|  |
| --- |
| For certain M and L, among all the proposed binary sequences, 4 sequences will be selected by following below:   * Step 1: sequences are ranked in terms of sync accuracy, and sync accuracy margin is set to provide tolerance on median operation over cross-checking results.   Note: For the sequences fall within the margin, they are considered as similar sync accuracy.   * For each sequence, median value among all the cross-checked values is picked up for comparison * Margin value: # of samples (0.13 us)   + For M=1, M=2: 2 samples   + For M=4: 1 sample   Note: if the number of sequences within the margin is smaller than 4, the margin can be extended to count in a set of 4 sequences from the same company.   * Step 2: for the sequences falling within the margin, further check the cross-correlation: * **Alt 1**: within the margin, **4 sequences from the same company** are selected, if more than 1 sets are picked up, the cross-correlation results are compared for such sets. The median value of cross-checked cross-correlation results is used for comparison. Sync accuracy may also be considered for comparing different sets.   + Cross-correlation value, for a set :     - For one cross-checking result, use the **maximum** cross- correlation value of the 4 sequences to represent the set     - Median value for the cross-correlation of all the cross-checking results for the set is used * Step 3 : Select one set with the smallest cross-correlation value ; another set with the best sync accuray (the worst sync wihin the set is used to represent the set) |

In the following, set 1 and set 2 accroding to above 3 steps are provided for each M & L combinations. Set 1 is the one set with smallest cross-correlation value in the step 3. Set 2 is the one set with the best sync accuray in the step 3.

* M=1, L=4，Set 1 & set2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 4 | 3.000 | 2 vivo 86 CATT 207 docomo 304 OPPO 335 Ericsson 383 Apple | | |
| 5 | 3.960 | 1 vivo 75 Panasonic 88 CATT 206 docomo 333 Ericsson 381 Apple | | |
| 2 | 4.840 | 3 vivo 74 Panasonic 87 CATT 302 OPPO 334 Ericsson 382 Apple | | |
| 3 | 9.268 | 4 vivo  85 CATT  303 OPPO  336 Ericsson  384 Apple | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| vivo,CATT,Ericsson,Apple {2,3,4,5} | | | 0.75 | 9.26 us |
| Set1 : selected sequence: vivo,CATT,Ericsson,Apple {2,3,4,5},maximum cross correlation value of the 4 sequences =0.75  Set2 : selected sequence: vivo,CATT,Ericsson,Apple {2,3,4,5},the maximum timing error (worst sync) within the set = 9.26us  Note :margin=49 sample | | | | |
|  | | | | |

**Proposal 1:** For M=1, L=4 (if supported), the set of LP-SS binary sequences is:

[0 1 0 1]

[0 1 1 0]

[1 0 0 1]

[1 0 1 0]

* M=1, L=6，Set 1 & set2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 6 | 2.580 | 306 OPPO  8 vivo  117 ZTE Corporation, Sanechips  123 ZTE Corporation, Sanechips  387 Apple | | |
| 4 | 2.840 | 7 vivo  118 ZTE Corporation, Sanechips  124 ZTE Corporation, Sanechips  305 OPPO  388 Apple | | |
| 1 | 3.583 | 386 Apple  6 vivo  119 ZTE Corporation, Sanechips  122 ZTE Corporation, Sanechips  340 Ericsson | | |
| 7 | 3.663 | 5 vivo  120 ZTE Corporation, Sanechips  121 ZTE Corporation, Sanechips  337 Ericsson  385 Apple | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| vivo,ZTE,Apple {7,1,4,6} | | | 1 | 3.663us |
| Set1 : selected sequence:{7,1,4,6},maximum cross correlation value of the 4 sequences = 1  Set2 : selected sequence:{7,1,4,6},the maximum timing error (worst sync) within the set = 3.663us  Note :margin=9 sample | | | | |
|  | | | | |

**Proposal 2:** For M=1, L=6 (if supported), the set of LP-SS sequence is:

[1 0 1 0 1 0]

[0 1 0 1 0 1]

[1 0 0 1 0 1]

[1 0 1 0 0 1]

* M=1, L=8，Set 1 & set2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 10 | 2.953 | 10 vivo  92 CATT  126 ZTE Corporation, Sanechips  130 ZTE Corporation, Sanechips  263 Qualcomm  295 Samsung  310 OPPO  389 Apple | | |
| 12 | 3.048 | 11 vivo  264 Qualcomm  296 Samsung  127 ZTE Corporation, Sanechips  131 ZTE Corporation, Sanechips  311 OPPO  390 Apple  344 Ericsson | | |
| 8 | 3.516 | 12 vivo  128 ZTE Corporation, Sanechips  132 ZTE Corporation, Sanechips  262 Qualcomm  294 Samsung  309 OPPO | | |
| 1 | 3.711 | 125 ZTE Corporation, Sanechips  129 ZTE Corporation, Sanechips  261 Qualcomm  293 Samsung | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| ZTE,QC,Samsung {1,10,12,8} | | | 0.75 | 3.711us |
| Set1 : selected sequence:{ 1,10,12,8},maximum cross correlation value of the 4 sequences = 0.75  Set2 : selected sequence:{ 1,10,12,8},the maximum timing error (worst sync) within the set = 3.711us  Note :margin=8 sample | | | | |
|  | | | | |

**Proposal 3:** For M=1, L=8 (if supported), the set of LP-SS sequence is:

[1 0 1 0 0 1 0 1]

[1 0 1 0 1 0 0 1]

[1 0 0 1 0 1 0 1]

[0 1 0 1 0 1 0 1]

* M=2, L=8，Set 1 & set2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 5 | 1.302 | 16 vivo  135 ZTE Corporation, Sanechips  266 Qualcomm  395 Apple | | |
| 3 | 1.310 | 265 Qualcomm  15 vivo | | |
| 7 | 1.430 | 93 CATT  133 ZTE Corporation, Sanechips  139 ZTE Corporation, Sanechips  141 ZTE Corporation, Sanechips  145 ZTE Corporation, Sanechips  237 LGE  267 Qualcomm  13 vivo | | |
| 11 | 1.430 | 35 Nokia 79 Panasonic 95 CATT 240 LGE 268 Qualcomm | | |
| 12 | 1.465 | 347 Ericsson  14 vivo  134 ZTE Corporation, Sanechips  143 ZTE Corporation, Sanechips  147 ZTE Corporation, Sanechips  80 Panasonic | | |
| 4 | 1.497 | 34 Nokia 94 CATT 239 LGE | | |
| 6 | 1.500 | 348 Ericsson | | |
| 14 | 1.560 | 36 Nokia 96 CATT 136 ZTE Corporation, Sanechips 238 LGE 299 Samsung 393 Apple | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| Vivo {7,12,3,5} | | | 0.75 | 1.465us |
| ZTE {7,12,5,14} | | | 0.75 | 1.560us |
| CATT,LGE {7,4,11,14} | | | 0.75 | 1.560us |
| QC {3,5,7,11} | | | 0.75 | 1.430 us |
| Set1 : selected sequence: vivo{ 7,12,3,5 }，ZTE{7,12,5,14}，CATT,LGE{7,4,11,14}, QC {3,5,7,11}maximum cross correlation value of the 4 sequences = 0.75  Set2 : selected sequence: QC {3,5,7,11},the maximum timing error (worst sync) within the set = 1.430us  Note :margin=2 sample | | | | |

**Proposal 4:** For M=2, L=8 (if supported), the set of LP-SS sequence is down-selected among:

vivo:

[0 1 1 0 1 0 0 1]

[1 0 0 1 1 0 0 1]

[0 1 0 1 1 0 0 1]

[0 1 1 0 0 1 0 1]

ZTE:

[0 1 1 0 1 0 0 1]

[1 0 0 1 1 0 0 1]

[0 1 1 0 0 1 0 1]

[1 0 1 0 0 1 0 1]

CATT, LG:

[0 1 1 0 1 0 0 1]

[ 1 0 1 0 0 1 0 1]

[0 1 0 1 1 0 1 0]

[1 0 0 1 0 1 1 0]

QC:

[0 1 0 1 1 0 0 1]

[0 1 1 0 0 1 0 1]

[0 1 1 0 1 0 0 1]

[1 0 0 1 0 1 1 0]

* M=2, L=12，Set 1 & set2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 14 | 0.906 | 149 ZTE Corporation, Sanechips  160 ZTE Corporation, Sanechips  164 ZTE Corporation, Sanechips | | |
| 5 | 0.998 | 20 vivo  151 ZTE Corporation, Sanechips  156 ZTE Corporation, Sanechips  157 ZTE Corporation, Sanechips  161 ZTE Corporation, Sanechips | | |
| 7 | 1.004 | 18 vivo  150 ZTE Corporation, Sanechips  158 ZTE Corporation, Sanechips  162 ZTE Corporation, Sanechips | | |
| 17 | 1.074 | 39 Nokia | | |
| 4 | 1.100 | 152 ZTE Corporation, Sanechips  351 Ericsson | | |
| 15 | 1.100 | 350 Ericsson | | |
| 12 | 1.151 | 17 vivo | | |
| 18 | 1.300 | 153 ZTE Corporation, Sanechips  159 ZTE Corporation, Sanechips  163 ZTE Corporation, Sanechips | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| ZTE { 14,7,5,4} | | | 0.833 | 1.100us |
| Set1 : selected sequence: ZTE {14,7,5,4}, maximum cross correlation value of the 4 sequences = 0.833  Set2 : selected sequence: ZTE {14,7,5,4},the maximum timing error (worst sync) within the set = 1.100us  Note :margin=2 sample | | | | |

**Proposal 5:** For M=2, L=12 (if supported), the set of LP-SS sequence is:

[1 0 0 1 1 0 0 1 1 0 0 1]

[0 1 1 0 1 0 0 1 1 0 0 1]

[0 1 1 0 0 1 1 0 1 0 0 1]

[0 1 1 0 0 1 0 1 1 0 0 1]

* M=2, L=16，Set 1 & set2

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 28 | 0.782 | 256 Huawei  271 Qualcomm | | |
| 34 | 0.782 | 272 Qualcomm | | |
| 22 | 0.789 | 21 vivo | | |
| 7 | 0.792 | 253 Huawei | | |
| 4 | 0.792 | 165 ZTE Corporation, Sanechips 354 Ericsson | | |
| 38 | 0.797 | 23 vivo | | |
| 20 | 0.819 | 269 Qualcomm | | |
| 25 | 0.822 | 22 vivo | | |
| 24 | 0.831 | 24 vivo 270 Qualcomm | | |
| 26 | 0.840 | 168 ZTE Corporation, Sanechips 175 ZTE Corporation, Sanechips 179 ZTE Corporation, Sanechips 355 Ericsson | | |
| 36 | 0.879 | 99 CATT 170 ZTE Corporation, Sanechips | | |
| 39 | 0.894 | 100 CATT 292 MTK | | |
| 12 | 0.910 | 291 MTK | | |
| 5 | 0.910 | 166 ZTE Corporation, Sanechips | | |
| 9 | 0.910 | 167 ZTE Corporation, Sanechips | | |
| 13 | 0.911 | 98 CATT | | |
| 33 | 0.911 | 289 MTK | | |
| 11 | 0.913 | 97 CATT | | |
| 2 | 0.913 | 255 Huawei | | |
| 6 | 0.913 | 290 MTK | | |
| 8 | 0.913 | 254 Huawei | | |
| 10 | 0.976 | 171 ZTE Corporation, Sanechips | | |
| 30 | 0.976 | 403 Apple | | |
| 40 | 0.976 | 404 Apple | | |
| 23 | 0.986 | 242 LGE | | |
| 32 | 1.011 | 401 Apple | | |
| 41 | 1.041 | 172 ZTE Corporation, Sanechips | | |
| 35 | 1.042 | 174 ZTE Corporation, Sanechips 178 ZTE Corporation, Sanechips | | |
| 27 | 1.042 | 173 ZTE Corporation, Sanechips 177 ZTE Corporation, Sanechips | | |
| 29 | 1.042 | 176 ZTE Corporation, Sanechips 180 ZTE Corporation, Sanechips | | |
| 3 | 1.042 | 244 LGE | | |
| 21 | 1.042 | 243 LGE | | |
| 37 | 1.042 | 241 LGE | | |
| 19 | 1.042 | 402 Apple | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| vivo{22,25,38,24} | | | 0.750 | 0.831us |
| ZTE{4,5,9,26} | | | 0.875 | 0.910us |
| ZTE{ 27,35,26,29} | | | 0.750 | 1.042us |
| Huawei{7,8,2,28} | | | 0.625 | 0.913us |
| QC{20,24,28,34} | | | 0.625 | 0.831us |
| MTK{33,6,12,39} | | | 0.625 | 0.913us |
| Apple{32,19,30,40} | | | 0.625 | 1.042us |
| CATT{11,13,36,39} | | | 0.875 | 0.913us |
| LGE{ 37,23,21,3} | | | 0.750 | 1.042us |
| Set1 : selected sequence: Huawei{7,8,2,28}, QC{20,24,28,34}, MTK{33,6,12,39},Apple{32,19,30,40}, maximum cross correlation value of the 4 sequences = 0.625  Set2 : selected sequence: vivo{22,25,38,24}, QC{20,24,28,34},the maximum timing error (worst sync) within the set = 0.913us  Note :margin=2 sample | | | | |

**Proposal 6:** For M=2, L=16 (if supported), the set of LP-SS sequence is down-selected among:

Huawei:

[0 1 1 0 0 1 1 0 1 0 1 0 1 0 0 1]

[0 1 1 0 1 0 0 1 0 1 0 1 1 0 0 1]

[0 1 0 1 1 0 1 0 0 1 1 0 0 1 0 1]

[1 0 0 1 1 0 1 0 0 1 0 1 1 0 0 1]

QC:

[1 0 0 1 0 1 0 1 1 0 0 1 1 0 0 1]

[1 0 0 1 1 0 0 1 0 1 1 0 0 1 0 1]

[1 0 0 1 1 0 1 0 0 1 0 1 1 0 0 1]

[1 0 1 0 0 1 1 0 0 1 1 0 0 1 0 1]

MTK:

[1 0 1 0 0 1 1 0 0 1 0 1 0 1 1 0]

[0 1 1 0 0 1 1 0 1 0 0 1 0 1 0 1]

[0 1 1 0 1 0 1 0 0 1 1 0 0 1 1 0]

[1 0 1 0 1 0 0 1 1 0 1 0 0 1 1 0]

Apple:

[1 0 1 0 0 1 0 1 1 0 0 1 0 1 0 1]

[1 0 0 1 0 1 0 1 0 1 0 1 1 0 0 1]

[1 0 0 1 1 0 1 0 1 0 1 0 0 1 0 1]

[1 0 1 0 1 0 0 1 1 0 1 0 1 0 0 1]

vivo:

[1 0 0 1 0 1 1 0 0 1 1 0 1 0 0 1]

[1 0 0 1 1 0 0 1 1 0 0 1 0 1 0 1]

[1 0 1 0 1 0 0 1 1 0 0 1 1 0 0 1]

[1 0 0 1 1 0 0 1 0 1 1 0 0 1 0 1]

* M=4, L=16，Set 1 & set2
  + balanced ‘0’ and ‘1’ within each OFDM symbol:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 37 | 0.815 | 25 vivo | | |
| 28 | 0.848 | 184 ZTE Corporation, Sanechips  190 ZTE Corporation, Sanechips  194 ZTE Corporation, Sanechips  407 Apple | | |
| 34 | 0.850 | 82 Panasonic | | |
| 33 | 0.880 | 183 ZTE Corporation, Sanechips  189 ZTE Corporation, Sanechips  193 ZTE Corporation, Sanechips | | |
| 48 | 0.911 | 192 ZTE Corporation, Sanechips  196 ZTE Corporation, Sanechips | | |
| 39 | 0.911 | 408 Apple | | |
| 41 | 0.933 | 27 vivo | | |
| 12 | 0.944 | 181 ZTE Corporation, Sanechips | | |
| 15 | 0.945 | 105 CATT | | |
| 35 | 0.976 | 187 ZTE Corporation, Sanechips | | |
| 16 | 0.978 | 106 CATT | | |
| 36 | 0.978 | 107 CATT | | |
| 38 | 0.978 | 108 CATT | | |
| 47 | 0.978 | 182 ZTE Corporation, Sanechips | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| CATT{15,16,36,38 } | | | 0.826 | 0.978us |
| ZTE{ 12,47,33,28} | | | 0.875 | 0.978us |
| Set1 : selected sequence: CATT{15,16,36,38 }, maximum cross correlation value of the 4 sequences = 0.826  Set2 : selected sequence: CATT{15,16,36,38 }, ZTE{ 12,47,33,28}, the maximum timing error (worst sync) within the set = 0.978us  Note : extend 1 sample to 0.163us to include a set of 4 sequences | | | | |

* M=4, L=16，Set 1 & set2
  + unbalanced ‘0’ and ‘1’ within each OFDM symbol:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 22 | 0.600 | 61 Futurewei | | |
| 1 | 0.633 | 287 MTK | | |
| 18 | 0.650 | 64 Futurewei | | |
| 20 | 0.730 | 63 Futurewei | | |
| 21 | 0.790 | 62 Futurewei | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| Futurewei {22,21,20,18 } | | | 0.5 | 0.790us |
| Set1 : selected sequence: Futurewei {22,21,20,18 }, maximum cross correlation value of the 4 sequences = 0.5  Set2 : selected sequence: Futurewei {22,21,20,18 }, the maximum timing error (worst sync) within the set = 0.790us  Note : margin=1 sample | | | | |

**Proposal 7:** For M=4, L=16 (if supported), the set of LP-SS sequence is down-selected among:

CATT (balanced):

[0110100110101010]

[0110101010011010]

[1010011010101001]

[1010100110100110]

ZTE (balanced):

[0 1 1 0 0 1 0 1 1 0 1 0 0 1 0 1]

[1 1 0 0 0 1 0 1 1 0 1 0 0 0 1 1]

[1 0 1 0 0 1 0 1 1 0 1 0 0 0 1 1]

[1 0 0 1 1 0 1 0 1 0 1 0 0 1 0 1]

Futurewei (unbalanced):

[1 0 0 0 1 0 0 0 0 0 0 1 0 0 1 0]

[1 0 0 0 0 1 0 0 1 0 0 0 0 0 1 0]

[1 0 0 0 0 1 0 0 0 1 0 0 1 0 0 0]

[1 0 0 0 0 1 0 0 0 0 0 1 0 0 0 1]

* M=4, L=32，Set 1 & set2
  + balanced ‘0’ and ‘1’ within each OFDM symbol:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 17 | 0.524 | 109 CATT | | |
| 39 | 0.560 | 112 CATT | | |
| 42 | 0.570 | 29 vivo | | |
| 38 | 0.570 | 111 CATT | | |
| 33 | 0.585 | 32 vivo | | |
| 13 | 0.612 | 258 Huawei | | |
| 36 | 0.613 | 197 ZTE Corporation, Sanechips | | |
| 34 | 0.630 | 110 CATT | | |
| 45 | 0.649 | 201 ZTE Corporation, Sanechips | | |
| 37 | 0.650 | 200 ZTE Corporation, Sanechips | | |
| 41 | 0.650 | 30 vivo | | |
| 5 | 0.650 | 198 ZTE Corporation, Sanechips | | |
| 35 | 0.650 | 199 ZTE Corporation, Sanechips | | |
| 52 | 0.650 | 203 ZTE Corporation, Sanechips | | |
| 10 | 0.650 | 260 Huawei | | |
| 43 | 0.650 | 204 ZTE Corporation, Sanechips | | |
| 44 | 0.650 | 202 ZTE Corporation, Sanechips | | |
| 40 | 0.650 | 245 LGE | | |
| 11 | 0.650 | 257 Huawei | | |
| 8 | 0.650 | 259 Huawei | | |
| 28 | 0.650 | 31 vivo | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| CATT{17,34,38,39} | | | 0.797 | 0.630us |
| ZTE{ 36,5,35,37} | | | 0.883 | 0.650us |
| ZTE{45,44,52,43} | | | 0.938 | 0.650us |
| HW{11,13,8,10} | | | **0.493** | 0.650us |
| vivo{42,41,28,33} | | | 0.653 | 0.650us |
| Set1 : selected sequence: HW{11,13,8,10}, maximum cross correlation value of the 4 sequences = 0.493  Set2 : selected sequence: CATT{17,34,38,39}, the maximum timing error (worst sync) within the set = 0.630us  Note : margin=1 sample | | | | |

* + unbalanced ‘0’ and ‘1’ within each OFDM symbol:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| logic sequence index | Median sync accuracy (Excluding ZTE unipolar results) (us) for each sequence | sequence index + company | | |
| 2 | 0.563 | 281 MTK | | |
| 1 | 0.651 | 282 MTK | | |
| 3 | 0.651 | 283 MTK | | |
| 4 | 0.651 | 284 MTK | | |
| Company + logic sequence index group | | | maximum cross correlation value | maximum timing error |
| MTK{1,2,3,4} | | | 0.375 | 0.651us |
| Set1 : selected sequence: MTK{1,2,3,4}, maximum cross correlation value of the 4 sequences = 0.375  Set2 : selected sequence: MTK{1,2,3,4}, the maximum timing error (worst sync) within the set = 0.651us  Note : margin=1 sample | | | | |

**Proposal 8:** For M=4, L=32(if supported), the set of LP-SS sequence is down-selected among:

HW (balanced):

[0 1 0 1 1 0 1 0 1 0 1 0 1 0 0 1 1 0 1 0 0 1 1 0 0 1 1 0 0 1 0 1]

[0 1 1 0 0 1 0 1 0 1 1 0 0 1 0 1 1 0 0 1 1 0 1 0 1 0 1 0 0 1 0 1]

[0 1 0 1 0 1 0 1 1 0 1 0 1 0 0 1 1 0 1 0 1 0 0 1 1 0 1 0 0 1 1 0]

[0 1 0 1 0 1 1 0 0 1 0 1 1 0 1 0 0 1 1 0 0 1 1 0 1 0 1 0 0 1 0 1]

CATT (balanced):

[0 1 1 0 1 0 0 1 1 0 1 0 1 0 1 0 0 1 0 1 1 0 1 0 1 0 0 1 0 1 1 0]

[1 0 1 0 0 1 0 1 1 0 0 1 1 0 1 0 0 1 1 0 1 0 1 0 1 0 0 1 0 1 1 0]

[1 0 1 0 0 1 0 1 1 0 1 0 1 0 0 1 0 1 1 0 0 1 1 0 1 0 0 1 1 0 1 0]

[1 0 1 0 0 1 1 0 1 0 1 0 1 0 0 1 0 1 1 0 1 0 1 0 0 1 0 1 1 0 0 1]

Mediatek (unbalanced):

[0 0 0 1 1 0 0 0 0 0 0 1 0 0 0 1 1 0 0 0 0 0 0 1 0 0 0 1 0 1 0 0]

[0 0 0 1 0 1 0 0 1 0 0 0 1 0 0 0 0 1 0 0 0 1 0 0 0 0 0 1 0 1 0 0]

[0 0 1 0 0 0 1 0 1 0 0 0 0 1 0 0 1 0 0 0 0 0 0 1 0 0 1 0 0 0 1 0]

[0 0 1 0 0 1 0 0 0 0 0 1 1 0 0 0 0 0 1 0 1 0 0 0 0 1 0 0 0 0 1 0]