IEEE P802.11
Wireless LANs

|  |
| --- |
| CRs on New MCSs |
| Date: 2025-05-05 |
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Abstract

This submission proposes resolutions to the following 26 comments submitted in CC50 on Clause 38.5 (Parameters for UHR-MCSs) in 11bn D0.1. The changes are proposed to be made to 11bn D1.0.

CIDs: 82, 208, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 458, 550, 1101, 1592, 2558, 3314

Revision history:

R0: Original version

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** | **Resolution** |
| 82 | 38.5.1 | 217.42 | Change the four "TBD" in the table to "17", "19", "20" and "23", respectively, per motion #195. Same comment to P218L42 (Table 38-51 in 38.5.2), P219L42 (Table 38-52 in 38.5.3), P220L42 (Table 38-53 in 38.5.4), P221L42 (Table 38-54 in 38.5.5), P222L42 (Table 38-55 in 38.5.6), P223L42 (Table 38-56 in 38.5.7), P224L42 (Table 38-57 in 38.5.8), P225L42 (Table 38-58 in 38.5.9), P226L42 (Table 38-59 in 38.5.10), P227L42 (Table 38-60 in 38.5.11), P228L42 (Table 38-61 in 38.5.12), P229L42 (Table 38-62 in 38.5.13), P230L42 (Table 38-63 in 38.5.14), P231L42 (Table 38-64 in 38.5.15), P232L42 (Table 38-65 in 38.5.16). | Refer to the comment. | ACCEPT |
| 208 | 38.5.1 | 217.42 | resolves TBD in UHR-MCSs table for new MCSs | As in comment. | ACCEPT |
| 380 | 38.5.1 | 217.42 | 4 "TBD"s in Table 38-50 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 381 | 38.5.2 | 218.42 | 4 "TBD"s in Table 38-51 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 382 | 38.5.3 | 219.42 | 4 "TBD"s in Table 38-52 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 383 | 38.5.4 | 220.42 | 4 "TBD"s in Table 38-53 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 384 | 38.5.5 | 221.42 | 4 "TBD"s in Table 38-54 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 385 | 38.5.6 | 222.42 | 4 "TBD"s in Table 38-55 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 386 | 38.5.7 | 223.42 | 4 "TBD"s in Table 38-56 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 387 | 38.5.8 | 224.42 | 4 "TBD"s in Table 38-57 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 388 | 38.5.9 | 225.42 | 4 "TBD"s in Table 38-58 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 389 | 38.5.10 | 226.42 | 4 "TBD"s in Table 38-59 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 390 | 38.5.11 | 227.42 | 4 "TBD"s in Table 38-60 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 391 | 38.5.12 | 228.42 | 4 "TBD"s in Table 38-61 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 392 | 38.5.13 | 229.42 | 4 "TBD"s in Table 38-62 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 393 | 38.5.14 | 230.42 | 4 "TBD"s in Table 38-63 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 394 | 38.5.15 | 231.42 | 4 "TBD"s in Table 38-64should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 395 | 38.5.16 | 232.42 | 4 "TBD"s in Table 38-65 should be replaced as "17" "19" "20" "23" from in sequency. | As in comment. | ACCEPT |
| 458 | 38.5.1 | 217.44 | NDBPS should be 64 for 16-QAM R=2/3 in table 38-50. | change '74' to '64'. | ACCEPT |
| 550 | 38.5.1 | 217.44 | there is a typo in 16-QAM R=2/3, the NDBPS should be 64 (not 74) | 74-->64 | ACCEPT |
| 1101 | 38.5.12 | 228.18 | Last column "183.5" should be "183.8". | See comment | ACCEPT |
| 1592 | 38.5.1 | 217.08 | Define UHR MCS index for the new four MCSs in Table 38-50 to 38-65. | See the comment. | ACCEPT |
| 2558 | 38.5.1 | 217.42 | Update TBD indices in Table 38-50 to 38--65 based on passed motion on new MCS indices | as in the comment | ACCEPT |
| 3314 | 38.5.1 | 217.42 | Change TBDs in MCS tables to correct MCS indices of 17, 19, 20, 23. | as in comment. | ACCEPT |

* UHR-MCSs for 26-tone RU

The rate-dependent parameters for the 26-tone RU are provided in Table38-50 (UHR-MCSs for 26-tone RU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 26-tone RU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 24 | 24 | 12 | 0.9 | 0.8 | 0.8 |
| 1 | QPSK | 1/2 | 2 | 48 | 24 | 1.8 | 1.7 | 1.5 |
| 2 | 3/4 | 36 | 2.6 | 2.5 | 2.3 |
| 3 | 16-QAM | 1/2 | 4 | 96 | 48 | 3.5 | 3.3 | 3.0 |
| 4 | 3/4 | 72 | 5.3 | 5.0 | 4.5 |
| 5 | 64-QAM | 2/3 | 6 | 144 | 96 | 7.1 | 6.7 | 6.0 |
| 6 | 3/4 | 108 | 7.9 | 7.5 | 6.8 |
| 7 | 5/6 | 120 | 8.8 | 8.3 | 7.5 |
| 8 | 256-QAM | 3/4 | 8 | 192 | 144 | 10.6 | 10.0 | 9.0 |
| 9 | 5/6 | 160 | 11.8 | 11.1 | 10.0 |
| 10 | 1024-QAM | 3/4 | 10 | 240 | 180 | 13.2 | 12.5 | 11.3 |
| 11 | 5/6 | 200 | 14.7 | 13.9 | 12.5 |
| 12 | 4096-QAM | 3/4 | 12 | 288 | 216 | 15.9 | 15.0 | 13.5 |
| 13 | 5/6 | 240 | 17.6 | 16.7 | 15.0 |
| 15 | BPSK-DCM  | 1/2 | 1 | 12 | 12 | 6 | 0.4 | 0.4 | 0.4 |
| 17 | QPSK | 2/3 | 2 | 24 | 48 | 32 | 2.4 | 2.2 | 2.0 |
| 19 | 16-QAM | 2/3 | 4 | 96 | 64 | 4.7 | 4.4 | 4.0 |
| 20 | 16-QAM | 5/6 | 4 | 96 | 80 | 5.9 | 5.6 | 5.0 |
| 23 | 256-QAM | 2/3 | 8 | 192 | 128 | 9.4 | 8.9 | 8.0 |

[#208, #380]

* UHR-MCSs for 52-tone RU

The rate-dependent parameters for the 52-tone RU are provided in Table38-51 (UHR-MCSs for 52-tone RU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 52-tone RU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 48 | 48 | 24 | 1.8 | 1.7 | 1.5 |
| 1 | QPSK | 1/2 | 2 | 96 | 48 | 3.5 | 3.3 | 3.0 |
| 2 | 3/4 | 72 | 5.3 | 5.0 | 4.5 |
| 3 | 16-QAM | 1/2 | 4 | 192 | 96 | 7.1 | 6.7 | 6.0 |
| 4 | 3/4 | 144 | 10.6 | 10.0 | 9.0 |
| 5 | 64-QAM | 2/3 | 6 | 288 | 192 | 14.1 | 13.3 | 12.0 |
| 6 | 3/4 | 216 | 15.9 | 15.0 | 13.5 |
| 7 | 5/6 | 240 | 17.6 | 16.7 | 15.0 |
| 8 | 256-QAM | 3/4 | 8 | 384 | 288 | 21.2 | 20.0 | 18.0 |
| 9 | 5/6 | 320 | 23.5 | 22.2 | 20.0 |
| 10 | 1024-QAM | 3/4 | 10 | 480 | 360 | 26.5 | 25.0 | 22.5 |
| 11 | 5/6 | 400 | 29.4 | 27.8 | 25.0 |
| 12 | 4096-QAM | 3/4 | 12 | 576 | 432 | 31.8 | 30.0 | 27.0 |
| 13 | 5/6 | 480 | 35.3 | 33.3 | 30.0 |
| 15 | BPSK-DCM  | 1/2 | 1 | 24 | 24 | 12 | 0.9 | 0.8 | 0.8 |
| 17 | QPSK | 2/3 | 2 | 48 | 96 | 64 | 4.7 | 4.4 | 4.0 |
| 19 | 16-QAM | 2/3 | 4 | 192 | 128 | 9.4 | 8.9 | 8.0 |
| 20 | 16-QAM | 5/6 | 4 | 192 | 160 | 11.8 | 11.1 | 10.0 |
| 23 | 256-QAM | 2/3 | 8 | 384 | 256 | 18.8 | 17.8 | 16.0 |

 [#82, #208, #381]

* UHR-MCSs for 52+26-tone MRU

The rate-dependent parameters for the 52+26-tone MRU are provided in Table38-52 (UHR-MCSs for 52+26-tone MRU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 52+26-tone MRU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 72 | 72 | 36 | 2.6 | 2.5 | 2.3 |
| 1 | QPSK | 1/2 | 2 | 144 | 72 | 5.3 | 5.0 | 4.5 |
| 2 | 3/4 | 108 | 7.9 | 7.5 | 6.8 |
| 3 | 16-QAM | 1/2 | 4 | 288 | 144 | 10.6 | 10.0 | 9.0 |
| 4 | 3/4 | 216 | 15.9 | 15.0 | 13.5 |
| 5 | 64-QAM | 2/3 | 6 | 432 | 288 | 21.2 | 20.0 | 18.0 |
| 6 | 3/4 | 324 | 23.8 | 22.5 | 20.3 |
| 7 | 5/6 | 360 | 26.5 | 25.0 | 22.5 |
| 8 | 256-QAM | 3/4 | 8 | 576 | 432 | 31.8 | 30.0 | 27.0 |
| 9 | 5/6 | 480 | 35.3 | 33.3 | 30.0 |
| 10 | 1024-QAM | 3/4 | 10 | 720 | 540 | 39.7 | 37.5 | 33.8 |
| 11 | 5/6 | 600 | 44.1 | 41.7 | 37.5 |
| 12 | 4096-QAM | 3/4 | 12 | 864 | 648 | 47.6 | 45.0 | 40.5 |
| 13 | 5/6 | 720 | 52.9 | 50.0 | 45.0 |
| 15 | BPSK-DCM  | 1/2 | 1 | 36 | 36 | 18 | 1.3 | 1.3 | 1.1 |
| 17 | QPSK | 2/3 | 2 | 72 | 144 | 96 | 7.1 | 6.7 | 6.0 |
| 19 | 16-QAM | 2/3 | 4 | 288 | 192 | 14.1 | 13.3 | 12.0 |
| 20 | 16-QAM | 5/6 | 4 | 288 | 240 | 17.6 | 16.7 | 15.0 |
| 23 | 256-QAM | 2/3 | 8 | 576 | 384 | 28.2 | 26.7 | 24.0 |

 [#82, #208, #382]

* UHR-MCSs for 106-tone RU

The rate-dependent parameters for the 106-tone RU are provided in Table38-53 (UHR-MCSs for 106-tone RU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 106-tone RU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 102 | 102 | 51 | 3.8 | 3.5 | 3.2 |
| 1 | QPSK | 1/2 | 2 | 204 | 102 | 7.5 | 7.1 | 6.4 |
| 2 | 3/4 | 153 | 11.3 | 10.6 | 9.6 |
| 3 | 16-QAM | 1/2 | 4 | 408 | 204 | 15.0 | 14.2 | 12.8 |
| 4 | 3/4 | 306 | 22.5 | 21.3 | 19.1 |
| 5 | 64-QAM | 2/3 | 6 | 612 | 408 | 30.0 | 28.3 | 25.5 |
| 6 | 3/4 | 459 | 33.8 | 31.9 | 28.7 |
| 7 | 5/6 | 510 | 37.5 | 35.4 | 31.9 |
| 8 | 256-QAM | 3/4 | 8 | 816 | 612 | 45.0 | 42.5 | 38.3 |
| 9 | 5/6 | 680 | 50.0 | 47.2 | 42.5 |
| 10 | 1024-QAM | 3/4 | 10 | 1 020 | 765 | 56.3 | 53.1 | 47.8 |
| 11 | 5/6 | 850 | 62.5 | 59.0 | 53.1 |
| 12 | 4096-QAM | 3/4 | 12 | 1 224 | 918 | 67.5 | 63.8 | 57.4 |
| 13 | 5/6 | 1 020 | 75.0 | 70.8 | 63.8 |
| 15 | BPSK-DCM | 1/2 | 1 | 51 | 51 | 25 | 1.8 | 1.7 | 1.6 |
| 17 | QPSK | 2/3 | 2 | 102 | 204 | 136 | 10.0 | 9.4 | 8.5 |
| 19 | 16-QAM | 2/3 | 4 | 408 | 272 | 20.0 | 18.9 | 17.0 |
| 20 | 16-QAM | 5/6 | 4 | 408 | 340 | 25.0 | 23.6 | 21.3 |
| 23 | 256-QAM | 2/3 | 8 | 816 | 544 | 40.0 | 37.8 | 34.0 |

[#82, #208, #383]

* UHR-MCSs for 106+26-tone MRU

The rate-dependent parameters for the 106+26-tone MRU are provided in Table38-54 (UHR-MCSs for 106+26-tone MRU, NSS,u = 1),

|  |
| --- |
| * UHR-MCSs for 106+26-tone MRU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 126 | 126 | 63 | 4.6 | 4.4 | 3.9 |
| 1 | QPSK | 1/2 | 2 | 252 | 126 | 9.3 | 8.8 | 7.9 |
| 2 | 3/4 | 189 | 13.9 | 13.1 | 11.8 |
| 3 | 16-QAM | 1/2 | 4 | 504 | 252 | 18.5 | 17.5 | 15.8 |
| 4 | 3/4 | 378 | 27.8 | 26.3 | 23.6 |
| 5 | 64-QAM | 2/3 | 6 | 756 | 504 | 37.1 | 35.0 | 31.5 |
| 6 | 3/4 | 567 | 41.7 | 39.4 | 35.4 |
| 7 | 5/6 | 630 | 46.3 | 43.8 | 39.4 |
| 8 | 256-QAM | 3/4 | 8 | 1 008 | 756 | 55.6 | 52.5 | 47.3 |
| 9 | 5/6 | 840 | 61.8 | 58.3 | 52.5 |
| 10 | 1024-QAM | 3/4 | 10 | 1 260 | 945 | 69.5 | 65.6 | 59.1 |
| 11 | 5/6 | 1 050 | 77.2 | 72.9 | 65.6 |
| 12 | 4096-QAM | 3/4 | 12 | 1 512 | 1 134 | 83.4 | 78.8 | 70.9 |
| 13 | 5/6 | 1 260 | 92.6 | 87.5 | 78.8 |
| 15 | BPSK-DCM  | 1/2 | 1 | 63 | 63 | 31 | 2.3 | 2.2 | 1.9 |
| 17 | QPSK | 2/3 | 2 | 126 | 252 | 168 | 12.4 | 11.7 | 10.5 |
| 19 | 16-QAM | 2/3 | 4 | 504 | 336 | 24.7 | 23.3 | 21.0 |
| 20 | 16-QAM | 5/6 | 4 | 504 | 420 | 30.9 | 29.2 | 26.3 |
| 23 | 256-QAM | 2/3 | 8 | 1008 | 672 | 49.4 | 46.7 | 42.0 |

 [#82, #208, #384]

* UHR-MCSs for 242-tone RU

The rate-dependent parameters for the 242-tone RU are provided in Table38-55 (UHR-MCSs for 242-tone RU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 242-tone RU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 234 | 234 | 117 | 8.6 | 8.1 | 7.3 |
| 1 | QPSK | 1/2 | 2 | 468 | 234 | 17.2 | 16.3 | 14.6 |
| 2 | 3/4 | 351 | 25.8 | 24.4 | 21.9 |
| 3 | 16-QAM | 1/2 | 4 | 936 | 468 | 34.4 | 32.5 | 29.3 |
| 4 | 3/4 | 702 | 51.6 | 48.8 | 43.9 |
| 5 | 64-QAM | 2/3 | 6 | 1 404 | 936 | 68.8 | 65.0 | 58.5 |
| 6 | 3/4 | 1 053 | 77.4 | 73.1 | 65.8 |
| 7 | 5/6 | 1 170 | 86.0 | 81.3 | 73.1 |
| 8 | 256-QAM | 3/4 | 8 | 1 872 | 1 404 | 103.2 | 97.5 | 87.8 |
| 9 | 5/6 | 1 560 | 114.7 | 108.3 | 97.5 |
| 10 | 1024-QAM | 3/4 | 10 | 2 340 | 1 755 | 129.0 | 121.9 | 109.7 |
| 11 | 5/6 | 1 950 | 143.4 | 135.4 | 121.9 |
| 12 | 4096-QAM | 3/4 | 12 | 2 808 | 2 106 | 154.9 | 146.3 | 131.6 |
| 13 | 5/6 | 2 340 | 172.1 | 162.5 | 146.3 |
| 15 | BPSK-DCM  | 1/2 | 1 | 117 | 117 | 58 | 4.3 | 4.0 | 3.6 |
| 17 | QPSK | 2/3 | 2 | 234 | 468 | 312 | 22.9 | 21.7 | 19.5 |
| 19 | 16-QAM | 2/3 | 4 | 936 | 624 | 45.9 | 43.3 | 39.0 |
| 20 | 16-QAM | 5/6 | 4 | 936 | 780 | 57.4 | 54.2 | 48.8 |
| 23 | 256-QAM | 2/3 | 8 | 1872 | 1248 | 91.8 | 86.7 | 78.0 |

[#82, #208, #385]

* UHR-MCSs for 484-tone RU

The rate-dependent parameters for the 484-tone RU are provided in Table38-56 (UHR-MCSs for 484-tone RU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 484-tone RU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 468 | 468 | 234 | 17.2 | 16.3 | 14.6 |
| 1 | QPSK | 1/2 | 2 | 936 | 468 | 34.4 | 32.5 | 29.3 |
| 2 | 3/4 | 702 | 51.6 | 48.8 | 43.9 |
| 3 | 16-QAM | 1/2 | 4 | 1 872 | 936 | 68.8 | 65.0 | 58.5 |
| 4 | 3/4 | 1 404 | 103.2 | 97.5 | 87.8 |
| 5 | 64-QAM | 2/3 | 6 | 2 808 | 1 872 | 137.6 | 130.0 | 117.0 |
| 6 | 3/4 | 2 106 | 154.9 | 146.3 | 131.6 |
| 7 | 5/6 | 2 340 | 172.1 | 162.5 | 146.3 |
| 8 | 256-QAM | 3/4 | 8 | 3 744 | 2 808 | 206.5 | 195.0 | 175.5 |
| 9 | 5/6 | 3 120 | 229.4 | 216.7 | 195.0 |
| 10 | 1024-QAM | 3/4 | 10 | 4 680 | 3 510 | 258.1 | 243.8 | 219.4 |
| 11 | 5/6 | 3 900 | 286.8 | 270.8 | 243.8 |
| 12 | 4096-QAM | 3/4 | 12 | 5 616 | 4 212 | 309.7 | 292.5 | 263.3 |
| 13 | 5/6 | 4 680 | 344.1 | 325.0 | 292.5 |
| 15 | BPSK-DCM  | 1/2 | 1 | 234 | 234 | 117 | 8.6 | 8.1 | 7.3 |
| 17 | QPSK | 2/3 | 2 | 468 | 936 | 624  | 45.9 | 43.3 | 39.0 |
| 19 | 16-QAM | 2/3 | 4 | 1872 | 1248 | 91.8 | 86.7 | 78.0 |
| 20 | 16-QAM | 5/6 | 4 | 1872 | 1560  | 114.7 | 108.3 | 97.5 |
| 23 | 256-QAM | 2/3 | 8 | 3744 | 2496 | 183.5 | 173.3 | 156.0 |

 [#82, #208, #386]

* UHR-MCSs for 484+242-tone MRU

The rate-dependent parameters for the 484+242-tone MRU are provided in Table38-57 (UHR-MCSs for 484+242-tone MRU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 484+242-tone MRU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 702 | 702 | 351 | 25.8 | 24.4 | 21.9 |
| 1 | QPSK | 1/2 | 2 | 1 404 | 702 | 51.6 | 48.8 | 43.9 |
| 2 | 3/4 | 1 053 | 77.4 | 73.1 | 65.8 |
| 3 | 16-QAM | 1/2 | 4 | 2 808 | 1 404 | 103.2 | 97.5 | 87.8 |
| 4 | 3/4 | 2 106 | 154.9 | 146.3 | 131.6 |
| 5 | 64-QAM | 2/3 | 6 | 4 212 | 2 808 | 206.5 | 195.0 | 175.5 |
| 6 | 3/4 | 3 159 | 232.3 | 219.4 | 197.4 |
| 7 | 5/6 | 3 510 | 258.1 | 243.8 | 219.4 |
| 8 | 256-QAM | 3/4 | 8 | 5 616 | 4 212 | 309.7 | 292.5 | 263.3 |
| 9 | 5/6 | 4 680 | 344.1 | 325.0 | 292.5 |
| 10 | 1024-QAM | 3/4 | 10 | 7 020 | 5 265 | 387.1 | 365.6 | 329.1 |
| 11 | 5/6 | 5 850 | 430.1 | 406.3 | 365.6 |
| 12 | 4096-QAM | 3/4 | 12 | 8 424 | 6 318 | 464.6 | 438.8 | 394.9 |
| 13 | 5/6 | 7 020 | 516.2 | 487.5 | 438.8 |
| 15 | BPSK-DCM  | 1/2 | 1 | 351 | 351 | 175 | 12.9 | 12.2 | 10.9 |
| 17 | QPSK | 2/3 | 2 | 702 | 1404 | 936 | 68.8 | 65.0 | 58.5 |
| 19 | 16-QAM | 2/3 | 4 | 2808 | 1872  | 137.6 | 130.0 | 117.0 |
| 20 | 16-QAM | 5/6 | 4 | 2808 | 2340  | 172.1 | 162.5 | 146.3 |
| 23 | 256-QAM | 2/3 | 8 | 5616 | 3744  | 275.3 | 260.0 | 234.0 |

 [#82, #208, #387]

* UHR-MCSs for 996-tone RU

The rate-dependent parameters for the 996-tone RU are provided in Table38-58 (UHR-MCSs for 996-tone RU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 996-tone RU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 980 | 980 | 490 | 36.0 | 34.0 | 30.6 |
| 1 | QPSK | 1/2 | 2 | 1 960 | 980 | 72.1 | 68.1 | 61.3 |
| 2 | 3/4 | 1 470 | 108.1 | 102.1 | 91.9 |
| 3 | 16-QAM | 1/2 | 4 | 3 920 | 1 960 | 144.1 | 136.1 | 122.5 |
| 4 | 3/4 | 2 940 | 216.2 | 204.2 | 183.8 |
| 5 | 64-QAM | 2/3 | 6 | 5 880 | 3 920 | 288.2 | 272.2 | 245.0 |
| 6 | 3/4 | 4 410 | 324.3 | 306.3 | 275.6 |
| 7 | 5/6 | 4 900 | 360.3 | 340.3 | 306.3 |
| 8 | 256-QAM | 3/4 | 8 | 7 840 | 5 880 | 432.4 | 408.3 | 367.5 |
| 9 | 5/6 | 6 533 | 480.4 | 453.7 | 408.3 |
| 10 | 1024-QAM | 3/4 | 10 | 9 800 | 7 350 | 540.4 | 510.4 | 459.4 |
| 11 | 5/6 | 8 166 | 600.4 | 567.1 | 510.4 |
| 12 | 4096-QAM | 3/4 | 12 | 11 760 | 8 820 | 648.5 | 612.5 | 551.3 |
| 13 | 5/6 | 9 800 | 720.6 | 680.6 | 612.5 |
| 15 | BPSK-DCM  | 1/2 | 1 | 490 | 490 | 245 | 18.0 | 17.0 | 15.3 |
| 17 | QPSK | 2/3 | 2 | 980 | 1960 | 1306 | 96.0 | 90.7 | 81.6 |
| 19 | 16-QAM | 2/3 | 4 | 3920 | 2613  | 192.1 | 181.5 | 163.3 |
| 20 | 16-QAM | 5/6 | 4 | 3920 | 3266  | 240.1 | 226.8 | 204.1 |
| 23 | 256-QAM | 2/3 | 8 | 7840 | 5226 | 384.3 | 362.9 | 326.6 |

[#82, #208, #388]

* UHR-MCSs for 996+484-tone MRU

The rate-dependent parameters for the 996+484-tone MRU are provided in Table38-59 (UHR-MCSs for 996+484-tone MRU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 996+484-tone MRU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 1 448 | 1 448 | 724 | 53.2 | 50.3 | 45.3 |
| 1 | QPSK | 1/2 | 2 | 2 896 | 1 448 | 106.5 | 100.6 | 90.5 |
| 2 | 3/4 | 2 172 | 159.7 | 150.8 | 135.8 |
| 3 | 16-QAM | 1/2 | 4 | 5 792 | 2 896 | 212.9 | 201.1 | 181.0 |
| 4 | 3/4 | 4 344 | 319.4 | 301.7 | 271.5 |
| 5 | 64-QAM | 2/3 | 6 | 8 688 | 5 792 | 425.9 | 402.2 | 362.0 |
| 6 | 3/4 | 6 516 | 479.1 | 452.5 | 407.3 |
| 7 | 5/6 | 7 240 | 532.4 | 502.8 | 452.5 |
| 8 | 256-QAM | 3/4 | 8 | 11 584 | 8 688 | 638.8 | 603.3 | 543.0 |
| 9 | 5/6 | 9 653 | 709.8 | 670.3 | 603.3 |
| 10 | 1024-QAM | 3/4 | 10 | 14 480 | 10 860 | 798.5 | 754.2 | 678.8 |
| 11 | 5/6 | 12 066 | 887.2 | 837.9 | 754.1 |
| 12 | 4096-QAM | 3/4 | 12 | 17 376 | 13 032 | 958.2 | 905.0 | 814.5 |
| 13 | 5/6 | 14 480 | 1 064.7 | 1 005.6 | 905.0 |
| 15 | BPSK-DCM  | 1/2 | 1 | 724 | 724 | 362 | 26.2 | 25.1 | 22.6 |
| 17 | QPSK | 2/3 | 2 | 1 448 | 2896 | 1930  | 141.9 | 134.0 | 120.6 |
| 19 | 16-QAM | 2/3 | 4 | 5792 | 3861 | 283.9 | 268.1 | 241.3 |
| 20 | 16-QAM | 5/6 | 4 | 5792 | 4826  | 354.9 | 335.1 | 301.6 |
| 23 | 256-QAM | 2/3 | 8 | 11584 | 7722  | 567.8 | 536.3 | 482.6 |

[#82, #208, #389]

* UHR-MCSs for 996+484+242-tone MRU

The rate-dependent parameters for the 996+484+242-tone MRU are provided in Table38-60 (UHR-MCSs for 996+484+242-tone MRU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 996+484+242-tone MRU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 1 682 | 1 682 | 841 | 61.8 | 58.4 | 52.6 |
| 1 | QPSK | 1/2 | 2 | 3 364 | 1 682 | 123.7 | 116.8 | 105.1 |
| 2 | 3/4 | 2 523 | 185.5 | 175.2 | 157.7 |
| 3 | 16-QAM | 1/2 | 4 | 6 728 | 3 364 | 247.4 | 233.6 | 210.3 |
| 4 | 3/4 | 5 046  | 371.0 | 350.4 | 315.4 |
| 5 | 64-QAM | 2/3 | 6 | 10 092 | 6 728 | 494.7 | 467.2 | 420.5 |
| 6 | 3/4 | 7 569 | 556.5 | 525.6 | 473.1 |
| 7 | 5/6 | 8 410 | 618.4 | 584.0 | 525.6 |
| 8 | 256-QAM | 3/4 | 8 | 13 456 | 10 092 | 742.1 | 700.8 | 630.8 |
| 9 | 5/6 | 11 213 | 824.5 | 778.7 | 700.8 |
| 10 | 1024-QAM | 3/4 | 10 | 16 820 | 12 615 | 927.6 | 876.0 | 788.4 |
| 11 | 5/6 | 14 016 | 1 030.6 | 973.3 | 876.0 |
| 12 | 4096-QAM | 3/4 | 12 | 20 184 | 15 138 | 1 113.1 | 1 051.3 | 946.1 |
| 13 | 5/6 | 16 820 | 1 236.8 | 1 168.1 | 1 051.3 |
| 15 | BPSK-DCM  | 1/2 | 1 | 841 | 841 | 420 | 30.9 | 29.2 | 26.3 |
| 17 | QPSK | 2/3 | 2 | 1 682 | 3364 | 2242 | 164.9 | 155.7 | 140.1 |
| 19 | 16-QAM | 2/3 | 4 | 6728 | 4485 | 329.8 | 311.5 | 280.3 |
| 20 | 16-QAM | 5/6 | 4 | 6728 | 5606  | 412.2 | 389.3 | 350.4 |
| 23 | 256-QAM | 2/3 | 8 | 13456 | 8970  | 659.6 | 622.9 | 560.6 |

[#82, #208, #390]

* UHR-MCSs for 2×996-tone RU

The rate-dependent parameters for the 2×996-tone RU are provided in Table38-61 (UHR-MCSs for 2¡Á996-tone RU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 2×996-tone RU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 1 960 | 1 960 | 980 | 72.1 | 68.1 | 61.3 |
| 1 | QPSK | 1/2 | 2 | 3  920 | 1 960 | 144.1 | 136.1 | 122.5 |
| 2 | 3/4 | 2 940 | 216.2 | 204.2 | 183.8 |
| 3 | 16-QAM | 1/2 | 4 | 7 840 | 3 920 | 288.2 | 272.2 | 245.0 |
| 4 | 3/4 | 5 880 | 432.4 | 408.3 | 367.5 |
| 5 | 64-QAM | 2/3 | 6 | 11 760 | 7 840 | 576.5 | 544.4 | 490.0 |
| 6 | 3/4 | 8 820 | 648.5 | 612.5 | 551.3 |
| 7 | 5/6 | 9 800 | 720.6 | 680.6 | 612.5 |
| 8 | 256-QAM | 3/4 | 8 | 15 680 | 11 760 | 864.7 | 816.7 | 735.0 |
| 9 | 5/6 | 13 066 | 960.7 | 907.4 | 816.6 |
| 10 | 1024-QAM | 3/4 | 10 | 19 600 | 14 700 | 1 080.9 | 1 020.8 | 918.8 |
| 11 | 5/6 | 16 333 | 1 201.0 | 1 134.2 | 1 020.8 |
| 12 | 4096-QAM | 3/4 | 12 | 23 520 | 17 640 | 1 297.1 | 1 225.0 | 1 102.5 |
| 13 | 5/6 | 19 600 | 1 441.2 | 1 361.1 | 1  225.0 |
| 15 | BPSK-DCM  | 1/2 | 1 | 980 | 980 | 490 | 36.0 | 34.0 | 30.6 |
| 17 | QPSK | 2/3 | 2 | 1 960 | 3920 | 2613 | 192.1 | 181.5 | 163.3 |
| 19 | 16-QAM | 2/3 | 4 | 7840 | 5226 | 384.3 | 362.9 | 326.6 |
| 20 | 16-QAM | 5/6 | 4 | 7840 | 6533  | 480.4 | 453.7 | 408.3 |
| 23 | 256-QAM | 2/3 | 8 | 15680 | 10453  | 768.6 | 725.9 | 653.3 |

[#82, #208, #391]

* UHR-MCSs for 2×996+484-tone MRU

The rate-dependent parameters for the 2×996+484-tone MRU are provided in Table38-62 (UHR-MCSs for 2¡Á996+484-tone MRU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 2×996+484-tone MRU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 2 428 | 2 428 | 1 214 | 89.3 | 84.3 | 75.9 |
| 1 | QPSK | 1/2 | 2 | 4 856 | 2 428 | 178.5 | 168.6 | 151.8 |
| 2 | 3/4 | 3 642 | 267.8 | 252.9 | 227.6 |
| 3 | 16-QAM | 1/2 | 4 | 9 712 | 4 856 | 357.1 | 337.2 | 303.5 |
| 4 | 3/4 | 7 284 | 535.6 | 505.8 | 455.3 |
| 5 | 64-QAM | 2/3 | 6 | 14 568 | 9 712 | 714.1 | 674.4 | 607.0 |
| 6 | 3/4 | 10 926 | 803.4 | 758.8 | 682.9 |
| 7 | 5/6 | 12 140 | 892.6 | 843.1 | 758.8 |
| 8 | 256-QAM | 3/4 | 8 | 19 424 | 14 568 | 1 071.2 | 1 011.7 | 910.5 |
| 9 | 5/6 | 16 186 | 1 190.1 | 1 124.0 | 1 011.6 |
| 10 | 1024-QAM | 3/4 | 10 | 24 280 | 18 210 | 1 339.0 | 1 264.6 | 1 138.1 |
| 11 | 5/6 | 20 233 | 1 487.7 | 1 405.1 | 1 264.6 |
| 12 | 4096-QAM | 3/4 | 12 | 29 136 | 21 852 | 1 606.8 | 1 517.5 | 1 365.8 |
| 13 | 5/6 | 24 280 | 1 785.3 | 1 686.1 | 1 517.5 |
| 15 | BPSK-DCM  | Not valid |
| 17 | QPSK | 2/3 | 2 | 2 428 | 4856 | 3237 | 238.0 | 224.8 | 202.3 |
| 19 | 16-QAM | 2/3 | 4 | 9712 | 6474 | 476.0 | 449.6 | 404.6 |
| 20 | 16-QAM | 5/6 | 4 | 9712 | 8093 | 595.1 | 562.0 | 505.8 |
| 23 | 256-QAM | 2/3 | 8 | 19424 | 12949 | 952.1 | 899.2 | 809.3 |

 [#82, #208, #392]

* UHR-MCSs for 3×996-tone MRU

The rate-dependent parameters for the 3×996-tone MRU are provided in Table38-63 (UHR-MCSs for 3¡Á996-tone MRU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 3×996-tone MRU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 2 940 | 2 940 | 1 470 | 108.1 | 102.1 | 91.9 |
| 1 | QPSK | 1/2 | 2 | 5 880 | 2 940 | 216.2 | 204.2 | 183.8 |
| 2 | 3/4 | 4 410 | 324.3 | 306.3 | 275.6 |
| 3 | 16-QAM | 1/2 | 4 | 11 760 | 5 880 | 432.4 | 408.3 | 367.5 |
| 4 | 3/4 | 8 820 | 648.5 | 612.5 | 551.3 |
| 5 | 64-QAM | 2/3 | 6 | 17 640 | 11 760 | 864.7 | 816.7 | 735.0 |
| 6 | 3/4 | 13 230 | 972.8 | 918.8 | 826.9 |
| 7 | 5/6 | 14 700 | 1 080.9 | 1 020.8 | 918.8 |
| 8 | 256-QAM | 3/4 | 8 | 23 520 | 17 640 | 1 297.1 | 1 225.0 | 1 102.5 |
| 9 | 5/6 | 19 600 | 1 441.2 | 1 361.1 | 1 225.0 |
| 10 | 1024-QAM | 3/4 | 10 | 29 400 | 22 050 | 1 621.3 | 1 531.3 | 1 378.1 |
| 11 | 5/6 | 24 500 | 1 801.5 | 1 701.4 | 1 531.3 |
| 12 | 4096-QAM | 3/4 | 12 | 35 280 | 26 460 | 1 945.6 | 1 837.5 | 1 653.8 |
| 13 | 5/6 | 29 400 | 2 161.8 | 2 041.7 | 1 837.5 |
| 15 | BPSK-DCM  | 1/2 | 1 | 1 470 | 1 470 | 735 | 54.0 | 51.0 | 45.9 |
| 17 | QPSK | 2/3 | 2 | 2 940 | 5880 | 3920  | 288.2 | 272.2 | 245.0 |
| 19 | 16-QAM | 2/3 | 4 | 11760 | 7840 | 576.5 | 544.4 | 490.0 |
| 20 | 16-QAM | 5/6 | 4 | 11760 | 9800 | 720.6 | 680.6 | 612.5 |
| 23 | 256-QAM | 2/3 | 8 | 23520 | 15680 | 1152.9 | 1088.9 | 980.0 |

[#82, #208, #393]

* UHR-MCSs for 3×996+484-tone MRU

The rate-dependent parameters for the 3×996+484-tone MRU are provided in Table38-64 (UHR-MCSs for 3¡Á996+484-tone MRU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 3×996+484-tone MRU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 3 408 | 3 408 | 1 704 | 125.3 | 118.3 | 106.5 |
| 1 | QPSK | 1/2 | 2 | 6 816 | 3 408 | 250.6 | 236.7 | 213.0 |
| 2 | 3/4 | 5 112 | 375.9 | 355.0 | 319.5 |
| 3 | 16-QAM | 1/2 | 4 | 13 632 | 6 816 | 501.2 | 473.3 | 426.0 |
| 4 | 3/4 | 10 224  | 751.8 | 710.0 | 639.0 |
| 5 | 64-QAM | 2/3 | 6 | 20 448 | 13 632 | 1 002.4 | 946.7 | 852.0 |
| 6 | 3/4 | 15 336 | 1 127.6 | 1 065.0 | 958.5 |
| 7 | 5/6 | 17 040 | 1 252.9 | 1 183.3 | 1 065.0 |
| 8 | 256-QAM | 3/4 | 8 | 27 264 | 20 448 | 1 503.5 | 1 420.0 | 1 278.0 |
| 9 | 5/6 | 22 720 | 1 670.6 | 1 577.8 | 1 420.0 |
| 10 | 1024-QAM | 3/4 | 10 | 34 080 | 25 560 | 1 879.4 | 1 775.0 | 1 597.5 |
| 11 | 5/6 | 28 400 | 2 088.2 | 1 972.2 | 1 775.0 |
| 12 | 4096-QAM | 3/4 | 12 | 40 896 | 30 672 | 2 255.3 | 2 130.0 | 1 917.0 |
| 13 | 5/6 | 34 080 | 2 505.9 | 2 366.7 | 2 130.0 |
| 15 | BPSK-DCM  | 1/2 | Not valid |
| 17 | QPSK | 2/3 | 2 | 3 408 | 6816 | 4544 | 334.1 | 315.6 | 284.0 |
| 19 | 16-QAM | 2/3 | 4 | 13632 | 9088 | 668.2 | 631.1 | 568.0 |
| 20 | 16-QAM | 5/6 | 4 | 13632 | 11360 | 835.3 | 788.9 | 710.0 |
| 23 | 256-QAM | 2/3 | 8 | 27264 | 18176 | 1336.5 | 1262.2 | 1136.0 |

 [#82, #208, #394]

* UHR-MCSs for 4×996-tone RU

The rate-dependent parameters for the 4×996-tone RU are provided in Table38-65 (UHR-MCSs for 4¡Á996-tone RU, NSS,u = 1).

|  |
| --- |
| * UHR-MCSs for 4×996-tone RU, *NSS,u* = 1
 |
| UHR-MCS index | Modulation | *Ru* | *NBPSCS,u* | *NSD,u* | *NCBPS,u* | *NDBPS,u* | Data rate (Mb/s) |
| 0.8 µs GI | 1.6 µs GI | 3.2 µs GI |
| 0 | BPSK | 1/2 | 1 | 3 920 | 3 920 | 1 960 | 144.1 | 136.1 | 122.5 |
| 1 | QPSK | 1/2 | 2 | 7 840 | 3 920 | 288.2 | 272.2 | 245.0 |
| 2 | 3/4 | 5 880 | 432.4 | 408.3 | 367.5 |
| 3 | 16-QAM | 1/2 | 4 | 15 680 | 7 840 | 576.5 | 544.4 | 490.0 |
| 4 | 3/4 | 11 760 | 864.7 | 816.7 | 735.0 |
| 5 | 64-QAM | 2/3 | 6 | 23 520 | 15 680 | 1 152.9 | 1 088.9 | 980.0 |
| 6 | 3/4 | 17 640 | 1 297.1 | 1 225.0 | 1 102.5 |
| 7 | 5/6 | 19 600 | 1 441.2 | 1 361.1 | 1 225.0 |
| 8 | 256-QAM | 3/4 | 8 | 31 360 | 23 520 | 1 729.4 | 1 633.3 | 1 470.0 |
| 9 | 5/6 | 26 133 | 1 921.5 | 1 814.8 | 1 633.3 |
| 10 | 1024-QAM | 3/4 | 10 | 39 200 | 29 400 | 2 161.8 | 2 041.7 | 1 837.5 |
| 11 | 5/6 | 32 666 | 2 401.9 | 2 268.5 | 2 041.6 |
| 12 | 4096-QAM | 3/4 | 12 | 47 040 | 35 280 | 2 594.1 | 2 450.0 | 2 205.0 |
| 13 | 5/6 | 39 200 | 2 882.4 | 2 722.2 | 2 450.0 |
| 15 | BPSK-DCM  | 1/2 | 1 | 1 960 | 1 960 | 980 | 72.1 | 68.1 | 61.3 |
| 17 | QPSK | 2/3 | 2 | 3 920 | 7840 | 5226  | 384.3 | 362.9 | 326.6 |
| 19 | 16-QAM | 2/3 | 4 | 15680 | 10453 | 768.6 | 725.9 | 653.3 |
| 20 | 16-QAM | 5/6 | 4 | 15680 | 15680 | 960.7 | 907.4 | 816.6 |
| 23 | 256-QAM | 2/3 | 8 | 31360 | 20906 | 1537.2 | 1451.8 | 1306.6 |

 [#82, #208, #395]

**SP:**

Do you agree to the resolutions provided for the following CIDs in 802.11-25/0775r0 to be included in 11bn Draft 1.0?

CIDs: 82, 208, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 458, 550, 1101, 1592, 2558, 3314

Y/N/A