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E-UTRA Bands, Channel Bandwidths, and Frequency Allocations.

E-UTRA Operating Bands indicates the carrier frequency. Not all LTE frequency bands support all bandwidth, This Chart includes FDD and TDD channels covering the evolutionary process from LTE Advanced PRO (Release 13/14) to 5G sub-6GHz New Radio [NR] (Release 15) and then the Official Launch of Release 16/17 (YR 2020), where mm-Wave bands enter our daily lives.

ComNav Engineering provides high isolation duplexers for all FDD channel applications, specifically bands of narrow separation where low PIM and high Isolation are desirable.

ComNav Engineering also provides some of the smallest SMT BP Filters on the market with high skirts for both UL and DL channel paths.

E-UTRA Absolute RF Channel Number	Channel Bandwidth					Uplink (UL) eNode B Rcvr UE Xmtr (MHz)	Downlink (DL) eNode B Xmtr UE Rcvr (MHz)	UL-DL Band Separation (MHz)	Duplex Mode	Frequency	Name	Included in (subset of) band	Duplex Spacing (MHz)	ComNav DUPLEXER Part Number (32 Watt cw)	ComNav UL SMT BP Filter Part Number (4 Watt cw)	ComNav DL SMT BP Filter Part Number (4 Watt cw)
	1.4MHz	3MHz	5MHz	10MHz	15MHz											
1			✓	✓	✓	1920 – 1980	2110 – 2170	130	FDD	2100	IMT	65	190	8DCR6B-1950/2140/90-L	TBD	TBD
2	✓	✓	✓	✓	✓	1850 – 1910	1930 – 1990	20	FDD	1900	PCS blocks A-F	25	80	11DCR8B-1880/1960/C70-D	TBD	TBD
3	✓	✓	✓	✓	✓	1710 – 1785	1805 – 1880	20	FDD	1800	DCS		95	11DCR4B-1748/1843/C85-LA	TBD	TBD
4	✓	✓	✓	✓	✓	1710 – 1755	2110 – 2155	355	FDD	1700	AWS blocks A-F (AWS-1)	66	400	6DCR8B-1733/2133/83-L	TBD	TBD
5	✓	✓	✓	✓		824 – 849	869 – 894	20	FDD	850	CLR	26	45	10DCR6E-836.5/881.5/Z30-D	TBD	TBD
6			✓	✓		830 – 840	875 – 885	35	FDD	850				11DCR12C-835/881/C30-D	TBD	TBD
7			✓	✓	✓	2500 – 2570	2620 – 2690	50	FDD	2600	IMT-E		120	9DCR4B-2524/2643/Z-L	TBD	TBD
8	✓	✓	✓	✓		880 – 915	925 – 960	45	FDD	900	E-GSM		45	11DCR4E-898.5/942.5/C40-L	TBD	TBD
9			✓	✓	✓	1749.9-1784.9	1844.9-1879.9	60	FDD	1750			60	11DCR4B-1748/1843/C85-LA	TBD	TBD
10			✓	✓	✓	1710 – 1770	2110 – 2170	340	FDD	1700	Extended AWS blocks A-I	66	400	6DCR8B-1733/2133/83-L	TBD	TBD
11			✓	✓	✓	1427.9 – 1447.9	1475.9 – 1495.9	23	FDD	1500	Lower PDC		48	TBD	TBD	TBD
12	✓	✓	✓	✓		699 – 716	729 – 746	12	FDD	700	Lower SMH blocks A/B/C		30	11DCR12C-743/C882-DX	TBD	TBD
13			✓	✓		777 – 787	746 – 756	21	FDD	700	Upper SMH block C		-31	11DCR12C-763/C881.5-DX	TBD	TBD
14			✓	✓		788 – 798	758 – 768	20	FDD	700	Upper SMH block D		-30	TBD	TBD	TBD
15/16						Reserved	Reserved									
17			✓	✓		704 – 716	734 – 746	18	FDD	700	Lower SMH blocks B/C	12	30	11DCR12C-763/C881.5-DX	TBD	TBD
18			✓	✓	✓	815 – 830	860 – 875	45	FDD	850	Japan lower 800	26	45	6DCR4E-822/867/Z28-L	TBD	TBD
19			✓	✓	✓	830 – 845	875 – 890	45	FDD	850	Japan upper 800	26	45	11DCR6E-837/882/C30-L	TBD	TBD
20			✓	✓	✓	832 – 862	791 – 821	41	FDD	800	EU Digital Dividend		-41	11DCR12C-838/883/C30-D	TBD	TBD
21			✓	✓	✓	1447.9 – 1462.9	1495.9 – 1510.9	48	FDD	1500	Upper PDC		48	TBD	TBD	TBD
22			✓	✓	✓	3410 – 3490	3510 – 3590	100	FDD	3500			100	6DCR4B-3650/3970/130-L	TBD	TBD
24			✓	✓		1626.5 – 1660.5	1525 – 1559	101.5	FDD	1600	L-Band 1600 (US)		-101.5	8DCR8B-1540/1641/Z50-D	TBD	TBD
25	✓	✓	✓	✓	✓	1850 – 1915	1930 – 1995	80	FDD	1900	Extended PCS blocks A-G		80	11DCR8B-1880/1960/C70-D	TBD	TBD
26	✓	✓	✓	✓	✓	814 – 849	859 – 894	45	FDD	850	Extended CLR		45	11DCR12C-832/887/C38-DX	TBD	TBD
27	✓	✓	✓	✓		807 – 824	852 – 869	45	FDD	800	SMR (adjacent to band 5)		45	11DCR12C-815/860/C25-D	TBD	TBD
28			✓	✓	✓	703 – 748	758 – 803	55	FDD	700	APT		55	TBD	TBD	TBD
29			✓	✓	✓	717 – 728	N/A	N/A	FDD	700	Lower SMH blocks D/E		N/A	N/A	OL0455	OL0455
30			✓	✓		2305 – 2315	2350 – 2360	45	FDD	2300	WCS blocks A/B		45	9DCR6B-2315/2385/30-L	TBD	TBD
31	✓	✓	✓			452.5 – 457.5	462.5 – 467.5	10	FDD	450			10	6DCR12E-455/465/Z-DX	TBD	TBD



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32		✓	✓	✓	✓	1452 – 1496	N/A	TDD	1500	L-Band (EU)	50, 75	N/A	N/A	OL0110	OL0110
33		✓	✓	✓	✓	1900 – 1920	N/A	TDD	2100	IMT	39	N/A	N/A	OL1625	OL1625
34		✓	✓	✓		2010 – 2025	N/A	TDD	2100	IMT		N/A	N/A	OL0658	OL0658
35	✓	✓	✓	✓	✓	1850 – 1910	N/A	TDD	1900	PCS (Uplink)		N/A	N/A	OL0227	OL0227
36	✓	✓	✓	✓	✓	1930 – 1990	N/A	TDD	1900	PCS (Downlink)		N/A	N/A	OL1657	OL1657
37		✓	✓	✓	✓	1910 – 1930	N/A	TDD	1900	PCS (Duplex spacing)		N/A	N/A	OL0975	OL0975
38		✓	✓	✓	✓	2570 – 2620	N/A	TDD	2600	IMT-E (Duplex Spacing)	41	N/A	N/A	OL1580	OL1580
39		✓	✓	✓	✓	1880 – 1920	N/A	TDD	1900	DCS-IMT gap		N/A	N/A	OL1616	OL1616
40		✓	✓	✓	✓	2300 – 2400	N/A	TDD	2300			N/A	N/A	OL1614	OL1614
41		✓	✓	✓	✓	2496 – 2690	N/A	TDD	2500	BRS / EBS		N/A	N/A	OL1650	OL1650
42		✓	✓	✓	✓	3400 – 3600	N/A	TDD	3500	CBRS (EU/Japan)		N/A	N/A	OL0711	OL0711
43		✓	✓	✓	✓	3600 – 3800	N/A	TDD	3700			N/A	N/A	OL0632	OL0632
44		✓	✓	✓	✓	703 – 803	N/A	TDD	700	APT		N/A	N/A	OL1554	OL1554
45		✓	✓	✓	✓	1447 – 1467	N/A	TDD	1500	L-Band (China)	50	N/A	N/A	OL0147	OL0147
46						5150 – 5925	N/A	TDD	5200	U-NII		N/A	N/A	OL0702	OL0702
47						5855 – 5925	N/A	TDD	5900	U-NII-4 (V2X)		N/A	N/A	OL0625	OL0625
48						3550 – 3700	N/A	TDD	3600	CBRS (US)		N/A	N/A	OL0635	OL0635
50						1432 – 1517	N/A	TDD	1500	L-Band (EU)		N/A	N/A	OL0810	OL0810
51						1427 – 1432	N/A	TDD	1500	Extended L-Band (EU)		N/A	N/A	TBD	TBD
65		✓	✓	✓	✓	1920 – 2010	2110 – 2200	190	FDD	2100	Extended IMT	190	8DCR6B-1950/2140/90-L	TBD	TBD
66	✓	✓	✓	✓	✓	1710 – 1780	2110 – 2200	400	FDD	1700	Extend A-J (AWS-1 &-3)	400	6DCR8B-1733/2133/83-L	TBD	TBD
67		✓	✓	✓	✓	738 – 758		N/A	FDD	700	EU 700	N/A	N/A	OL1457	OL1457
68		✓	✓	✓		698 – 728	753 – 783	55	FDD	700	ME 700	55	11DCR12C-763/C881.5-DX	TBD	TBD
69		✓				2570 – 2620		N/A	FDD	2600	IMT-E (Duplex spacing)	N/A	N/A	OL1485	OL1485
70		✓	✓	✓		1695 – 1710	1995 – 2020	295 – 300	FDD	2000	AWS-4	300	10DCR8B-1732.5/1827.5/Z65-D	TBD	TBD
71		✓	✓	✓	✓	663 – 698	617 – 652	-46	FDD	600	US Digital Dividend	-46	TBD	TBD	TBD
72	✓	✓	✓			451 – 456	461 – 466	10	FDD	450	PMR/PAMR Europe	10	6DCR12E-452.7/462.5/Z-DX	TBD	TBD
73	✓	✓	✓			450 – 455	460 – 465	10	FDD	450		10	6DCR12E-455/465/Z-DX	TBD	TBD
74						1427 – 1470	1475 – 1518	48	FDD	1500	L-Band 1500 (US)	48	TBD	TBD	TBD
75						1432 – 1517		N/A	FDD	1500	L-Band (EU)	N/A	N/A	OL0810	OL0810
76						1427 – 1432		N/A	FDD	1500	Extended L-Band (EU)	N/A	N/A	OL0473	OL0473

There are many applications where multiple channels or multiple UL/DL paths are involved in the system design. Over the past two years, **ComNav Engineering** has provided solutions to these customers working on Federal Government and ship based networks for vessels of multiple origins. Our PN: 11DCR4B-1880/1960/C70-L is a good example where one duplexer covers both TDD Channels 35 & 36 in a single package.

Contact your local representative to discuss the details of your application:

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