

Learn how to find RFoCPRI map position

Preparation

Please, update the firmware with V3.055 or later.

File Dump

Please, refer to “RFoCPRI IQ file dump procedure_v1.0” to dump IQ data using CellAdvisor.



RFoCPRI IQ file
dump procedure_\

Once you dump CPRI IQ data, CellAdvisor also generate an excel file having the same name with the file you dumped.

File Copy

1. [Save/Load]-[File Manager]-Navigate to **Internal-Save-Logging**
2. Find files like below,



2457.6_None_10M
_30_10_01_24.csv

3. Plug a USB in CellAdvisor and choose **Select - copy – Paste** to USB

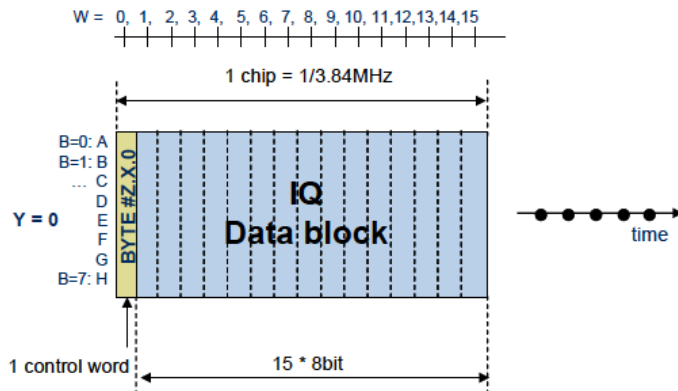
IQ Map Position identification

1. Open file then you can see below number at the top of the spreadsheet that looks like a basic frame of CPRI.
 - a. Below table shows four parallel IQ data blocks.

Bit	W0	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15
0	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
1	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
2	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
3	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
4	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
5	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
6	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
7	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0
8	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
9	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
10	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
11	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
12	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
13	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
14	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
15	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0
16	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
17	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
18	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
19	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
20	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0

21	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
22	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
23	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
24	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
25	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
26	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
27	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
28	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
29	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
30	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0
31	1	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0

- b. Above table shows multiple parallel IQ data block, and where a IQ data is mapped into. "0" indicates the bit is not used, and "1" indicates the bit is occupied.



- c. By counting the number of bits being occupied by IQ data, user can assume where the IQ data is started and ended.
- d. If you know the bandwidth of signal, you may simply assume how many carriers are in there and what might be the possible sample width.
- e. Please do not count in the bits in column "W0" which are for control word, not for an IQ.
2. Below of the first block of data that shows the bit occupation status of a basic frame, you also can find two more data block from the same spreadsheet as follow.
- Left block shows entire bit in the basic frame in a column
 - Right block shows all the bits in the basic frame except control word, and with **Map Position** info.
 - You can see from the blow example table, that the Map Position form 120 to 179 is used.
 - $(179-120+1)=60$
 - If we obtained below data from a LTE BS servicing 5MHz:
 - We should divide 60 by 2 because we know 5MHz LTE signal occupies two AxC Containers per each basic frame.
 - Therefore, $60/2=30$. It is multiple of 15. So, now we can assume below table are for two 5MHz LTE signals that are sampled with 15 bits.
 - So your right Map position configuration should be,
 - NEM: None
 - Bandwidth: 5MHz
 - Sample Width: 15bit
 - AxC Container Group #1

- i. AxC#1: 120
 - ii. AxC#2: 135
 - e. AxC Container Group #2
 - i. AxC#1: 150
 - ii. AxC#2: 165
- iv. If we obtained below data from a LTE BS servicing 10MHz
 - 1. We should divide 60 by 4 because we know 10MHz LTE signal occupies four AxC Containers per each basic frame.
 - 2. Therefore, $60/4=15$. So, now we can assume below table are for a 10MHz LTE signal that is sampled with 15 bits.
 - 3. So your right Map position configuration should be,
 - a. NEM: None
 - b. Bandwidth: 10MHz
 - c. Sample Width: 15bit
 - d. AxC Container Group #1
 - i. AxC#1: 120
 - ii. AxC#2: 135
 - iii. AxC#3: 150
 - iv. AxC#4: 165

(example)

Bit	W0-W15
0	1
1	1
2	1
3	1
4	1
5	1
6	1
7	1
8	1
9	1
10	1
11	1
12	1
13	1
14	1
15	1
16	1
17	1
18	1
19	1
20	1
21	1
22	1
23	1
24	1
25	1
26	1

Bit	W1-W15	Map Position
0	0	0
1	0	
2	0	1
3	0	
4	0	2
5	0	
6	0	3
7	0	
8	0	4
9	0	
10	0	5
11	0	
12	0	6
13	0	
14	0	7
15	0	
16	0	8
17	0	
18	0	9
19	0	
20	0	10
21	0	
22	0	11
23	0	
24	0	12
25	0	
26	0	13

27	1
28	1
29	1
30	1
31	1
32	0
33	0
34	0
35	0
36	0
37	0
38	0
39	0
40	0
41	0
42	0
43	0
44	0
45	0
46	0
47	0
48	0
49	0
50	0
51	0
52	0
53	0
54	0
55	0
56	0
57	0
58	0
59	0
60	0
61	0
62	0
63	0
64	0
65	0
66	0
67	0
68	0
69	0
70	0
71	0
72	0
73	0
74	0

27	0	
28	0	14
29	0	
30	0	15
31	0	
32	0	16
33	0	
34	0	17
35	0	
36	0	18
37	0	
38	0	19
39	0	
40	0	20
41	0	
42	0	21
43	0	
44	0	22
45	0	
46	0	23
47	0	
48	0	24
49	0	
50	0	25
51	0	
52	0	26
53	0	
54	0	27
55	0	
56	0	28
57	0	
58	0	29
59	0	
60	0	30
61	0	
62	0	31
63	0	
64	0	32
65	0	
66	0	33
67	0	
68	0	34
69	0	
70	0	35
71	0	
72	0	36
73	0	
74	0	37

75	0
76	0
77	0
78	0
79	0
80	0
81	0
82	0
83	0
84	0
85	0
86	0
87	0
88	0
89	0
90	0
91	0
92	0
93	0
94	0
95	0
96	0
97	0
98	0
99	0
100	0
101	0
102	0
103	0
104	0
105	0
106	0
107	0
108	0
109	0
110	0
111	0
112	0
113	0
114	0
115	0
116	0
117	0
118	0
119	0
120	0
121	0
122	0

75	0	
76	0	38
77	0	
78	0	39
79	0	
80	0	40
81	0	
82	0	41
83	0	
84	0	42
85	0	
86	0	43
87	0	
88	0	44
89	0	
90	0	45
91	0	
92	0	46
93	0	
94	0	47
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98	0	49
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100	0	50
101	0	
102	0	51
103	0	
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105	0	
106	0	53
107	0	
108	0	54
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111	0	
112	0	56
113	0	
114	0	57
115	0	
116	0	58
117	0	
118	0	59
119	0	
120	0	60
121	0	
122	0	61

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124	0
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126	0
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163	0
164	0
165	0
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168	0
169	0
170	0

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126	0	63
127	0	
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130	0	65
131	0	
132	0	66
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463	0	
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465	0	
466	0	233
467	0	
468	0	234
469	0	
470	0	235
471	0	
472	0	236
473	0	
474	0	237
475	0	
476	0	238
477	0	
478	0	239
479	0	

VIAVI#

507	0
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509	0
510	0
511	0