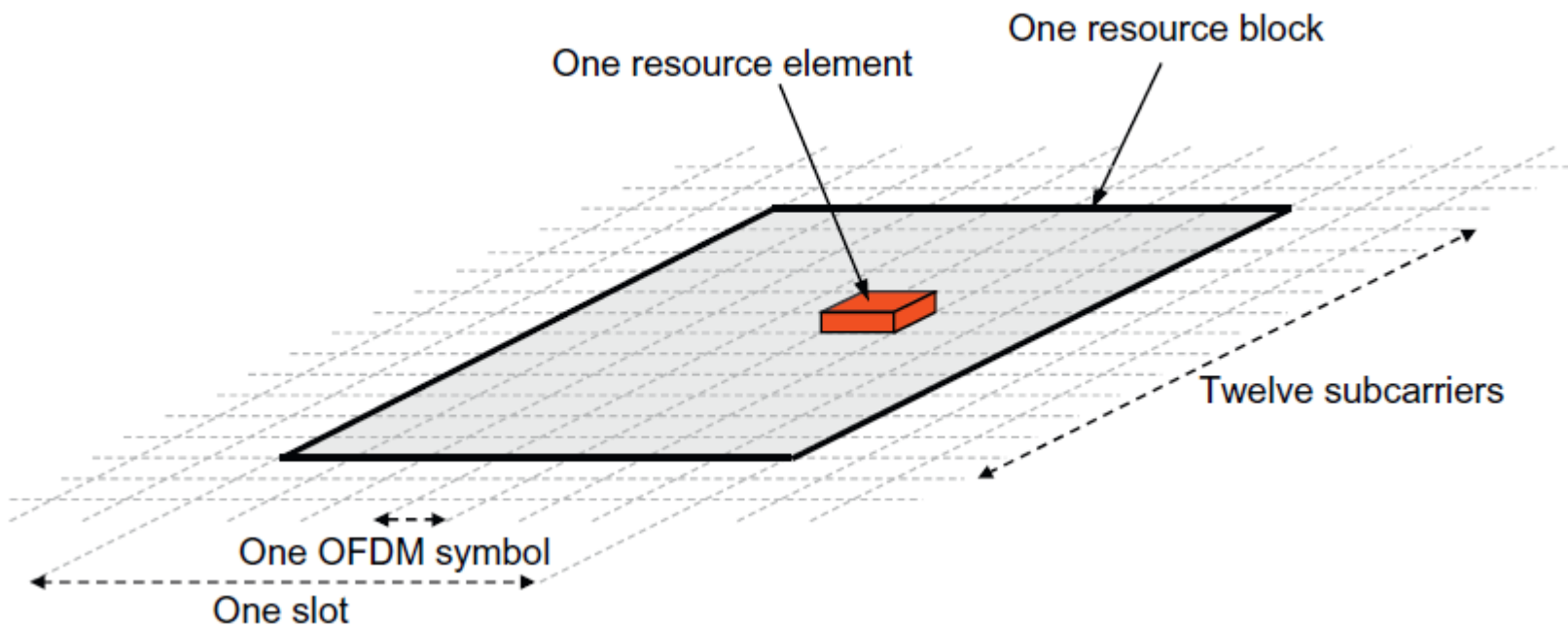




basic source units in LTE

Source: E.. Dahlman: 4 G LTE/LTE-Advanced for Mobile Broadband

W [MHz]	1,4	3,0	5,0	10,0	15,0	20,0
W_{eff} [MHz]	1,08	2,7	4,5	9,0	13,5	18,0
N_{SCT}	93,33	200	333,33	666,66	1000	1333,33
N_{SC}	72	180	300	600	900	1200
N_{RB}	6	15	25	50	75	100

parameters LTE R8

MCS Index I_{MCS}	Modulation Order Q_m	TBS Index I_{TBS}
0	2	0
1	2	1
2	2	2
3	2	3
4	2	4
5	2	5
6	2	6
7	2	7
8	2	8
9	2	9
10	4	9
11	4	10
12	4	11
13	4	12
14	4	13
15	4	14
16	4	15
17	6	15
18	6	16
19	6	17
20	6	18
21	6	19
22	6	20
23	6	21
24	6	22
25	6	23
26	6	24
27	6	25
28	6	26
29	2	reserved
30	4	
31	6	

LTE R8 MCS pre PDSCH

Table 7.1.7.1-1

Source: ETSI TS 136 213 V8.8.0 (2009-10)

Category		3GPP release	Downlink						Uplink			
			Maximum number of DL-SCH transport block bits received within a TTI		Maximum number of bits of a DL-SCH transport block received within a TTI	Total number of soft channel bits	Maximum number of supported layers for spatial multiplexing in DL	Support for 256QAM in DL	Maximum number of UL-SCH transport block bits transmitted within a TTI		Maximum number of bits of an UL-SCH transport block transmitted within a TTI	Support for 64QAM in UL
										(Mbit/s)		
0		Rel 12	1000	1	1000	25344	1	No	1000	1	1000	No
1		Rel 8	10296	10	10296	250368	1	No	5160	5	5160	No
1bis		Rel 14	10296	10	10296	250368	1	No	5160	5	5160	No
2		Rel 8	51024	51	51024	1237248	2	No	25456	25	25456	No
3		Rel 8	102048	102	75376	1237248	2	No	51024	51	51024	No
4		Rel 8	150752	150	75376	1827072	2	No	51024	51	51024	No
5		Rel 8	299552	299	149776	3667200	4	No	75376	75	75376	Yes
6	4	Rel 10	301504	301	75376 (2 layers, 64QAM) 149776 (4 layers, 64QAM)	3654144	2 or 4	No	51024	51	51024	No
7	4	Rel 10	301504	301	75376 (2 layers, 64QAM) 149776 (4 layers, 64QAM)	3654144	2 or 4	No	102048	102	51024	No
8	5	Rel 10	2998560	2998	299856	35982720	8	No	1497760	1497	149776	Yes
9	6,4	Rel 11	452256	452	75376 (2 layers, 64QAM) 149776 (4 layers, 64QAM)	5481216	2 or 4	No	51024	51	51024	No
10	7,4	Rel 11	452256	452	75376 (2 layers, 64QAM) 149776 (4 layers, 64QAM)	5481216	2 or 4	No	102048	102	51024	No

LTE UE categories

Source: http://niviuk.free.fr/ue_category.php

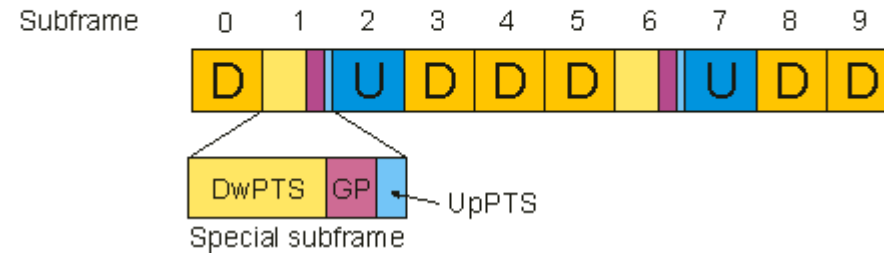
I_{TBS}	N_{PRB}										
	10	20	30	40	50	60	70	80	90	100	110
0	248	536	808	1096	1384	1672	1928	2216	2536	2792	3112
1	344	712	1064	1416	1800	2152	2536	2856	3240	3624	4008
2	424	872	1320	1800	2216	2664	3112	3624	4008	4584	4968
3	568	1160	1736	2344	2856	3496	4136	4776	5352	5736	6456
4	696	1416	2152	2856	3624	4264	4968	5736	6456	7224	7992
5	872	1736	2664	3496	4392	5352	6200	6968	7992	8760	9528
6	1032	2088	3112	4136	5160	6200	7224	8248	9528	10296	11448
7	1224	2472	3624	4968	6200	7224	8504	9912	11064	12216	13536
8	1384	2792	4264	5544	6968	8504	9912	11064	12576	14112	15264
9	1544	3112	4776	6200	7992	9528	11064	12576	14112	15840	17568
10	1736	3496	5352	6968	8760	10680	12216	14112	15840	17568	19080
11	2024	4008	5992	7992	9912	12216	14112	16416	18336	19848	22152
12	2280	4584	6712	9144	11448	13536	15840	18336	20616	22920	25456
13	2536	5160	7736	10296	12960	15264	18336	20616	22920	25456	28336
14	2856	5736	8504	11448	14112	16992	19848	22920	25456	28336	31704
15	3112	6200	9144	12216	15264	18336	21384	24496	27376	30576	34008
16	3240	6456	9912	12960	16416	19848	22920	26416	29296	32856	35160
17	3624	7224	10680	14688	18336	21384	25456	29296	32856	36696	39232
18	4008	7992	11832	15840	19848	23688	27376	31704	35160	39232	43816
19	4264	8504	12960	16992	21384	25456	30576	34008	39232	43816	46888
20	4584	9144	14112	18336	22920	28336	32856	36696	42368	46888	51024
21	4968	9912	15264	19848	25456	30576	35160	40576	45352	51024	55056
22	5352	10680	16416	21384	27376	32856	37888	43816	48936	55056	59256
23	5736	11448	16992	22920	28336	34008	40576	45352	51024	57336	63776
24	5992	12216	18336	24496	30576	36696	42368	48936	55056	61664	66592
25	6200	12576	19080	25456	31704	37888	43816	51024	57336	63776	71112
26	6712	12960	19848	26416	32856	39232	46888	52752	59256	75376	73712

TBS tab. 7.1.7.2.1-1

Source: 3GPP TS 36.213

LTE TDD Frame Type 2

UL/DL Config = 2, Special SF Config = 6



Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

LTE TDD structure

Format	Normal CP			Extended CP		
	DwPTS	GP	UpPTS	DwPTS	GP	UpPTS
0	3	10	1	3	8	1
1	9	4		8	3	
2	10	3		9	2	
3	11	2		10	1	
4	12	1		3	7	2
5	3	9	2	8	2	
6	9	3		9	1	
7	10	2		-	-	-
8	11	1		-	-	-

LTE TDD special subframe structure [OFDM symbols]