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Re:	Contribution on comments to P802.16e/D3	
Abstract	The contribution is a complement to comment on the 802.16e draft, including design for preambles using FFT sizes of 1024,512,128	
Purpose	To be integrated into P802.16e/D3 document	
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# Preambles design for OFDMA PHY layer, FFT sizes of 1024,512 and 128

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## 1 Introduction

The preambles used in the 2K OFDMA mode were design to have a very low PAPR, giving many advantages including the possibility to boost the preamble to get better performance of estimation/acquisition/cell monitoring etc. we propose a similar design for the 1024, 512 and 128 FFT OFDMA modes.

## 2 Changes needed

### In section 8.4.6.1.1 in the P802.18e/D3 change

- Page 79 lines 8-12

~~Add the following text in section 8.4.6.1.1 before Table 270:~~

~~For FFT size other than 2048 FFT, only the first  $k$  elements of table 246 shall be used to modulate the DL preamble sub-carriers, where  $k$  is the number of carriers.~~

- Add to Page 79 line 13

[\[change paragraph in page 556 IEEE802.16d-2004\]](#)

The PN series modulating the pilots are defined in ~~Table 307~~ [Tables 307a-307d](#). The series modulated depends on the segment used and IDcell parameter. The defined series shall be mapped onto the preamble subcarriers in ascending order. ~~Table 307~~ [Tables 307a-307d](#) includes the PN sequence in an Hexadecimal format, the value of the PN is obtained by converting the series to a binary series ( $W_k$ ) and starting mapping the PN from the MSB of each symbol to the LSB (0 mapped to +1 and 1 mapped to -1, for example [in table 307a](#) for [the 2K mode](#) Index=0, segment =0,  $W_k = 110000010010\dots$ , and the mapping shall follow: -1 -1 +1 +1 +1 +1 +1 -1 +1 +1 -1 +1 ...):

[\[Change also table title to of table 370\]:](#)

**Table 307a** —Preamble modulation series per segment [and CellId, for the 2K FFT mode](#)

[\[Add tables 307b-307d : \]](#)

Number	CellId	Segment	Series to modulate (in Hexadecimal format)

0	0	0	A6F294537B285E1844677D133E4D53CCB1F182DE00489E53E6B6E77065C7EE7D0ADBEAF
1	1	0	668321CBBE7F462E6C2A07E8BBDA2C7F7946D5F69E35AC8ACF7D64AB4A33C467001F3B2
2	2	0	1C75D30B2DF72CEC9117A0BD8EAF8E0502461FC07456AC906ADE03E9B5AB5E1D3F98C6E
3	3	0	5F9A2E5CA7CC69A5227104FB1CC2262809F3B10D0542B9BDFDA4A73A7046096DF0E8D3D
4	4	0	82F8A0AB918138D84BB86224F6C342D81BC8BFE791CA9EB54096159D672E91C6E13032F
5	5	0	EE27E59B84CCF15BB1565EF90D478CD2C49EE8A70DE368EED7C9420B0C6FFAF9AF035FC
6	6	0	C1DF5AE28D1CA6A8917BCDAF4E73BD93F931C44F93C3F12F0132FB643EFD5885C8B2BCB
7	7	0	FCA36CCCF7F3E0602696DF745A68DB948C57DFA9575BEA1F05725C42155898F0A63A248
8	8	0	024B0718DE6474473A08C8B151AED124798F15D1FFCCD0DE574C5D2C52A42EEF858DBA5
9	9	0	D4EBFCC3F5A0332BEA5B309ACB04685B8D1BB4CB49F9251461B4ABA255897148F0FF238
10	10	0	EEA213F429EB926D1BDEC03ABB67D1DE47B4738F3E929854F83D18B216095E6F546DADE
11	11	0	C03036FA9F253045DF6C0889A8B83BAEFCF90EB993C2D79BD911CA84075061AA43DA471
12	12	0	1E68EC22E5E2947FB0A29E4CC70597254B36C60331EACF779FE752D3F55DC41ABFC7DC9
13	13	0	63A57E75A0434F035AAC4504B265081D497F10C77928B71797C5D6C6824DC0F23BE34EE
14	14	0	C57C4612816DE981C58FD6F8DE9DD41F2422ADBC522B0CE31F9A6D5F2A126DC08F69FB1
15	15	0	978256AF184E7ED17789B33D324C711B36BFBCCE5446EB03687E9A0A839C7CE156104D2
16	16	0	011EC823157DD73150640CEB7DDB0A1F8F91E09599A851D5C7CAF687CFB752D297D82FC
17	17	0	C6DE82BEB7F57B9120E8A376D85C8F70FDC65BC660402DAC4AE6002EA2740C4F9E5973C
18	18	0	4C74929D6F9FAB9E5BB761026038E076F6824295E0AF397806ECEBC6DC713F03ACDC27C
19	19	0	13E1E85C2234D0F3418001A35F135E10C6C918C36BC659FDA9D655D288A0BDAA8BF489D
20	20	0	FD4AF2D8F4F08F1A7DF59291C9AEE788F641B8231CFB813376E0BEB68DFCFCBBE552445
21	21	0	EBBC77A493AA0C62C62F25EE5E8D0701F50386F49026FA31487C9FD5C5206CE4EB00576
22	22	0	134F936F9E875842587ADCA92187F2FC6D62FFC3A833D8CDE465F9972ABAA83763AAEB7

23	23	0	3CD1DA70670BC73363D1B4A66D280FF6AA7636D07ECF32BA26101E5EBA1594FB8A0420A
24	24	0	918296B2937C2B6F73CF98F85A81B723D1C69DBDF3E019749C582DA22E789562729D475
25	25	0	C323981B8B2240865F48D61AE1B3B61D88522B7358952F949D4308CA15D1EE8FDFA683F
26	26	0	7514A6FA5FBB250C5C8CE96F791D676036C344A44B24284477B44CB3E758F8BCD58F05B
27	27	0	84C7FEC6E977FA1EC0C7CC9E0D067C73D8F846F82ABB3456D2104E1448D5A58D5975152
28	28	0	4841AFC277B86A0E067AF319422F501C87ACBFBDD66BFEA3644F879AE98BA8C5D605123
29	29	0	F35EA87318E459138A2CE69169AD5FD9F30B62DA04ED21320A9F59893F0D176752152FD
30	30	0	A0C5F35C5971CD3DC55D7D2B9FD27AA17A198583F580EB0800744EE5B6B3648DEA95840
31	31	0	A6D3D33AD9B56862DBF076E3ACE6A3150510CCC8BE77DE4E6E10EB5FE163765647D07DF
32	0	1	52849D8F020EA6583032917F36E8B62DFD18AD4D77A7D2D8EC2D4F20CC0C75B7D4DF708
33	1	1	CC53A152209DEC7E61A06195E3FA633076F7AE1BAFFE83CE565087C0507BA596E0BD990
34	2	1	17D98A7E32CCA9B142FE32DB37B2BF726E25AA7A557FFB5C400B47A38B16CF18E1EDE63
35	3	1	A5BA8C7E2C795C9F84EBBD425992766BDE5549A7A9F7EF7E44AFD941C6084568638FE84
36	4	1	33E57E78A5696255CA61AE36027036DA619E493A0A8F95D9915C6E61F3006CB9706BEBA
37	5	1	09961E7309A9B7F3929C370C51910EBAB1B4F409FA976AE8679F354C84C4051F371F902
38	6	1	508A9EBAEF3C7E09CFCFC0B6F444A09B45A130EFC8C5B22BCE87213854E7C9D329C9ADC
39	7	1	AACEEF9BCDC82E4AD525185B07CBABCB74861D16F7C25CFBA917B05463AD65391AF840D
40	8	1	23060ACC5A125DAB207EEEE47B4EEE1E8466BD17DDA2EB3CD90D2AB7A758C213E6D7FE5
41	9	1	CA55521667BDA8B6F1B205201A51B3A0C05DE9EA06BC73268730A81A992777021F46055
42	10	1	05ADFC A2F8207DC6FF8D1A85A1DD4694D4C48A838C4F833C532710021AC448A7B62B8DD
43	11	1	218C951223D7B712DC98F8B5217388A830003C5F2A00F232DD3475D2FC78C25B8D88FF9
44	12	1	79B94D24D721121EF678B7156F8D2666DE712BBF3837C85A9518781903146A7B4D42A28
45	13	1	58AABEF6A6BDE4011CAC583C5104B2C6FC5A2980F856373E5931A3C690245327581FA13

46	14	1	427D1AD18E338E16FCE6E23B4AD6D82A2144D53048F26 65AA94577AFABD26889FCB1F9F
47	15	1	337FE0E4C15A22471AE0F6B6F91161A7DE2E1403D73587 D5C8355105D2F70642B2CE425
48	16	1	A3FCAA311B536AC9DB39FED9F4E996506B3181C58D6B 7E04157A3FD463F60468765BCFD
49	17	1	F484FD1F57F53A4A749B86148E0B1D0653667CE13931988 75DDB0AE9179BBBDAAD53A11
50	18	1	A3E9ECF1E6048562BC89DB6168E708855F0D4AD29F859 EF36C9160DF407D85426233632
51	19	1	890519376D1FFAA2894EABCD6663B0A3C2411982C17B0 1270E0FB0B289D4BC8C3B83DA9
52	20	1	09847B6187BB5F6F6728B4ED610088FAD9DADFC00748E 9DCD8A0CE320D6C991654ABE05
53	21	1	3285AE0A3D196313659C37BE1C94D61D20F11FD49D9FD F9D1026FF5763F02CB78AE135C
54	22	1	0069D3F34D0D455AFB45FEFDF716333B785C6BDA90DA 23F1CC68BC6A1DBC916C595DA3E
55	23	1	AA977A8BCA39381E7C35A1ACC7C4F60421C0862BFD61 06C7C025B0676EA0EF68972DD8F
56	24	1	F310745C497094ABE56E0490C0800319DBE290553E696B6 859635AF03B121F79D925D19
57	25	1	964DFD350B9C7DFDC7F6F7C43283A76F0D613E48A5520 D1DAF761C6F47E389B43A023F5
58	26	1	6D767B88D28A455CC3B56C942BAFD8E465A50FD2C22F E6162E03A9AAC3C1CC899800610
59	27	1	C5491C6CA3D998906EC1482F815B74B7C2E3816B682AC C6009AB7EFF34BF0E9CE59C754
60	28	1	6D8EE32D30E19D93A0E5AD8226BAE9CF6FCBA17CF6E 67FDC5A15A81ECB8908BEDD77C80
61	29	1	98F8BFDF774C7A249418E6FF4723D6E6AB2F091CDE4DE 1CE11D3BD463B509FB716940FD
62	30	1	65300BAD8FFA21BC7DC2C1F79FA97A9F469CCC9E270A 61759F34D6276F57CBEB009CD21
63	31	1	6F36BB6D5A7DC4FB720439E91FF0DE86DD6C4B93CFC4 271F2BCC6169616E3AEAA19E360
64	0	2	D27B00C70A8AA2C036ADD4E99D047A376B363FEDC287 B8FD1A7794818C5873ECD0D3D56
65	1	2	E7FDDCEED8D31B2C0752D976DE92BEA241A713CF818 C274AA1C2E3862C7EB7023AF35D4
66	2	2	87BF4954022D30549DF7348477EACB97AC3565B838460C C62F242883313B15C31370335
67	3	2	82DD830BEDE4F13C76E4CF9AEF5E42609F0BDDCB000A 742B6372DD5225B0C3114494746
68	4	2	4E06E4CF46E1F5691938D7F40179D8F79A85216775384BD 97966DB4BBF49FB6FAB8F945

69	5	2	64164534569A5E670FDB390D09C04802DD6A16B022CAD C77EDD7464AFED43C773A8DC76
70	6	2	FB8769A81AA9DB607F14A6A95948401F83057CDC9C9C3 996BA5821403A49F00A4E35191
71	7	2	77710D6F40B4F79CC63F678551C3EC18FA9DF2C82E6C8 F415DADFD63264B7513180070E
72	8	2	503F196BBF93C238BFD5E735E5AE52E0DAE64F5E2F4C3 B92E553F51303C4A64C4403BF3
73	9	2	5FD4A6894566678C95B9D5A59DDE5366799045FEB03A2 BAA74094140E9068C61C2E972C
74	10	2	95B584DC40C8B5DEAD63D48FCE65B1E61BAB4C597D9 21DB12677141E2FFE7C0AA3DA0D5
75	11	2	985763AB6CC8934DB8A0BE738A7AF1D1FA3958C1F9E2 D6A51A163E47A0A6E5FEB759FDD
76	12	2	FD8D45F00D943AD986BD353D61C6746DBF8A309B6AE1 C173B880D957B76DC031A957E8D
77	13	2	AE4323534F6EFB1A20169328417885EF304FA220389FA9C 2607E5A406F4CE4A7498A39F
78	14	2	E5205579893BE184CB9948C28E2F9AAF699D47B6E5E0B2 19CBEAFE4BEC8D561BD809E34
79	15	2	AB11D6941478D36D5695CE813070DC1E32122A39083E53 FE373660AEB125D83383FBDCA
80	16	2	188A09C46F1F11206FF9F15CFB5F6CD2F26C4BF485EE37 D3650A595064F76CE34E40EAD
81	17	2	4B1CDE25539A56CEDC45FE7F54C38CF155F4FB1AE868F 6C3952D07014BF828E810BDE2D
82	18	2	16CA8F8C6A879E865E3611EAC389D56AFA3E4E84CDBB 73567BA4A160249C4B680A7D9BC
83	19	2	39D2B08AA0E2E8781476027B41AD72F8D9838B7001AAD FD33A92D81E56ECBB2C9378D58
84	20	2	8C258BC80D4AD125F335A5151EDF9E9A463E06C5C8D04 6F82E5DC3D73EF4D2231C5D14F
85	21	2	41A029C6356C825585179C5348EDF07A3AC2022539AC28 DC4CD3C1DFADC8EE9644CD939
86	22	2	0D70A77CBE9804913BFBEC4FBF917C5CD3580F6062BB AD3F99ECEBB4A9EBB87523AB722
87	23	2	6A00A30901F9FDE44B4F1ECED44E0BCB943B29519F313 BE4496D34F39B154FC2384CB75
88	24	2	95351107A8BE6ABFC24C1292FE1A0FE677CBFD04F2E81 178CAA9D294730EF9C946F676E
89	25	2	01F21470FD9B1E0B3C6B2F7C0412A15764C277D61BA2E E3B3769DE7ADACB2BB29918FB7
90	26	2	A578ABFE155369440FA3D4DF757CCA596469B80A0E56B FE6010DD63E67CEDB86BB1EF39
91	27	2	1E1CFFAB031836777DE5D168A9246C559574C74CCC064 05EB406B8DDB7C9A6EF54A66A5

92	28	2	354149C2CA19A735F9CD04AF4922E8ECE6509B978B951 F946FD4AD36C7F9C83624205E7
93	29	2	5A27E60DEA547D0D41897A03199F28A967AC51728E3B3 8325B4FBECF1B85A7EE9B04182
94	30	2	784DA3B16B810FE3B851060AD7BD27D9D9457F6C8899A 13D311E531B855C15ECE6D3A2F
95	31	2	D7DFBC65797633A8C13D3EEC781D48952338136063B579 D69437B28B744B5A4BE18AFA9
96	0	0	61AF26BD39A9FFF52826625E04ADA299385A373FA946D 837D754E6CFEBB26F5C03B87CF
97	1	1	D77D97CDB93DBEAA65CAFA146F40D72B5E80944F750E 07325DC164ED60F32434BC7187D
98	2	2	4529D9CA65AF49C1C39BDC18CFAB87E03FE4DAFC0A4 8FF1457D46B0DF66B414A23ACDDB
99	3	0	33AC0261DAA57C1D611EBA1C730D50AFEE5BE3E84903 0A4E891BC8C5F4C78DCDDFEA263
100	4	1	BED48C704F02A84F03BCD299D919DA56F7B71EDF8A0F 8A25E8F8496F95A44CE2B9F74C9
101	5	2	0ECCBE0902EBF4B4C29506014A3706622784B7B2D5153E 10AD3112DC5E45277A32E79DE
102	6	0	7CB4937889C7DFD9AA2D37235E06F993D3D4F5D515B39 CA652F62397C08457D66BC5A36
103	7	1	43F23F6CAC6C43896B3EDBF00E1CBD42E2CC75E2A996 448F0FCF17F6779DD6E356FED11
104	8	2	72C8A209FBC4A568BEF03BCFE1B0D959F977B0963780B 4E54E2B9A1016344ACB7EE3E3A
105	9	0	77AEB9E50DC3727849A94FBFFCDB5B9589AF50ABD8A 58808B9663058E17A2EBC496DF43
106	10	1	667123C89077FE4AAAEF15C635E976C6811682D478FFC7 B721A76B5A38697DF4FB7D2CE
107	11	2	CBD6C5C9BE55B0BE76AD03392E8A8AB9A86063DB31B 79280B447980BB841FD7E9DC6B9B
108	12	0	C7D7DEF8B3C9C8667D8D65063B4DAD1FF69445C87CA7 1DA955D0CA23970E988A6EA4C83
109	13	1	FB246ABD92F9E560CB2BEC2317204C9CE22AD3BD19E A02E90F5F3B7F4F65538D8ED098E
110	14	2	29E74579472FDD8FFC2700B2BF33C649989DD8153093A7 CA08B50F7A5E4BAED108A0F0D
111	15	0	A27F29D8D6CCD7EB4BBE303C3E9E95802DB98BFD5B8 ED03B88304359D92E3EC108CA3C8
112	16	1	3FE70E26FA00327FE3B2BE6BC5D5014F588F09C17D222 C146DD68B4824692A651888C76
113	17	2	41E91307EC58801CFF2C7E9CFEFBEB71681FAE2BEAEC 72D4E4556E99345D3BA4B369B59

Table 307b —Preamble modulation series per segment and CellId, for the 1K FFT mode



Number	Cellid	Segment	Series to modulate (in Hexadecimal format)
0	0	0	66C9CB4D1C8F31D60F5795886EE02FFF6BE4
1	1	0	D8C30DA58B5ED71056C5D79032B80E05522C
2	2	0	8EB62664E3B2C5222DE18E9000561F25AAFC
3	3	0	3B32299087C257CD31C67E4AA5DD697B0E08
4	4	0	C07E0B0C5DB44071EE6CEC40CA3135CB5DB8
5	5	0	89B08CD299A8AC757DB59107AF4E1EF1EE1C
6	6	0	1B72E8C0ECFAABF050091382B411B45A718C
7	7	0	5B33ED5A6303397EC3CCC35C8203A5A05178
8	8	0	AD1173C461254BF9181238319F93F86AF964
9	9	0	51E2005BBA69C858BCC741D84990B657271C
10	10	0	21A03B607DD96F270CBC759B2A9BD6A84A34
11	11	0	4518EC4C7AD645D24AD949B42A7881403C7C
12	12	0	F8B70C595A37315D301D378A4D2848C821D4
13	13	0	FF42582005F8382C5CC6298D757155B36B24
14	14	0	599EF40107CBB3B30AF945365494A0D60570
15	15	0	C6D6BE87F0D88458ABD22DE822B64E450738
16	16	0	E043896829F236B10A35014D9E4F26ECB95C
17	17	0	2347472A610FC084C71460393AEF36CBE928
18	18	0	5F4D880DC516DC0B3860DA948225D2BC6770
19	19	0	9EFEEA99631FAF0D9589E9640BCD56C5FF08
20	20	0	FE792EF83B235B3D4A6447BED27035454BC0
21	21	0	B3B1B868C121C4555A64161B654A4FE81D70
22	22	0	B7C2D44078510ADD2447D93E8A1231AE3910
23	23	0	16A9D8F71CC1CD0EFA0008AA343A7A4ADA4C
24	24	0	7389FDE96166E7E40F7A6778AA02944937A4
25	25	0	A0598A0907798B3465DD8CBD08565F0FB5B8
26	26	0	0E75B3C128085C954A25E5808FC5833A8FB0
27	27	0	BBCDA362265B4D4D2BEE80F635E638316280
28	28	0	660047B06A1B5FAE6A9F0679DBCA9B1A2DF4
29	29	0	2594AE119CB87E802D67EF7EE0EAE99474CC
30	30	0	8FB3FA462D2CF842BB5319D9786A997C10
31	31	0	599E199B609C0C654DB053E8C94F343AAFF8
32	0	1	E0187D89220D11B5F60DAC078A5E2EED6EF0
33	1	1	69F57E074F14A10FEC6144C26E98C4688330
34	2	1	D2C4067132528AA41BBE61A9C171A382F768
35	3	1	B027CB82594D3900700B541A99CCD5FD5870
36	4	1	E9B565C61F73EC6633A1F2D96EC409495B80
37	5	1	EBD7E29110582C5951233AB22B03DE709698
38	6	1	0CCA91DA1B42B0B55C924F32B08B1FAE0E18
39	7	1	A4213FFB85B56E27C74FC6ECBA359875438C
40	8	1	1A37F92589686CFE5E4D4BFD8E2BC63AA8CC



41	9	1	31531C7B2F7518BF59ACFB216FC74D09F2F4
42	10	1	CE026112DF00BB74E1B1F43B595112B16344
43	11	1	503494DE054AE395883AEDD8CC7801B8F124
44	12	1	8447E25CA9A0EE1CFB9FADB6C42B8F565B3C
45	13	1	757C45DA8F140FB6E71024294B2439CDACFC
46	14	1	F2A59A32B51CE505E45E9B5C7C7DBE880DF4
47	15	1	8DFBF09479BC91E466A539E077D2B26A8B2C
48	16	1	1C6FB87D76DB82FFA1E492166684CACEE560
49	17	1	A32CF584137FDF1D4CCE6A1CF40FEC1F4AE0
50	18	1	EC4D3AC52136FA468F28777078C8A82C0808
51	19	1	30CABB208C9D6C774814A163765E4ACBC540
52	20	1	CA3448C6716F6F8D15D7372A3A4F6E825A14
53	21	1	ABD1526F4A510F820B689F30C1E7B88C8848
54	22	1	94E4E2AE2C4E47FD7D0A154C25BF40F759E0
55	23	1	43BFFD566D85BE162650670BE1A3CA523284
56	24	1	D7644475A2E5EDAD1AD184242E3C841A03E0
57	25	1	A61DDBA416D1D14358647C4ACEF2503001E4
58	26	1	1F9047A8651D4D4A7C582469DC8C41B68E08
59	27	1	E0EAC02D975263F36D4BEF70669CBDEE658C
60	28	1	DFAE7334BD2B8FF1D2C7CB5922823B03F744
61	29	1	D44B2AD5842F1EEA1A39DBC64EC064FCCFB C
62	30	1	08AD296C8D17ABD021E02E20DACC247673EC
63	31	1	2FE66830D806B3F8DD38D5FE1CF12DEB9774
64	0	2	C6325F42597BD48A8914944C7DB973D83E64
65	1	2	E04B98E9254434D3F765A621752C0F1FEC54
66	2	2	A74B60D84CCB156B1B8AE015B8CE980868EC
67	3	2	78E7405DCFDA1DFCDA6E54B3794B49A0F8B0
68	4	2	F32F4CA1A154E746FE1C2D1E4A1251779804
69	5	2	5A2905A1CF5D06444C880ADC07EB3889E71C
70	6	2	74290661C664DEB829569B7C4E6C32B2BE00
71	7	2	EBB53241F5D9CD87A612C0774ED2FED4679C
72	8	2	E33B89ABA4ED020D558B833AF74072922164
73	9	2	3B7D2DEEF829E230718AA7996CD814A4DD88
74	10	2	373861E8993FC22E176F6DA6A46A10158EF4
75	11	2	2BEA329B65DE1CD26ECDD382915AC40B1D0 C
76	12	2	7A8B131BD5D1270C30003DA472DD81D9A434
77	13	2	9D6A237940057479D30BE19AD719F8F9B47C
78	14	2	C1FB9C3811B349E9F793A14C8AE8425A6218
79	15	2	DFE03D8C717A346B4B1D3C02693330A9B4
80	16	2	76254DEF89683CD7210898069E2CDA0EE144
81	17	2	09B9B69C132C4E2DC16A1438828147D65F94
82	18	2	B1CCE0D47DF246E9059CBC970168518206AC
83	19	2	1017669D7990F3AB4378924C69E442F2BAD0

84	20	2	772407B19C5FA41D542C8A2DC9ADD2C2943C
85	21	2	7A38C2889EB10D93F23EC75B212D327D18A8
86	22	2	D25A195D899BF6F531F5ECC228BE0678A438
87	23	2	A83FD1C33F4C6CAA5A0E8B062937AC310034
88	24	2	AA6DDD1A05ADF49F615BE9F9EBCA6630E440
89	25	2	B14990574937763EEBD71A12FEB0C673F878
90	26	2	DDF013D74BDDE5FBB621A32B54DE24AA1D60
91	27	2	D814295D387D2EE33F90C07CA493062B3054
92	28	2	89B93046231A786C3D74ABAEC6AFF42D037C
93	29	2	5680E918BA19199E841B4D6A7D1DD1420E78
94	30	2	639CC821373B332F975817C0A1AC16A48150
95	31	2	06711D78BD8978D82DA58B7E494DDF77E994
96	0	0	C882DD8DBD23C796A1389DA4EAA9A4138640
97	1	1	038086D70895496BCABC404B1EC999F67AC0
98	2	2	8203073A335DB9E57B0CA2F07D5958176B50
99	3	0	3FF1CD3638EE6469A4A482AF834EF56A2340
100	4	1	69EA7871159D5099F900C6133C07DABF56F0
101	5	2	4D88ABB17FF855393EDBC070CF0439D5E94C
102	6	0	01EFD43C87362B00E376A728BC597BEED978
103	7	1	7AE20D16F3CC6F947413518FDF6E1FCCCDE8
104	8	2	BB852F9A90B0DE260BB67F45491B31DE3A74
105	9	0	088627544BDF971C1AC4F86F05A212EE9634
106	10	1	0C8A08A37C2B9D3C1812E9C116B4E6A6285C
107	11	2	E74775CADDDDF0D2D808FE7FC1C177489284
108	12	0	E81ECC6AC393294E9B549A8B2BADE7FFF904
109	13	1	1C5FAE8CACE7A2CD13CAF4A34A440E909BF8
110	14	2	6EE7E42A292BDACC5C79B81CA6598274C940
111	15	0	407547BC0C961D9E9ADDE010F4990724E8DC
112	16	1	46CE626ACD894F9650E6B7C3F9E3BFAE5B08
113	17	2	C59B894FBF170F44F4816750280AB8CB4E48

Table 307c —Preamble modulation series per segment and CellId, for the 512 FFT mode

Number	CellId	Segment	Series to modulate (in Hexadecimal format)
0	0	0	01E52A9B3
1	1	0	C96FF8AB1
2	2	0	A1F5CE648
3	3	0	1E2BF6919
4	4	0	051798B72
5	5	0	932D7FA8E

6	6	0	2CBD50F73
7	7	0	F86F6A451
8	8	0	2BA44F7E7
9	9	0	EEFA172C3
10	10	0	FF46C729A
11	11	0	0362D5C61
12	12	0	27DDC7CA5
13	13	0	17EAEDAC6
14	14	0	94ACD9E03
15	15	0	1A1AC22DD
16	16	0	FD5E18DA6
17	17	0	35DEB6E0E
18	18	0	A0185E326
19	19	0	93B3F9C75
20	20	0	632481EA8
21	21	0	8BB8104A5
22	22	0	87C89EF75
23	23	0	207AA794C
24	24	0	6A4D1C403
25	25	0	7761B4BD7
26	26	0	31ABBF06D
27	27	0	69C6E455F
28	28	0	AB3B3CFF0
29	29	0	731412685
30	30	0	A3135C034
31	31	0	FECCB2B85
32	0	1	AA37BDA7C
33	1	1	90955CE1F
34	2	1	ADBC1B844
35	3	1	A04A3B197
36	4	1	015E56CB3
37	5	1	64D6F4038
38	6	1	D2DD02238
39	7	1	FEA763CB2
40	8	1	8CE0D5FB6
41	9	1	CC25D7A7E
42	10	1	7019D3A92
43	11	1	784CF7EAB
44	12	1	07085DAC8
45	13	1	4CEEB5E1F
46	14	1	9E5CD5B80
47	15	1	63A76FD05
48	16	1	AA276F96F
49	17	1	3370F5082
50	18	1	35A644170

51	19	1	16FD73B8B
52	20	1	EEE990E94
53	21	1	28A3120FC
54	22	1	C2FBC2993
55	23	1	880BCACD3
56	24	1	AFA4DB918
57	25	1	AE1E49884
58	26	1	F7945E264
59	27	1	38374CA42
60	28	1	5AAE39B00
61	29	1	138069E54
62	30	1	966707005
63	31	1	A5037759E
64	0	2	3FE158D96
65	1	2	AED3B839F
66	2	2	F5AE23268
67	3	2	1895E68BE
68	4	2	1443C94EC
69	5	2	929547307
70	6	2	A17D3230C
71	7	2	D54FC0C33
72	8	2	AB77F079C
73	9	2	C3CA00A66
74	10	2	025519879
75	11	2	6CF39F815
76	12	2	F69E451B1
77	13	2	91BC72EBF
78	14	2	F964A5447
79	15	2	F8CD36F4A
80	16	2	726A3C802
81	17	2	118D1B682
82	18	2	DED9E703A
83	19	2	3E8929773
84	20	2	2C64AA7F9
85	21	2	2249CEA0F
86	22	2	01363A94E
87	23	2	69D77721F
88	24	2	AE103C9B9
89	25	2	89E2A6940
90	26	2	A7BC42645
91	27	2	BBB6B9C0F
92	28	2	5BF7598F8
93	29	2	4AE4C79FE
94	30	2	1FDC748C9
95	31	2	877D5E6E4

96	0	0	0FE322452
97	1	1	4DC778B5F
98	2	2	ADD9E3F88
99	3	0	2C1C857DC
100	4	1	CFB4B5503
101	5	2	CD8505E21
102	6	0	82892F4CE
103	7	1	3979FD176
104	8	2	5FA49C311
105	9	0	BA7857B19
106	10	1	BC030C4CA
107	11	2	517F3CBD6
108	12	0	7E545BE73
109	13	1	DDCA69C3F
110	14	2	A01A2C8C7
111	15	0	1C0B64435
112	16	1	330282DF2
113	17	2	147FCCF4B

Table 307d —Preamble modulation series per segment and CellId, for the 128 FFT mode

### 3 Preamble properties

The preambles were chosen by a computer search, which minimized the PAPR and cross-correlation properties (for a coherent/slow or differential/fast cell search).

The following graphs show the PAPR of the series:



