

3GPP Frequency Bands, FDD

	Region	Operating band	Band name	Total spectrum	Uplink [MHz]	Downlink [MHz]
R'99→ Rel-4	   	Band 1	2.1 GHz	2x60 MHz	1920-1980	2110-2170
		Band 2	1900 MHz	2x60 MHz	1850-1910	1930-1990
Rel-5		Band 3	1800 MHz	2x75 MHz	1710-1785	1805-1880
Rel-6	      Band 6 not applicable → 	Band 4	1.7/2.1 GHz	2x45 MHz	1710-1755	2110-2155
		Band 5	850 MHz	2x25 MHz	824-849	869-894
		Band 6	800 MHz	2x10 MHz	830-840	875-885
Rel-7	     	Band 7	2.6 GHz	2x70 MHz	2500-2570	2620-2690
		Band 8	900 MHz	2x35 MHz	880-915	925-960
		Band 9	1700 MHz	2x35 MHz	1749.9-1784.9	1844.9-1879.9
		Band 10	Ext 1.7/2.1MHz	2x60 MHz	1710-1770	2110-2170
Rel-8	Band 11 to →  change    	Band 11	1500 MHz lower	2x25 MHz	1427.9 - 1452.9	1475.9 - 1500.9
		Band 12	Lower 700 MHz	2x18 MHz	698-716	728-746
		Band 13	Upper 700 MHz	2x10 MHz	777-787	746-756
		Band 14	Upper 700 MHz, public safety/private	2x10 MHz	788-798	758-768
		Band 17	Lower 700 MHz, AT&T blocks B&C	2x12 MHz	704-716	734-746

Notes:

- *1 Parts of S. America (ITU Region 2) , Parts of Asia (ITU Region 3)
- *2 ITU Region 2
- *3 N. America excluding USA
- *4 WCDMA specs I – XIX (TS 25.104), LTE specs 1-19 (TS 36.104)

Ref: 3GPP TS 36.104



3GPP Frequency Bands, FDD

Region	Operating band	Band name	Total spectrum	Uplink [MHz]	Downlink [MHz]	
Rel-9 LTE (18,19), WCDMA(XIX) Under study → 3.5 GHz bands under study →	Band 18	800 MHz Band A	2x15 MHz	815-830	860-875	
	Band 19	800 MHz Band B	2x15 MHz	830-845	875-890	
	Band 20	UMTS LTE 800 EU	2x30 MHz	832-862	791-821	
	Band 21	1500 MHz upper	2x15 MHz	1447.9-1462.9 MHz	1495.9-1510.9 MHz	
	Band ??	3.4 – 3.6 GHz	2x90 MHz	3410-3500	3510-3600	
	Band ??	3.6 – 3.8 GHz	2x100 MHz	3????-3????	3????-3????	

Notes:

*1 Parts of S. America (ITU Region 2) , Parts of Asia (ITU Region 3)

*2 ITU Region 2

*3 N. America excluding USA

*4 WCDMA specs I – XIX (TS 25.104), LTE specs 1-19 (TS 36.104)

Ref: 3GPP TS 36.104

Nokia Siemens Networks

3GPP Supported TDD Frequency Bands

	Region	Operating band ⁴	Total spectrum	Frequencies [MHz]
Rel-99→Rel-6		Band 33	20 MHz	1900-1920
		Band 34	15 MHz	2010-2025
		Band 35	60 MHz	1850-1910
		Band 36	60 MHz	1930-1990
		Band 37	20 MHz	1910-1930
Rel-7		Band 38	50 MHz	2570-2620
Rel-8		Band 39	40 MHz	1880-1920
		Band 40	100 MHz	2300-2400
Rel-9 3.5 GHz bands under study		Band ??	190 MHz	3410-3600
		Band ??	200 MHz	3600-3800 ?

Note:

*1 IMT2000 Frequency. Generally in EU and China

*2 IMT2000 Frequency. Used in China

*3 TDD bands allocated in USA/Canada as part of technology agnostic approach in PCS bands. Current commercial deployments in these bands are FDD

*4 Operating band numbers are for LTE TDD from TS 36.104, different numbering scheme in WCDMA TS 25.105

Ref: 3GPP TS 36.104

