2620 – 2690 2575 – 2615 (TDD) |
|-----|--|

| Technology | Frequency Band (MHz) |
|---|-----------------------|
| Micronesia (The Federated States of) | |
| GSM900 | 890 – 902 / 935 – 947 |

| Mongolia | |
|-----------------|--|
| CDMA450 | 450 – 460 / 460 – 470 |
| CDMA800 | 824 – 849 / 869 – 894 |
| CDMA1800 | 1850 – 1865 / 1930 – 1945 1880 – 1885 / 1960 – 1965 |
| GSM900 | 890 – 915 / 935 – 960 |
| GSM1800 | 1710 – 1785 / 1805 – 1880 |
| 3G/WCDMA | 1920 – 2170 |
| LTE | 1710 – 1785 / 1805 – 1880 |

| Myanmar (The Republic of the Union of) | |
|---|----------------------------------|
| CDMA450 | 453.375-457.125/ 463.375-467.125 |
| CDMA800 | 825-833.375/ 870-878.75 |
| GSM900 | 890 – 915/ 935 – 960 |
| LTE | 1710-1785/ 1805-1880 |
| WCDMA | 1920 – 1980/2110 – 2170 |
| BWA(TDD) | 2575-2615 |

| Nepal (Federal Democratic Republic of) | |
|--|--|
| CDMA800 | 824 – 834 / 869 – 879 (FDD) |
| GSM 900 / UMTS 900 | 880 – 915 / 925 – 960 (FDD) |
| GSM 1800 / LTE 1800 | 1710 – 1785 / 1805 – 1880 (FDD) |
| IMT-2000 (3G/WCDMA) | 1920 – 1980 / 2110 – 2170 (FDD) |
| IMT-Advanced /WiMAX | 2300 – 2400 (TDD) |
| IMT-Advanced | 2500 – 2570 / 2620 – 2690 (FDD) 2570 – 2620 (TDD) |
| IMT- Advanced/BWA | 3300 – 3400 (TDD) |
| IMT-Advanced/LTE | 703 – 748 / 758 – 803 (FDD) |
| IMT Advanced/LTE | 3400 – 3600 (TDD) |
| IMT Advanced/LTE | 3600 – 3800 (TDD) |

| New Zealand | |
|-----------------------|---------------------------|
| LTE | 703 – 748 / 758 – 803 |
| UMTS850 | 825 – 840 / 870 – 885 |
| UMTS900 / LTE | 890 – 915 / 935 – 960 |
| LTE | 1710 – 1785 / 1805 – 1880 |
| UMTS(WCDMA)2100 / LTE | 1920 – 1980 / 2110 – 2170 |
| BWA / LTE | 2300 – 2395 |
| BWA / LTE | 2500 – 2570 / 2620 – 2690 |
| BWA / LTE | 2575 – 2620 |

| | |
|-----|---------------------------|
| BWA | 3410 – 3487 / 3510 – 3587 |
|-----|---------------------------|

| Palau | |
|---------|--------------------------|
| GSM900 | 890 – 915/ 935 – 960 |
| GSM1800 | 1710 – 1715/ 1805 – 1810 |

| Papua New Guinea | |
|------------------|-----------------------------|
| EGSM | 880 – 889.80 / 925 – 934.80 |
| PGSM | 890 – 914.80 / 935 – 959.80 |
| GSM1800 | 1700 – 1720 / 1805 – 1820 |
| CDMA | 824 – 835 / 869 – 880 |
| LTE700 | 698-806 |
| BWA (WiMAX) | 2330 – 2360 |
| BWA (WiMAX) | 3400 – 3500 |

| Philippines | |
|-------------------|--|
| CDMA 450 | 450 – 470 |
| UMTS (WCDMA) 800 | 825 – 845 / 870 - 890 |
| EGSM | 880 – 890 / 925 – 935 |
| GSM 900 | 890 – 915 / 935 – 960 |
| GSM 1800 | 1710 – 1785 / 1805 – 1880 |
| UMTS (WCDMA) 2100 | 1920 – 1980 / 2110 – 2170 |
| CDMA | 1900 – 1910 / 1980 – 1990 |
| WIMAX | 2300 – 2400 (TDD) 2500 – 2690 (TDD) 3400 – 3600 (FDD) 10150 – 10650 (FDD) |

| Singapore | |
|----------------------|--|
| HSPA | 882 – 887 / 927 – 932 |
| WCDMA / LTE / NB-IoT | 890 – 915 / 935 – 960 |
| LTE | 1710 – 1785 / 1805 – 1880 2300 – 2340 2500 – 2560 / 2620 – 2680 2570 – 2615 |
| Non-IMT | 1904.9 – 1920 |
| HSPA / WCDMA / LTE | 1920 – 1979.7/ 2110.3 – 2169.7 |

| Thailand | |
|------------------|---------------------------|
| HSPA | 824 – 839 / 869 – 884 |
| GSM900/WCDMA/LTE | 895 – 915 / 940 – 960 |
| GSM1800/LTE | 1710 – 1785 / 1805 – 1880 |
| HSPA/LTE | 1920 – 1980 / 2110 – 2170 |
| TDD LTE | 2310 – 2370 |
| BWA | 2500 – 2690 |

| Viet Nam (Socialist Republic of) | |
|----------------------------------|-----------------------------------|
| CDMA 450 | 453.08 – 457.37 / 463.08 – 467.37 |
| CDMA 2000 1X EV-DO/HSPA | 824 – 835 / 869 – 880 |

| | |
|----------|---------------------------|
| eGSM900 | 880 – 890 / 925 – 935 |
| GSM900 | 890 – 915 / 935 – 960 |
| GSM1800 | 1710 – 1785 / 1805 – 1880 |
| IMT 2000 | 1920 – 1980 / 2110 – 2170 |

2.4 Responses to Question 2

1) Afghanistan, Islamic Republic of

| Operator | Frequency Band (MHz) | | Technology | License duration |
|----------------|----------------------|-------------------|------------|---|
| | Uplink | Downlink | | |
| AWCC | 829.200 - 898.000 | 935.200 - 943.000 | P-GSM 900 | Period:15 years 10 July 2003 – 9 July 2018 |
| | 1730.200-1736.000 | 1825.200-1831.000 | GSM 1800 | |
| TDCA | 898.400 - 906.200 | 934.000 - 951.200 | P-GSM 900 | Period:15 years 09 Jan 2003 – 08 Jan 2018 |
| | 1742.600-1748.400 | 1837.600-1843.400 | GSM 1800 | |
| MTN | 906.000 - 910.600 | 951.600 - 955.600 | P-GSM 900 | Period:15 years 12 Oct 2005 – 11 Oct 2020 |
| | 1710.200-1719.800 | 1805.200-1814.800 | GSM 1800 | |
| ETTISALAT | 911.000 - 915.000 | 956.000 - 959.800 | P-GSM 900 | Period:15 years 30 May 2006 – 29 May 2021 |
| | 880.200 - 884.200 | 925.200 - 929.200 | E-GSM 900 | |
| | 1720.200-1729.800 | 1815.200-1824.800 | GSM 1800 | |
| AFGHAN TELECOM | 826.110 - 829.800 | 871.110 - 874.800 | CDMA 800 | Period:15 years 19 April 2006 – 18 April 2021 |
| WASEL TELECOM | 831.045 - 834.735 | 876.045 - 879.735 | CDMA 800 | Period:15 years 18 May 2006 – 17 May 2021 |

Note: Afghanistan Telecommunications Regulatory Authority (ATRA) has not awarded any license for BWA and IMT-2000 since January 2010 in Afghanistan.

2) Australia

| Operator | Frequency Band(MHz) | | Technology (Note) | License duration | Comments |
|-----------------------------|---------------------|-----------|------------------------|---|----------------|
| | Uplink | Downlink | | | |
| Telstra Corporation Limited | 713-733 | 768-788 | LTE700 | Period:15 years Expiration: 31 Dec 2029 | Australia-wide |
| | 830-845 | 875-890 | UMTS (HSPA+) 800 | Period:15 years Expiration: 17 June 2028 | Australia wide |
| | 890-898.4 | 935-943.4 | GSM 900 | Issued on an annual basis until completion of 803-960 | Australia wide |

| Operator | Frequency Band(MHz) | | Technology (Note) | License duration | Comments |
|---|----------------------|------------------|---|---|---|
| | Uplink | Downlink | | | |
| | | | | MHz review (previously 5 years) | |
| | 1710-1730 | 1805-1825 | LTE1800 | Period:15 years Expiration: 17 June 2028 | Regional and City areas |
| | 1935- 1940 | 2125-2130 | UMTS (HSPA+) 2100 | Period:15 years Expiration: 11 Oct. 2017 | Major cities |
| | 1960-1970 | 2150-2160 | | | |
| | 1970-1975 | 2160-2165 | UMTS (HSPA+) 2100 | Combination 15 year spectrum licence expiring: 11 Oct. 2017 and 5 year apparatus licence | Regional |
| | 1940-1950 | 2130-2140 | | | |
| | 2302-2337, 2368-2400 | | TD-LTE | 24 July 2030 | Remote Areas |
| 2510-2550 | 2630-2670 | LTE2500/ 2600 | Period:15 years Expiration: 30 Sep 2029 | Australia- wide | |
| 3425-3442.5, 3475-3492.5 | | TD-LTE | 13 Dec 2015 | | |
| Vodafone Hutchison Australia Pty Ltd | 733-738 | 788-793 | LTE700 | Dec 2029 | Australia- wide |
| | 825-835 | 870-880 | UMTS (HSPA+) 850/ LTE850 | Period:15 years Expiration: 17 June 2028 | Regional, Remote and City Areas. |
| | 906.7-915.1 | 951.7-960.1 | GSM 900 / UMTS (HSPA+) 900 | Issued on an annual basis until completion of 803-960 MHz review (previously 5 years) | Australia wide |
| | 1725-1755 | 1820-1845 | LTE 1800 | Period:15 years Expiration: 17 June 2028 | Major cities |
| | 1710-1725 | 1805-1820 | LTE1800 | Period:15 years Expiration: 17 June 2028 | Regional Areas |
| | 1920-1935 | 2110-2125 | UMTS (HSPA+) 2100 | Period:15 years Expiration: 11 Oct.2017 | Major cities |

| Operator | Frequency Band(MHz) | | Technology (Note) | License duration | Comments |
|-----------------------------|--------------------------|-------------|-------------------------------------|---|--|
| | Uplink | Downlink | | | |
| | 1970-1980 | 2160-2170 | UMTS (HSPA+) 2100 | Period:15 years Expiration: 11 Oct.2017 | Major cities and regional |
| Singtel Optus Pty Ltd | 703-713 | 758-768 | LTE700 | Period:15 years Expiration: 31 Dec 2029 | Australia- wide |
| | 898.4-906.8 | 943.4-951.8 | GSM 900 / UMTS (HSPA+) 900 | Issued on an annual basis until completion of 803-960 MHz review (previously 5 years) | Australia wide |
| | 1755-1770 | 1850-1865 | LTE 1800 | Period:15 years Expiration: 17 June 2028 | Major cities |
| | 1940-1960 | 2130-2150 | UMTS (HSPA+) 2100 | Period:15 years Expiration: 11 Oct.2017 | Major cities |
| | 1970-1965 | 2140-2155 | UMTS (HSPA+) 2100 | Combination 15 year spectrum licence expiring: 11 Oct. 2017 and 5 year apparatus licence | Regional areas |
| | 2302-2400 | | TD-LTE | Period:15 years Expiration: 24 July 2030 | Major cities, some regional locations |
| | 2550-2570 | 2670-2690 | LTE2500/ 2600 | Period:15 years Expiration: 30 Sep 2029 | Australia- wide |
| | 3425-3492.5, 3542.5-3575 | | TD-LTE | Period:15 years Expiration: 13 Dec 2015 | Major cities, Regional Western Australia |
| TPG Internet Pty Ltd | 738-748 | 793-803 | LTE700 | Expiration Dec 2029 | Australia- wide |
| | 2500-2510 | 2620-2630 | LTE2500/ 2600 | Period:15 years Expiration: 30 Sep 2029 | Australia- wide |

| Operator | Frequency Band(MHz) | | Technology (Note) | License duration | Comments |
|--|---------------------|-----------|-------------------|---|---|
| | Uplink | Downlink | | | |
| Rail Corporation New South Wales | 1770-1785 | 1865-1880 | GSM-R 1800 | Period:15 years Expiration: 17 June 2028 | Sydney |
| Public Transport Authority of Western Australia | 1770-1785 | 1865-1880 | – | Period:15 years Expiration: 17 June 2028 | Perth |
| Department for Transport Energy and Infrastructure | 1775-1785 | 1870-1880 | – | Period:15 years Expiration: 17 June 2028 | Adelaide |
| QR Network Pty Ltd | 1770-1785 | 1865-1880 | GSM-R 1800 | Period:15 years Expiration: 17 June 2028 | Brisbane |
| Victorian Rail Track | 1770-1785 | 1865-1880 | GSM-R 1800 | Period:15 years Expiration: 17 June 2028 | Melbourne |
| NBN Co | 2302-2400 | | TD-LTE | Period:15 years Expiration: 24 July 2030 | Regional and remote areas |
| | 3400-3575 | | TD-LTE | Combination 15 year spectrum licence expiring: 13 Dec 2015 and 5 year apparatus licence | Various amounts of spectrum in different metro, regional and remote areas |

Note: All bands in the table are available on a technology flexible basis in Australia. The technology column in this case indicates the most likely/major technology deployed at the present time (however, the type of service deployed and the technology used is at the discretion of the licensee).

3) Bangladesh

| Operator | Frequency Band (MHz) | | Technology | License duration |
|--------------------------------|----------------------|------------------|--------------------|------------------|
| | Uplink | Downlink | | |
| Pacific Bangladesh Telecom Ltd | 825.00 – 835.00 | 870.00-880.00 | CDMA2000 1X | 2011-2026 |
| ROBI AXIATA BD Ltd | 888.40 – 890.00 | 933.40 – 935.00 | Technology Neutral | 2005-2020 |
| | 1720.00-1730.00 | 1815.00 –1825.00 | Technology Neutral | |
| ROBI AXIATA BD Ltd | 900.20-907.60 | 945.20 – 952.60 | Technology Neutral | 2011 - 2026 |

| | | | | |
|---------------------------------------|------------------|------------------|--------------------|-------------|
| | 1730.0 -1737.40 | 1825.0 – 1832.40 | Technology Neutral | |
| | 1945 – 1955 | 2135 – 2145 | Technology Neutral | 2013 - 2028 |
| Banglalink Digital Communications Ltd | 895.20 - 900.20 | 940.20 – 945.20 | Technology Neutral | 2011 - 2026 |
| | 1752.00-1762.00 | 1847.00 –1857.00 | Technology Neutral | |
| | 1762.00 -1767.60 | 1857.00 –1862.60 | Technology Neutral | 2018 - 2033 |
| | 1955.00-1960.00 | 2145.00–2150.00 | Technology Neutral | 2013 - 2028 |
| | 1930.00-1935.00 | 2120.00-2125.00 | Technology Neutral | 2018 - 2033 |
| Grameen Phone Ltd | 907.60 – 915.00 | 952.60 – 960.00 | Technology Neutral | 2011 – 2026 |
| | 1737.40 -1752.00 | 1832.40 –1847.00 | Technology Neutral | |
| | 1767.60-1772.60 | 1862.60-1867.60 | Technology Neutral | 2018- 2033 |
| | 1935 – 1945 | 2125 – 2135 | Technology Neutral | 2013 - 2028 |
| Tele Talk Bangladesh Ltd | 890.00 – 895.20 | 935.00 – 940.20 | GSM, EDGE | 2004 - 2019 |
| | 1710.00 -1720.00 | 1805.00 –1815.00 | GSM, EDGE | |
| | 1960.00-1970.00 | 2150.00-2160.00 | 3G | 2012 - 2026 |

4) Bhutan

| Operator | Frequency Band(MHz) | | Technology | License duration |
|----------------|---------------------|-------------|------------|------------------|
| | Uplink | Downlink | | |
| Bhutan Telecom | 824 - 829 | 869 - 874 | WCDMA850 | 15 years |
| | 890 - 900 | 935 - 945 | GSM900 | |
| | 1920 - 1940 | 2110 - 2130 | WCDMA2100 | |
| | 1730 - 1740 | 1825 - 1835 | LTE1800 | |
| | 1720 - 1730 | 1815 - 1825 | GSM1800 | |
| Tashi InfoComm | 900 - 910 | 945 - 955 | GSM900 | 15 years |
| | 824 - 834 | 860 - 879 | WCDMA850 | |

5) Brunei Darussalam

| Operator | Frequency Band(MHz) | | Technology | License duration |
|-------------------------------|---------------------|-------------|-----------------|---------------------------|
| | Uplink | Downlink | | |
| DataStream Technology Sdn Bhd | 900 - 915 | 945 – 960 | GSM 900 | Valid until 30 April 2028 |
| | 1765 - 1785 | 1860 – 1880 | LTE1800 | Valid until 30 April 2028 |
| | 1940 - 1960 | 2130 – 2150 | UMTS(WCDMA)2100 | Valid until 30 April 2028 |
| Progresif Cellular Sdn Bhd | 1920 - 1940 | 2110 – 2130 | UMTS(WCDMA)2100 | Valid until 31 Dec 2029 |

6) Cambodia

| Operator | Frequency Band(MHz) | | Technology | License duration |
|----------|---------------------|---------------|-------------|------------------|
| | Uplink | Downlink | | |
| M FONE | 453.0 – 457.5 | 463.0 – 467.5 | CDMA 450 | Note |
| | 888.0 – 890.0 | 933.0 – 935.0 | EGSM 900 | Note |
| | 1750 – 1770 | 1845 – 1865 | GSM 1800 | Expiration:2032 |
| | 1975 – 1980 | 2165 – 2170 | UMTS(WCDMA) | Expiration:2036 |
| GT-Tell | 824.0 – 829.4 | 869.0 - 874.4 | CDMA 800 | Expiration:2037 |
| SOTELCO | 880.0 – 888.0 | 925.0 – 933.0 | EGSM 900 | Expiration:2042 |
| | 1745 – 1750 | 1840 – 1845 | GSM 1800 | Expiration:2042 |
| CamGSM | 890.0 – 899.3 | 935.0 – 944.3 | GSM 900 | Expiration:2021 |
| | 1770 – 1785 | 1865 – 1880 | GSM 1800 | Note |
| | 1960 – 1975 | 2150 – 2165 | UMTS(WCDMA) | Note |
| VIETTEL | 899.3 – 905.7 | 944.3 – 950.7 | GSM 900 | Note |
| | 1710 – 1720 | 1805 – 1815 | GSM 1800 | Expiration:2036 |
| | 1940 – 1950 | 2130 – 2140 | UMTS(WCDMA) | Expiration:2039 |
| TMIC | 905.7 – 915.0 | 950.7 – 960.0 | GSM 900 | Expiration:2027 |
| | 1740 – 1745 | 1835 – 1840 | GSM 1800 | Note |
| | 1920 – 1930 | 2110 – 2120 | UMTS(WCDMA) | Expiration:2038 |
| LATELZ | 1720 – 1730 | 1815 – 1825 | GSM 1800 | Note |
| APPIFONE | 1730 – 1740 | 1825 – 1835 | GSM 1800 | Note |
| | 1930 – 1940 | 2120 – 2130 | UMTS(WCDMA) | Expiration:2038 |
| CADCOMMS | 1950 – 1960 | 2140 – 2150 | UMTS(WCDMA) | Expiration:2036 |

Note: Expiration date is around 2020 to 2040.

7) China, People's Republic of

| Operator | Frequency Band(MHz) | | Technology | License duration |
|---------------|---------------------|-----------|------------|------------------------|
| | Uplink | Downlink | | |
| China Telecom | 825~835 | 870~880 | CDMA/LTE | Expiration: 2018.12.31 |
| | 1765~1780 | 1860~1875 | LTE | Expiration: 2023.12.31 |
| | 1920~1940 | 2110~2130 | LTE | Expiration: 2018.12.31 |
| | 2635-2655 (TDD) | | TD-LTE | Expiration: 2023.12.31 |
| China Mobile | 889 – 909 | 934 – 954 | GSM900 | Expiration 2019.12.31 |
| | 1710~1735 | 1805~1830 | GSM1800 | Expiration 2019.12.31 |
| | 1880 – 1915(TDD) | | TD-LTE | Expiration: 2023.12.31 |
| | 2010~2025(TDD) | | TD-SCDMA | Expiration: 2018.12.31 |
| | 2320 – 2370 (TDD) | | TD-LTE | Expiration: 2023.12.31 |

| Operator | Frequency Band(MHz) | | Technology | License duration |
|--------------|---------------------|-----------|------------------------|---------------------------|
| | Uplink | Downlink | | |
| | 2575-2635 (TDD) | | TD-LTE | Expiration: 2023.12.31 |
| China Unicom | 909~915 | 954~960 | GSM900 WCDMA LTE | Expiration 2019.12.31 |
| | 1735~1750 | 1830~1845 | GSM1800 LTE | Expiration 2019.12.31 |
| | 1750~1765 | 1845~1860 | LTE | Expiration: 2023.12.31 |
| | 1940~1955 | 2130~2145 | WCDMA LTE | Expiration: 2018.12.31 |
| | 1955~1965 | 2145~2155 | L2100 | Expiration: 2018.12.31 |
| | 2300-2320 (TDD) | | TD-LTE | Expiration: 2023.12.31 |
| | 2555-2575 (TDD) | | TD-LTE | Expiration: 2023.12.31 |

8) Hong Kong, China

| Operator | Frequency Band (MHz) | | Technology | Licence duration |
|-------------------|----------------------|-----------------|---------------|-------------------|
| | Uplink | Downlink | | |
| Hong Kong Telecom | 825 – 832.5 | 870 – 877.5 | CDMA2000 | Expiration : 2023 |
| | 890 – 897.5 | 935 – 942.5 | GSM900 / UMTS | Expiration : 2021 |
| | 904.1 – 904.9 | 949.1 – 949.9 | GSM900 | Expiration : 2021 |
| | 1713.7 – 1716.9 | 1808.7 – 1811.9 | GSM1800 | Expiration : 2021 |
| | 1718.5 – 1740.1 | 1813.5 – 1835.1 | GSM1800 / LTE | Expiration : 2021 |
| | 1770.1 – 1781.7 | 1865.1 – 1876.7 | GSM1800 / LTE | Expiration : 2021 |
| | 1920.3 – 1949.9 | 2110.3 – 2139.9 | UMTS | Expiration : 2016 |
| | 2535 – 2540 | 2655 – 2660 | LTE | Expiration : 2028 |
| | 2540 – 2555 | 2660 – 2675 | LTE | Expiration : 2024 |
| | 1904.9 – 1909.9 | | UMTS TDD | Expiration : 2016 |
| | 1914.9 – 1919.9 | | UMTS TDD | Expiration : 2016 |
| Hutchison | 885 – 890 | 930 – 935 | UMTS | Expiration : 2026 |
| | 897.5 – 902.3 | 942.5 – 947.3 | UMTS | Expiration : 2020 |
| | 903.1 - 904 | 948.1 – 949 | GSM900 | Expiration : 2020 |
| | 904.9 – 907.5 | 949.9 – 952.5 | GSM900 | Expiration : 2020 |
| | 1710.5 – 1712.1 | 1805.5 – 1807.1 | GSM1800 | Expiration : 2021 |
| | 1760.1 – 1770.1 | 1855.1 – 1865.1 | GSM1800 / LTE | Expiration : 2021 |
| | 1964.9 – 1979.7 | 2154.9 – 2169.7 | UMTS | Expiration : 2016 |
| | 2019.7 – 2024.7 | | UMTS TDD | Expiration : 2016 |
| | 2360 – 2390 | | TD-LTE | Expiration : 2027 |
| China Mobile | 1750.1 – 1760.1 | 1845.1 – 1855.1 | GSM1800 / LTE | Expiration : 2021 |
| | 1781.7 – 1784.9 | 1876.7 – 1879.9 | GSM1800 | Expiration : 2021 |
| | 2530 – 2535 | 2650 – 2655 | LTE | Expiration : 2028 |
| | 2555 – 2570 | 2675 – 2690 | LTE | Expiration : 2024 |
| | 2330 – 2360 | | TD-LTE | Expiration : 2027 |
| SmarTone | 832.5 – 837.5 | 877.5 – 882.5 | UMTS850 | Expiration : 2026 |

| Operator | Frequency Band (MHz) | | | | | | License Duration |
|---------------|----------------------|-------------------|--------------|----------------|----------|----------|------------------|
| | LTE 800 | GSM/UMTS /LTE 900 | GSM/LTE 1800 | UMTS /LTE 2100 | LTE 2300 | LTE 2500 | |
| Sistema Shyam | Y | | | | | | |
| VodaIdea | | Y | Y | Y | Y | Y | |

Note: In India, licenses are awarded to mobile operators on service area basis. Please contact Telecom Regulatory Authority of India (TRAI)/Department of Telecommunication (DOT) for detailed information on mobile operator name, assigned frequency band and used technology in a specific service area.

10) Indonesia, Republic of

| Operator | Frequency Band(MHz) | | Technology | License Duration | Coverage |
|---------------------------------------|---------------------|-----------------|----------------------------------|---------------------------|-------------|
| | Uplink | Downlink | | | |
| PT Sampoerna Telekomunikasi Indonesia | 450 – 457.5 | 460 – 467.5 | CDMA450 / LTE | 2016 – 2026 ¹⁾ | Nation Wide |
| PT Smartfren Telecom, Tbk. | 824 – 835 | 869 – 880 | LTE | 2010 – 2020 ¹⁾ | Nation Wide |
| PT Indosat, Tbk. | 887.5 – 890 | 932.5– 935 | GSM 900 / UMTS (WCDMA) 900 / LTE | 2010 – 2020 ¹⁾ | Nation Wide |
| | 890 – 900 | 935 – 945 | | | |
| | 1742.5 – 1762.5 | 1837.5 – 1857.5 | GSM 1800 / LTE | | |
| | 1965 – 1970 | 2155 – 2160 | UMTS (WCDMA) 2100 / LTE | 2018 – 2028 ¹⁾ | |
| | 1970 – 1975 | 2160 – 2165 | | 2009 – 2019 ¹⁾ | |
| | 1975 – 1980 | 2165 – 2170 | | 2016 – 2026 ²⁾ | |
| PT Telekomunikasi Selular | 880 – 887.5 | 925 – 932.5 | GSM 900 / UMTS (WCDMA) 900 / LTE | 2010 – 2020 ¹⁾ | Nation Wide |
| | 900 – 907.5 | 945 – 952.5 | | | |
| | 1762.5 – 1785 | 1857.5 – 1880 | | | |
| | 1935 – 1940 | 2125 – 2130 | UMTS (WCDMA) 2100 / LTE | 2009 – 2019 ¹⁾ | |
| | 1940 – 1945 | 2130 – 2135 | | 2016 – 2026 ²⁾ | |
| | 1945 – 1950 | 2135 – 2140 | | 2013 – 2023 ¹⁾ | |
| | 2300 – 2330 | | | LTE | |
| PT XL Axiata, Tbk. | 907.5 – 915 | 952.5 – 960 | GSM 900 / UMTS | 2010 – 2020 ¹⁾ | Nation Wide |

| Operator | Frequency Band(MHz) | | Technology | License Duration | Coverage |
|-----------------------------------|---------------------|-----------------|-------------------------------|---|-------------|
| | Uplink | Downlink | | | |
| | | | (WCDMA) 900 / LTE | 2010 – 2020 ¹⁾ 2011 – 2021 ¹⁾ 2016 – 2026 ²⁾ | |
| | 1710 – 1732.5 | 1805 – 1827.5 | GSM 1800 / LTE | | |
| | 1950 – 1955 | 2140 – 2145 | UMTS (WCDMA) 2100 / LTE | | |
| | 1955 – 1960 | 2145 – 2150 | | | |
| | 1960 – 1965 | 2150 – 2155 | | | |
| PT Hutchison 3 Indonesia | 1732.5 – 1742.5 | 1827.5 – 1837.5 | GSM 1800 / LTE | 2010 – 2020 ¹⁾ | Nation Wide |
| | 1920 – 1925 | 2110 – 2115 | UMTS (WCDMA) 2100 / LTE | 2016 – 2026 ²⁾ | |
| | 1925 – 1930 | 2115 – 2120 | | 2011 – 2021 ¹⁾ | |
| | 1930 – 1935 | 2120 – 2125 | | 2018 – 2028 ¹⁾ | |
| PT Smart Telecom | 2330 – 2360 | | LTE | 2014 – 2024 ¹⁾ | Nation Wide |
| PT First Media | 2360 – 2375 | | LTE | 2009 – 2019 ¹⁾ | Sub Nation |
| PT Internux | 2375 – 2390 | | LTE | 2009 – 2019 ¹⁾ | Sub Nation |
| PT Indosat Mega Media | 2375 – 2390 | | BWA (TDD) | 2009 – 2019 ¹⁾ | Sub Nation |
| PT Jasnita Telekomindo | 2375 – 2390 | | BWA (TDD) | 2009 – 2019 ¹⁾ | Sub Nation |
| PT Berca Hardayaperkasa | 2360 – 2390 | | BWA (TDD) | 2009 – 2019 ¹⁾ | Sub Nation |
| PT Telekomunikasi Indonesia, Tbk. | 2360 – 2375 | | BWA (TDD) | 2009 – 2019 ¹⁾ | Sub Nation |

Note 1) : License is granted by bandwidth-based licensed and can be extended for the next 10 years.

Note 2) : License is granted by bandwidth-based licensed and already been extended for the second term of 10 years license. After the license period ended, the band will be evaluated.

11) Iran (Islamic Republic of)

| Operator | Frequency Band(MHz) | | Technology | License duration |
|----------|---------------------|-------------|------------|------------------|
| | Uplink | Downlink | | |
| Ritel | 880-890 | 925-935 | UMTS | 15 years |
| | 1740-1750 | 1835-1845 | UMTS | |
| | 1950-1965 | 2140-2155 | UMTS | |
| MTN | 890.1-896.1 | 935.1-941.1 | GSM | 15 years |
| | 890.1-897.9 | 935.1-942.9 | GSM | WiMax: 6 years |

| Operator | Frequency Band(MHz) | | Technology | License duration |
|----------------|---------------------|---------------|------------|------------------|
| | Uplink | Downlink | | |
| | 1765-1785 | 1860-1880 | GSM/UMTS | |
| | 1935-1950 | 2125-2140 | UMTS | |
| | 2500-2515 | 2620-2635 | 3G & LTE | |
| | 3479-3500 | 3569-3600 | WiMax | |
| TCI | 896.3-914.9 | 941.3-959.9 | GSM | 15 years |
| | 898.1-902.7 | 943.1-947.7 | GSM | |
| | 906.7-914.7 | 951.7-959.9 | GSM | |
| | 902.7-906.7 | 947.7-951.7 | GSM | |
| | 1725.1-1739.9 | 1820.1-1834.9 | GSM/UMTS | |
| | 1880-1900 (TDD) | | WLL DECT | |
| MTCE | 902.7-906.7 | 947.7-951.7 | GSM | 15 years |
| | 3422-3443 | 3522-3543 | WiMax | WiMax: 6 years |
| Kish Telecom | 902.7-906.7 | 947.7-951.7 | GSM | 10 years |
| Irafon | 1710.1-1713.1 | 1805.2-1806.8 | PSTN | 10 years |
| Koh noor | 1710.1-1713.1 | 1805.1-1808.1 | GSM as USO | 10 years |
| Datak | 3422-3443 | 3522-3543 | WiMax | 6 years |
| Rayaneh Danesh | 3422-3443 | 3522-3543 | WiMax | 6 years |
| Mobin Net | 3443.5-3474.5 | 3543.5-3564.5 | WiMax | 6 years |

12) Japan

| Operator | Frequency Band(MHz) | | Technology | License duration |
|---|---------------------|---------------|----------------------|----------------------------|
| | Uplink | Downlink | | |
| NTT DOCOMO, INC. | 728-738 | 783-793 | LTE | Period:5 years (Note 2) |
| | 830-845 | 875-890 | WCDMA / LTE | |
| | 1447.9-1462.9 | 1495.9-1510.9 | LTE | |
| | 1765-1785 | 1860-1880 | LTE | |
| | 1940-1960 | 2130-2150 | WCDMA / LTE | |
| | 3440-3480(TDD) | | LTE | |
| | 3480-3520(TDD) | | LTE | |
| | 3600-3700(TDD) | | 5G (3GPP Release 15) | |
| | 4500-4600(TDD) | | 5G (3GPP Release 15) | |
| | 27400-27800(TDD) | | 5G (3GPP Release 15) | |
| KDDI CORPORATION/ OKINAWA CELLULAR TELEPHONE COMPANY | 718-728 | 773-783 | LTE | |
| | 815-830 | 860-875 | CDMA2000 / LTE | |
| | 1437.9-1447.9 | 1485.9-1495.9 | LTE | |
| | 1710-1730 | 1805-1825 | LTE | |
| | 1920-1940 | 2110-2130 | CDMA2000 / LTE | |
| | 3520-3560(TDD) | | LTE | |
| | 3700-3800(TDD) | | 5G (3GPP Release 15) | |

| | | | |
|-----------------------------|--------------------|---------------|---|
| | 4000-4100(TDD) | | 5G (3GPP Release 15) |
| | 27800-28200 (TDD) | | 5G (3GPP Release 15) |
| SoftBank Corp. | 738-748 | 793-803 | LTE |
| | 900-915 | 945-960 | WCDMA / LTE |
| | 1427.9-1437.9 | 1475.9-1485.9 | LTE |
| | 1750-1765 | 1845-1860 | LTE |
| | 1884.5-1915.7(TDD) | | PHS |
| | 1960-1980 | 2150-2170 | WCDMA / LTE |
| | 3400-3440(TDD) | | LTE |
| | 3560-3600(TDD) | | LTE |
| | 3900-4000(TDD) | | 5G (3GPP Release 15) |
| | 29100-29500(TDD) | | 5G (3GPP Release 15) |
| RAKUTEN MOBILE | 1730-1750 | 1825-1845 | LTE |
| | 3800-3900(TDD) | | 5G (3GPP Release 15) |
| | 27000-27400(TDD) | | 5G (3GPP Release 15) |
| Wireless City Planning Inc. | 2545-2575(TDD) | | AXGP(Advanced eXtended Global Platform) |
| UQ Communications Inc. | 2595-2645(TDD) | | WiMAX / WiMAX2+ |

Note 1: All bands whose technology is 5G (3GPP Release 15) are not in use as of June 25, 2019.

Note 2: License is granted to Base Station each. Expiration date of license for each station is different.

13) Korea, Republic of

| Operator | Frequency Band(MHz) | | Technology | License duration |
|------------|---------------------|-----------|------------------|-----------------------|
| | Uplink | Downlink | | |
| SK Telecom | 824-829 | 869-874 | CDMA 800 | 2011.7.1 - 2021.6.30 |
| | 829-839 | 874-884 | LTE | 2011.7.1 - 2021.6.30 |
| | 1715-1725 | 1810-1820 | LTE | 2011.12.6 - 2021.12.5 |
| | 1730-1735 | 1820-1830 | LTE | 2013.9.26 – 2021.12.5 |
| | 1940-1950 | 2130-2140 | LTE | 2016.12.4 - 2021.12.3 |
| | 1940-1960 | 2130-2150 | UMTS(WCDMA) 2100 | 2001.12.4 - 2016.12.3 |
| | 2500-2520 | 2620-2640 | LTE | 2016.8.4 - 2026.12.31 |

| Operator | Frequency Band(MHz) | | Technology | License duration |
|----------|---------------------|-------------|----------------------|------------------------|
| | Uplink | Downlink | | |
| | 2540-2550 | 2660-2670 | LTE | 2016.8.4 - 2026.12.31 |
| | 2300-2327(TDD) | | Mobile WiMAX (WiBro) | 2012.3.30 - 2019.3.29 |
| | 3600-3700(TDD) | | 5G | 2018.12.1 - 2028.11.30 |
| | 28100-28900(TDD) | | 5G | 2018.12.1 - 2023.11.30 |
| KT | 819-824 | 864-869 | - | 2012.7.1 - 2022.6.30 |
| | 904.3-914.3 | 949.3-959.3 | LTE | 2011.7.1 - 2021.6.30 |
| | 1735-1740 | 1830-1840 | LTE | 2013.9.11 - 2021.6.30 |
| | 1745-1755 | 1840-1850 | LTE | 2011.7.1 - 2021.6.30 |
| | 1755-1765 | 1850-1860 | LTE | 2016.8.4 - 2026.12.31 |
| | 1960-1970 | 2150-2160 | LTE | 2016.12.4 - 2021.12.3 |
| | 1970-1980 | 2160-2170 | UMTS(WCDMA) 2100 | 2016.12.4 - 2021.12.3 |
| | 2330-2360(TDD) | | Mobile WiMAX (WiBro) | 2012.3.30 - 2019.3.29 |
| | 3500-3600(TDD) | | 5G | 2018.12.1 - 2028.11.30 |
| | 26500-27300(TDD) | | 5G | 2018.12.1 - 2023.11.30 |
| LG Uplus | 839-849 | 884-894 | LTE | 2011.7.1 - 2021.6.30 |
| | 1770-1780 | 1860-1870 | CDMA | 2011.7.1 - 2021.6.30 |
| | 1920-1940 | 2110-2130 | LTE | 2011.12.4 - 2021.12.5 |
| | 2520-2540 | 2640-2660 | LTE | 2013.12.4 - 2026.12.3 |
| | 3420-3500(TDD) | | 5G | 2018.12.1 - 2028.11.30 |
| | 27300-28100(TDD) | | 5G | 2018.12.1 - 2023.11.30 |

14) Lao, PDR

| Operator | Frequency Band (MHz) | | Technology | License Duration |
|----------|----------------------|---------------|------------|------------------|
| | Uplink | Downlink | | |
| LTC | 452.5-457.475 | 462.5-467.475 | CDMA 450 | 1 year * |

| Operator | Frequency Band (MHz) | | Technology | License Duration |
|--------------|-----------------------|-----------------------|------------|------------------|
| | Uplink | Downlink | | |
| | 880.2-884.8 | 925.2-929.8 | eGSM 900 | 1 year * |
| | 909-915 | 954-960 | GSM 900 | 1 year * |
| | 1755-1770 | 1850-1865 | GSM 1800 | 1 year * |
| | 1935-1950 | 2125-2140 | IMT 2000 | 1 year * |
| ETL | 890.2-896.2 | 935.2-941.2 | GSM 900 | 1 year * |
| | 1740-1755 | 1835-1850 | GSM 1800 | 1 year * |
| | 1960-1970 | 2150-2160 | IMT 2000 | 1 year * |
| Star Telecom | 896.4-902.4 | 941.4-947.4 | GSM 900 | 1 year * |
| | 1710-1725 | 1805-1820 | GSM 1800 | 1 year * |
| | 1930-1935 & 1950-1960 | 2120-2125 & 2140-2150 | IMT 2000 | 1 year * |
| Beeline | 885.2-887.4 | 930.2-932.4 | eGSM 900 | 1 year * |
| | 902.6-908.6 | 947.6-853.6 | GSM 900 | 1 year * |
| | 1725-1740 | 1820-1835 | GSM 1800 | 1 year * |
| | 1920-1930 | 2110-2120 | IMT 2000 | 1 year * |
| Sky Telecom | 1770-1785 | 1865-1880 | LTE | 1 year * |
| | 1970 – 1980 | 2160-2170 | IMT 2000 | 1 year * |

Note *: to renew every year subject to the master agreement with Government.

15) Macao, China

| Operator | Frequency Band (MHz) | | Technology | License Duration (Note 1) |
|---|----------------------|-----------------|-------------------|--|
| | Uplink | Downlink | | |
| China Telecom (Macao) Company Limited | 825.485-826.735 | 870.485-871.735 | CDMA800 | Period:8 years June 2007-June 2015 |
| | 832.865-834.115 | 877.865-879.115 | | |
| Smartone - Mobile Communications (Macao), Limited | 891.5-899.1 | 936.5-944.1 | GSM900 | Period:8+2 years (Note 2) July 2002-July 2012 |
| | 1723.9-1734.1 | 1818.9-1829.1 | GSM1800 | |
| Macao Telecommunications Company Limited | 899.3-906.9 | 944.3-951.9 | GSM900 | Period:8+2 years (Note 2) July 2002-July 2012 |
| | 1734.9-1750.1 | 1829.9-1845.1 | GSM1800 | |
| | 1970.1-1975.1 | 2160.1-2165.1 | UMTS (WCDMA) 2100 | Period:8 years June 2007-June 2015 |
| | 907.3-914.9 | 952.3-959.9 | GSM900 | Period:8+2 years (Note 2) |

| | | | | |
|---|---------------|---------------|-------------------|---------------------------------------|
| Hutchison Telephone (Macau) Company Limited | 1769.7-1784.9 | 1864.7-1879.9 | GSM1800 | July 2002-July 2012 |
| | 1950.1-1955.1 | 2140.1-2145.1 | UMTS (WCDMA) 2100 | Period:8 years June 2007-June 2015 |

Note 1:Licensing arrangement may be made at an appropriate time before the expiration of the license.

Note 2:According to the 3G licensing conditions, if the 3G licensee possesses a 2G license, the 2G license will be renewed for a period of no more than two years. Therefore, the 2G licenses of Macau Telecommunications Company Limited (CTM), Hutchison and Smartone have been renewed and the license durations have been extended to year 2012.

16) Malaysia

| Operator | Frequency Band(MHz) | | Technology | License duration |
|---------------------------------|---------------------|---------------|-------------------------------|--------------------|
| | Uplink | Downlink | | |
| Telekom Malaysia Berhad | 452.0-456.475 | 462.0-466.475 | CDMA450 | Annual basis* |
| | 824-829 | 869-874 | LTE | Annual basis* |
| Maxis Broadband Sdn Bhd | 905-915 | 950-960 | GSM900 / UMTS(WCDMA)900 / LTE | Until 30 June 2032 |
| | 1710-1730 | 1805-1825 | GSM1800 / LTE | Until 30 June 2032 |
| | 1935-1950 | 2125-2140 | UMTS(WCDMA)2100 | Until 1 April 2034 |
| | 2015-2020 (TDD) | | | |
| | 2510-2520 | 2630-2640 | LTE | Annual basis* |
| Celcom Mobile Sdn Bhd | 1745-1765 | 1840-1860 | GSM1800 / LTE | Until 30 June 2032 |
| Celcom Axiata Berhad | -890-900 | 935-945 | GSM900 / UMTS(WCDMA900) / LTE | Until 30 June 2032 |
| | 1950-1965 | 2140-2155 | UMTS(WCDMA)2100 | Until 1 April 2034 |
| | 2020-2025 (TDD) | | | |
| | 2530-2540 | 2650-2660 | LTE | Annual basis* |
| Digi Telecommunications Sdn Bhd | 885-890 | 930-935 | GSM900 / LTE | Until 30 June 2032 |
| | 1765-1785 | 1860-1880 | GSM1800 / LTE | Until 30 June 2032 |
| | 1965-1980 | 2155-2170 | UMTS(WCDMA)2100 | Until 1 April 2034 |
| | 2010-2015 (TDD) | | | |

| Operator | Frequency Band(MHz) | | Technology | License duration |
|---|------------------------------------|-----------|-----------------|--------------------|
| | Uplink | Downlink | | |
| | 2560-2570 | 2680-2690 | LTE | Annual basis* |
| U Mobile Sdn Bhd | 900-905 | 945-950 | UMTS(WCDMA)900 | Until 30 June 2032 |
| | 1730-1745 | 1825-1840 | LTE | Until 30 June 2032 |
| | 1920-1935 | 2110-2125 | UMTS(WCDMA)2100 | Until 1 March 2027 |
| | 1915-1920(TDD) | | | |
| | 2520-2530 | 2640-2650 | LTE | Annual basis* |
| Asiaspace Broadband Sdn Bhd | 2300-2330 (TDD) (West Malaysia) | | WiMAX / LTE | Annual basis* |
| SEA Telco Engineering Services Sdn Bhd | 2300-2330 (TDD) (East Malaysia) | | WiMAX / LTE | Annual basis* |
| Redtone Engineering & Network Services Sdn Bhd | 2500-2510 | 2620-2630 | LTE | Annual basis* |
| YTL Communications Sdn Bhd | 2330-2360 (TDD) | | WiMAX / LTE | Annual basis* |
| | 2595-2615 (TDD) | | LTE | Annual basis* |
| Webe Digital Sdn Bhd | 2360-2390 (TDD) | | WiMAX / LTE | Annual basis* |
| | 2575-2595 (TDD) | | LTE | Annual basis* |
| Altel Communications Sdn Bhd | 2540-2560 | 2660-2680 | LTE | Annual basis* |

Note *: Approval is given on annual basis based on Apparatus Assignment.

17) Micronesia, The Federated States of

| Operator | Frequency Band(MHz) | | Technology | License duration |
|-------------------------|---------------------|----------|------------|--------------------|
| | Uplink | Downlink | | |
| FSM Telecom Corporation | 890-902 | 935-947 | GSM900 | Conditional (Note) |

Note 1: FSM Telecom Corporation is a public Corporation and the only service provider (monopoly) in the FSM. While they are not issued a license, the Department of Transportation, Communication and Infrastructure has issued a Frequency Authorization for use of the frequencies for the mobile service. The authorization is conditional for 5 years duration which has expired pending adoption of the radiocommunication regulations for the FSM.

Note 2: While FSM Telecom Corporation has originally requested to also operate in the 1800 MHz band, the service has not taken off. Because of this, the 1800MHz band has been filed, but never used.

18) Mongolia

| Operator | Frequency Band(MHz) | | Technology | License duration |
|----------|---------------------|-------------|------------|------------------|
| | Uplink | Downlink | | |
| Mobicom | 890.0-902.5 | 935.0-947.5 | GSM 900 | 1995-2031 |
| | 1740-1755 | 1835-1850 | GSM 1800 | 2001-2031 |
| | 1920-1930 | 2110-2120 | 3G/WCDMA | 2008-2018 |
| | 1970-1980 | 2160-2170 | | |
| | 2010-2015 (TDD) | | | |
| | 2020-2025 (TDD) | | | |
| | 1735-1745 | 1830-1840 | LTE | 2016-2031 |
| Skytel | 824.0-831.0 | 869.0-876.0 | CDMA 800 | 1999-2029 |
| | 835-845 | 880-890 | 3G/WCDMA | - |
| | 1945-1955 | 2135-2145 | | 2008-2018 |
| | 2015-2020 (TDD) | | | |
| | 1760-1770 | 1855-1865 | LTE | 2016-2031 |
| Unitel | 902.6-914.8 | 947.6-959.8 | GSM 900 | 2005-2025 |
| | 1710-1725 | 1805-1820 | GSM 1800 | 2009-2025 |
| | 1930-1945 | 2120-2135 | 3G/WCDMA | 2008-2018 |
| | 1725-1735 | 1820-1830 | LTE | 2016-2031 |
| G-Mobile | 453.0-457.5 | 463.0-467.5 | CDMA 450 | 2006-2021 |
| | 1885-1890 (TDD) | | 3G/WCDMA | 2008-2018 |
| | 1960-1970 | 2150-2160 | | |
| | 1770-1780 | 1865-1875 | LTE | 2016-2031 |

19) Myanmar, The Republic of the Union of

| Operator | Frequency Band(MHz) | | Technology | License duration |
|---------------------------------------|---------------------|-----------------|------------|------------------|
| | Uplink | Downlink | | |
| Myanma Posts and Telecommunications | 453.375-457.125 | 463.375-467.125 | CDMA 450 | 15 Years |
| | 825-833.375 | 870-878.75 | CDMA 800 | 15 Years |
| | 905-915 | 950-960 | GSM 900 | 15 Years |
| | 1730-1750 | 1825-1845 | LTE 1800 | 12 Years |
| | 1935-1950 | 2125-2140 | WCDMA 2100 | 15 Years |
| Telenor Myanmar Limited | 895-900 | 940-945 | GSM 900 | 15 Years |
| | 1710-1730 | 1805-1825 | LTE 1800 | 12 Years |
| | 1965-1980 | 2155-2170 | WCDMA 2100 | 15 Years |
| Ooredoo Myanmar Limited | 890-895 | 935-940 | GSM 900 | 15 Years |
| | 1765-1785 | 1860-1880 | LTE 1800 | 12 Years |
| | 1950-1965 | 2140-2155 | WCDMA 2100 | 15 Years |
| Telecom International Myanmar Co.,Ltd | 900-905 | 945-950 | GSM 900 | 15 Years |
| | 1750-1765 | 1845-1860 | LTE 1800 | 12 Years |
| | 1920-1930 | 2110-2120 | WCDMA 2100 | 15 Years |

| | | | |
|------------------------------|------------------------|----------|----------|
| Amara Communications Co.,Ltd | 2575-2595 2595-2615 | BWA(TDD) | 13 Years |
| Fortune Telecom Co.,Ltd | 2575-2595 | BWA(TDD) | 13 Years |
| Global Technology Co.,Ltd | 2595-2615 | BWA(TDD) | 13 Years |

20) Nepal, Federal Democratic Republic of

| Operator | Frequency Band(MHz) | | Technology | License duration |
|---|---------------------|---------------|------------------------|-------------------|
| | Uplink | Downlink | | |
| Nepal Doorsanchar Company Limited (Nepal Telecom) | 827 – 833 | 872 – 878 | CDMA 2000-1x EV-DO | Refer Note below. |
| | 890 – 899.6 | 935 – 944.6 | GSM 900 | |
| | 1710 – 1725 | 1805 – 1820 | GSM 1800/ LTE 1800 | |
| | 1970 – 1980 | 2160 – 2170 | WCDMA(3G) | |
| | 2300 – 2330 | | WiMAX / LTE | |
| United Telecom Limited | 824 – 827 | 869 – 872 | CDMA 2000-1x EV-DO | |
| | 880 – 885 | 925 - 930 | GSM 900 | |
| | 1773 – 1785 | 1868 – 1880 | GSM 1800 | |
| Ncell Private Limited | 902.6 – 910.6 | 947.6 – 955.6 | GSM 900 / UMTS 900 | |
| | 1732 – 1743 | 1827 – 1838 | GSM 1800 / LTE 1800 | |
| | 1960 – 1970 | 2150 – 2160 | 3G/WCDMA | |
| Nepal Satellite Telecom Pvt. Ltd. | 910.6 – 915 | 955.6 – 960 | GSM 900 | |
| | 1744 – 1753 | 1839 – 1848 | GSM 1800 | |
| Smart Telecom Pvt. Ltd. | 885 – 887 | 930 – 932 | GSM 900 | |
| | 899.6 – 902.6 | 944.6 – 947.6 | GSM 900 | |
| | 1753 – 1765 | 1848 - 1860 | GSM 1800/LTE 1800 | |

Note 1: No separate frequency license is awarded to the operators. The frequencies were assigned to the operators as a part of the Service License to provide the telecommunication services (Mobile, Basic Telephony Service, Limited Mobility, Basic Telecommunication Service).

Note 2: The bandwidths were assigned to the operators based on the number of subscribers and other additional criteria in the past whereas the New Frequency Policy, 2012 has adopted the principle of auction for frequency assignment. However, yet frequency remains to be assigned based on auction process.

Note 3: Operators have to pay frequency fee to the Government as per the frequency policy and decision of the Radio Frequency Policy Determination Committee (RFPDC).

Note 4: The bandwidth assigned to the operators can be revoked if frequency fee is not paid within the stipulated time.

Note 5: As per the spectrum policy 2017, spectrum will be assigned through auction and the spectrum will be technology neutral. The existing spectrum assignment will be made technology neutral upon approval from Nepal Telecommunications Authority.

21) New Zealand

| Operator | Frequency Band(MHz) | | Technology | License duration |
|--|---------------------|-----------|-----------------------|--|
| | Uplink | Downlink | | |
| Vodafone New Zealand Ltd | 723-738 | 778-793 | LTE | Period: 18 years Expiration: 2031 (Note 1) |
| | 899.8-915 | 944.8-960 | GSM 900 / UMTS 900 | Period: 20 years Expiration: 2031 |
| | 1760-1785 | 1855-1880 | LTE | Period: 20 years Expiration: 2021 |
| | 1920-1945 | 2110-2135 | UMTS 2100 / LTE | Period: 20 years Expiration: 2021 |
| | 2555-2570 | 2675-2690 | LTE | Period: 20 years Expiration: 2028 |
| | 3424-3452 | 3524-3552 | BWA | Period: 20 years Expiration: 2022 (Note 2) |
| Spark NZ (formerly known as Telecom NZ Ltd) | 703-723 | 758-778 | LTE | Period: 18 years Expiration: 2031 (Note 1) |
| | 825-840 | 870-885 | UMTS 850 | Period: 20 years Expiration: 2031 |
| | 1735-1760 | 1830-1855 | LTE | Period: 20 years Expiration: 2021 |
| | 1950 -1965 | 2140-2155 | UMTS 2100 | Period: 20 years Expiration: 2021 |
| | 2300-2370 (TDD) | | LTE | Period: 20 years Expiration: 2030 |
| | 2520-2540 | 2640-2660 | LTE or BWA | Period: 20 years Expiration: 2028 |
| | 3459-3466 | 3559-3566 | BWA | Period: 20 years Expiration: 2022 (Note 2) |
| Two Degrees Mobile Ltd | 738-748 | 793-803 | LTE | Period: 18 years Expiration: 2031 (Note 1) |
| | 890-899.8 | 935-944.8 | UMTS 900 / LTE | Period: variable Expiration:2031 (Note 1) |
| | 1710-1735 | 1805-1830 | LTE | Period: 20 years Expiration: 2021 |
| | 1965-1980 | 2155-2170 | UMTS 2100 | Period: 20 years Expiration: 2021 |

| Operator | Frequency Band(MHz) | | Technology | License duration |
|--------------------------------|---------------------|-----------|-----------------|--|
| | Uplink | Downlink | | |
| Reserved (Note 3) | 2370-2395 (TDD) | | Planned for BWA | Period: 20 years Expiration: 2030 |
| Managed Spectrum Park (Note 4) | 2575-2620 (TDD) | | BWA | Period: 20 years Expiration: 2028 |
| | 3410-3424 | 3510-3524 | BWA | Period: 20 years Expiration: 2022 (Note 2) |
| Cayman | 2500-2520 | 2620-2640 | LTE or BWA | Period: 20 years Expiration: 2028 |
| Blue Reach | 2540-2555 | 2646-2675 | LTE or BWA | Period: 20 years Expiration: 2028 |
| Connecta | 3452-3459 | 3552-3559 | BWA | Period: 20 years Expiration: 2022 (Note 2) |
| Kordia | 3466-3487 | 3566-3587 | BWA | Period: 20 years Expiration: 2022 (Note 2) |

Note 1: The choice of any licence duration different to the conventional 20-year period is due to the alignment of a common licence expiry date for all IMT frequency bands below 1 GHz.

Note 2: The spectrum in 3410-3487/3510-3587 MHz, collectively known as 3.5 GHz band, is under review for possible early re-allocation into a new 5G band plan based on a larger contiguous block. The band plan and exact frequency boundaries are still under consideration. For more information, please refer to <https://www.rsm.govt.nz/projects-auctions/current-projects/preparing-for-5g-in-new-zealand>.

Note 3: The spectrum in 2370-2395 MHz is currently reserved by the New Zealand government for possible future reallocation and it is planned for BWA.

Note 4: Managed Spectrum Park is facilitated by a nationwide spectrum access open to local and regional BWA services subject to self-managed coordination or sharing.

22) Palau

| Operator | Frequency Band(MHz) | | Technology | License duration |
|---|---------------------|-----------|------------|------------------------|
| | Uplink | Downlink | | |
| Palau National Communications Corporation | 890-915 | 935-960 | GSM 900 | Not subject to license |
| Palau Mobile Corporation | 1710-1715 | 1805-1810 | GSM 1800 | 5 years |

23) Papua New Guinea

| Operator | Frequency Band(MHz) | | Technology | License duration |
|----------|---------------------|----------|-----------------------------|------------------------------------|
| | Uplink | Downlink | | |
| Digicel | 718 - 733 | 773 -788 | 4G (LTE)-Yet to be deployed | Period:10 years Expiration:2024 |

| | | | | |
|-----------------------|-------------|-------------|-------------------------------|-------------------------------------|
| | 880 – 894 | 925 – 939 | GSM 900 | Period:10 years Expiration:2017 |
| | 894 - 899 | 939 - 944 | 3G(WCDMA) | Period:10 years Expiration: 2017 |
| | 1710 – 1720 | 1805 – 1816 | GSM1800 | Period:10 years Expiration: 2017 |
| | 1721 - 1740 | 1816 - 1835 | 4G (LTE) | Period:10 years Expiration: 2017 |
| Bemobile | 903 – 908 | 948 – 953 | 3G (WCDMA) | Period:10 years Expiration: 2017 |
| | 908 - 915 | 953 - 960 | GSM 900 | Period:10 years Expiration: 2017 |
| Telikom PNG | 733 - 748 | 788 - 803 | 4G (LTE)- Yet to be deployed | Period:10 years Expiration:2024 |
| | 824 – 835 | 869 – 880 | CDMA 800 | Period:10 years Expiration: 2017 |
| | 1760 - 1785 | 1855 - 1880 | 4G (LTE) – yet to be deployed | Period:10 years Expiration:2024 |
| | 2330 – 2360 | | BWA (Wimax) | Period:10 years Expiration: 2019 |
| | 3400 – 3500 | | BWA (Wimax) | Period:10 years Expiration: 2019 |
| PNG Government (Note) | | | | |

Note: Permit only as of January 2010. The full extent of the amount of spectrum needed was not known as of January 2010. The permit is renewable annually.

24) Philippines

| Operator | Frequency Band(MHz) | | Technology | License duration |
|-------------------------|--|--|------------------|--|
| | Uplink | Downlink | | |
| TEXTRON CORP . GLOBE | 450-460 | 460-470 | CDMA 450 | Renewable for a maximum period of three years. |
| SMART | 825-835 | 870-880 | UMTS (WCDMA) 800 | |
| EXTELCOM | 835-845 | 880-890 | UMTS (WCDMA) 800 | |
| EXTELCOM | 880-890 | 925-935 | EGSM | |
| GLOBE | 890-897.5 905-915 | 935-942.5 950-960 | GSM 900 | |
| SMART | 897.5-905 | 942.5-950 | GSM 900 | |
| BELLTEL | 1710-1720 | 1805-1815 | GSM 1800 | |
| EXTELCOM | 1720-1725 | 1815-1820 | GSM 1800 | |
| SMART | 1725-1732.5 1735-1740 1745-1750 1780-1782.5 | 1820-1827.5 1830-1835 1840-1845 1875-1877.5 | GSM 1800 | |

| Operator | Frequency Band(MHz) | | Technology | License duration |
|--|--|--|-------------------|------------------|
| | Uplink | Downlink | | |
| DIGITEL | 1760-1775 1782.5-1785 | 1855-1870 1877.5-1880 | GSM 1800 | |
| GLOBE | 1732.5-1735 1740-1745 1775-1780 | 1827.5-1830 1835-1840 1870-1875 | GSM 1800 | |
| BAYANTEL | 1750-1760 | 1845-1855 | GSM 1800 | |
| SMART | 1920-1935 | 2110-2125 | UMTS (WCDMA) 2100 | |
| DIGITEL | 1935-1945 | 2125-2135 | UMTS (WCDMA) 2100 | |
| GLOBE | 1945-1955 | 2135-2145 | UMTS (WCDMA) 2100 | |
| BAYANTEL | 1900.625-1903.125 | 1980.625-1983.125 | CDMA 2000 | |
| MULTIMEDIA TELEPHONY INC./BROADBAND PHILS. | 1903.125-1904.375 1905.625-1906.875 | 1983.125-1904.375 1985.625-1986.875 | CDMA 2000 | |
| DIGITEL | 1906.875-1909.375 | 1986.875-1989.375 | CDMA 2000 | |
| eTELCO | 2300-2330 | TDD | WIMAX | |
| PRIMEWORLD/SMART | 2332.5-2362.5 | TDD | WIMAX | |
| EXTELCOM | 2365-2395 | TDD | WIMAX | |
| INNOVE/GLOBE | 2500-2515 | TDD | WIMAX | |
| BAYANTEL | 2515-2520 | TDD | WIMAX | |
| DIGITEL | 2520-2535 | TDD | WIMAX | |
| eTELCO | 2535-2550 | TDD | WIMAX | |
| WI-TRIBE (LBNI) | 2555-2595 | TDD | WIMAX | |
| BELLTEL | 2629-2669 | TDD | WIMAX | |
| SMART BROADBAND | 2670-2690 | TDD | WIMAX | |
| TNRI TELECOMS | 10154-10182 | 10504-10532 | WIMAX | |

25) Singapore

| Operator | Frequency Band(MHz) | | Technology | License Duration | Coverage |
|----------|---------------------|-----------------|----------------|------------------------|-------------|
| | Uplink | Downlink | | | |
| M1 | 890 – 895 | 935 – 940 | WCDMA / NB-IoT | valid till 30 Jun 2033 | Nation Wide |
| | 1765 – 1785 | 1860 – 1880 | LTE | valid till 30 Jun 2030 | |
| | 2520 – 2540 | 2640 – 2660 | | | |
| | 1950.1 – 1969.9 | 2140.1 – 2159.9 | WCDMA | | |

| Operator | Frequency Band(MHz) | | Technology | License Duration | Coverage |
|----------------|---------------------|-----------------|-------------|-------------------------|-------------|
| | Uplink | Downlink | | | |
| | 1904.9 – 1909.9 | | Non-IMT | valid till 31 Dec 2021 | |
| StarHub Mobile | 882 – 887 | 927 – 932 | HSPA | valid till 30 June 2033 | Nation Wide |
| | 2580 – 2600 | | LTE | | |
| | 1740 – 1765 | 1835 – 1860 | LTE | valid till 30 June 2030 | |
| | 2500 – 2520 | 2620 – 2640 | LTE | | |
| | 1920 – 1935.1 | 2110.3 – 2125.1 | HSPA | valid till 31 Dec 2021 | |
| | 1974.9 – 1979.7 | 2164.9 – 2169.7 | HSPA/LTE | | |
| | 1914.9 – 1920 | | Non-IMT | | |
| Singtel Mobile | 905 – 915 | 950 – 960 | WCDMA / LTE | valid till 30 June 2033 | Nation Wide |
| | 2600 – 2615 | | LTE | | |
| | 1710 – 1740 | 1805 – 1835 | LTE | valid till 30 June 2030 | |
| | 2540 – 2560 | 2660 – 2680 | | | |
| | 1935.1 – 1950.1 | 2125.1 – 2140.1 | WCDMA | valid till 31 Dec 2021 | |
| | 1969.9 – 1974.9 | 2159.9 – 2164.9 | | | |
| | 1909.9 – 1914.9 | | Non-IMT | | |
| TPG | 895 – 905 | 940 – 950 | LTE | valid till 30 June 2033 | Nation Wide |
| | 2300 – 2340 | | | | |
| | 2570 – 2580 | | | | |

26) Thailand

| Operator | Frequency Band (MHz) | | Technology | License Duration |
|----------|----------------------|-----------|---------------|------------------|
| | Uplink | Downlink | | |
| TOT | 1965–1980 | 2155–2170 | HSPA | August 2025 |
| | 2310–2370 | | TDD LTE | August 2025 |
| CAT | 824–839 | 869–884 | HSPA | August 2025 |
| DTN | 1920–1935 | 2110–2125 | HSPA/LTE | December 2027 |
| | 1745–1750 | 1840–1845 | GSM/LTE | September 2033 |
| AWN | 895–905 | 940–950 | GSM/WCDMA/LTE | June 2031 |
| | 1725–1740 | 1820–1835 | LTE | September 2033 |
| | 1740–1745 | 1835–1840 | GSM/LTE | September 2033 |
| | 1950–1965 | 2140–2155 | HSPA | December 2027 |

| | | | | |
|-----|-----------|-----------|----------|----------------|
| TUC | 905–915 | 950–960 | GSM/LTE | June 2031 |
| | 1710–1725 | 1805–1820 | GSM/LTE | September 2033 |
| | 1935–1950 | 2125–2140 | HSPA/LTE | December 2027 |

27) Vietnam, Socialist Republic of

| Operator | Frequency Band(MHz) | | Technology | License duration |
|------------------------------|---------------------|-----------------|-------------------------------|------------------------------------|
| | Uplink | Downlink | | |
| Viettel ⁽¹⁾ | 453.08 – 457.37 | 465.08 – 467.37 | CDMA 450 | Period:15 years Expiration:2019 |
| SPT | 824 – 835 | 869 – 880 | CDMA2000 1X EV- DO/HSPA | Period:15 years Expiration:2016 |
| HTC | 880 - 890 | 925 – 935 | eGSM900 | Period:15 years Expiration:2023 |
| GPC – VNPT | 890.1 – 898.5 | 935.1 – 943.5 | GSM900 | Period:15 years Expiration:2018 |
| | 1710 – 1730 | 1805 – 1825 | GSM1800 | Period:15 years Expiration:2022 |
| | 1965 – 1980 | 2155 – 2170 | IMT 2000 | Period:15 years Expiration:2024 |
| Viettel | 898.5 – 906.7 | 943.5 – 951.7 | GSM900 | Period:15 years Expiration:2018 |
| | 1750 – 1770 | 1845 – 1865 | GSM1800 | Period:15 years Expiration:2018 |
| | 1935 – 1950 | 2125 – 2140 | IMT 2000 | Period:15 years Expiration:2024 |
| VMS | 906.7 – 914.9 | 951.7 – 959.9 | GSM900 | Period:15 years Expiration:2015 |
| | 1730 – 1750 | 1825 – 1845 | GSM1800 | Period:15 years Expiration:2015 |
| | 1920 – 1935 | 2110 – 2125 | IMT 2000 | Period:15 years Expiration:2024 |
| GTel Mobile | 1770 – 1785 | 1865 – 1880 | GSM1800 | Period:15 years Expiration:2023 |
| Viettel ⁽¹⁾ & HTC | 1950 – 1965 | 2140 – 2155 | IMT 2000 | Period:15 years Expiration:2024 |

Note 1: EVN Telecom was merged with Viettel from 1/1/2012