

# New Project Proposal: SFF-8024 refresh

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- SFF-8024 is SFF Module Management Reference Code Tables
- Contains lists of codes for module types, interface types and similar
- SFF policy is to update it with new "application codes" every 6 months
- Last update project was completed in July 2024
- It's time to begin the next one
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# Requested additions to SFF-8024

- Add codes for Add code for FOIC1.1-RS, FOIC4.4-RS and FOIC8.8 in Table 4-5
- Correct names in Table 4-7 for some Open ROADM codes ( shown in Table)
- Add requested codes from the Open XR group ( below)in Table 4-7
- Add identifier code for OSFP-RHS or OSFP-XD-RHS in Table 3-1 and a new columns in Table 4-11 for OSFP-RHS and OSFP-XD subtypes
- OIF CEI-112G-LINEAR – possibly one Host Electrical Interface ID, or 1 x number of widths. No new media interface IDs.
- 100G-DR-LPO from the LPO MSA – possibly one or two Host Electrical Interface IDs , and one SMF media interface ID. Or 1 x number of widths.

|     |    | OpenXR <sup>6</sup>              |            |    |           |          |   |
|-----|----|----------------------------------|------------|----|-----------|----------|---|
| 129 | 81 | XR400-16QAM                      | 484.023917 | 16 | 3.7814369 | DP-16QAM | 8 |
| 130 | 82 | XR300-8QAM                       | 363.017938 | 16 | 3.7814369 | DP-8QAM  | 6 |
| 131 | 83 | XR200-QPSK                       | 242.011959 | 16 | 3.7814369 | DP-QPSK  | 4 |
| 132 | 84 | XR200-16QAM                      | 242.011959 | 8  | 3.7814369 | DP-16QAM | 8 |
| 133 | 85 | XR100-QPSK                       | 121.005979 | 8  | 3.7814369 | DP-QPSK  | 4 |
| 134 | 86 | XR100-16QAM                      | 121.005979 | 4  | 3.7814369 | DP-16QAM | 8 |
| 135 | 87 | XR400-OTN-16QAM                  | 507.736091 | 16 | 3.9666882 | DP-16QAM | 8 |
| 136 | 88 | XR300-OTN-8QAM                   | 380.802068 | 16 | 3.9666882 | DP-8QAM  | 6 |
| 137 | 89 | XR200-OTN-QPSK                   | 253.868045 | 16 | 3.9666882 | DP-QPSK  | 4 |
| 138 | 8A | XR200-OTN-16QAM                  | 253.868045 | 8  | 3.9666882 | DP-16QAM | 8 |
| 139 | 8B | XR100-OTN-QPSK                   | 126.934023 | 8  | 3.9666882 | DP-QPSK  | 4 |
| 140 | 8C | XR100-OTN-16QAM                  | 126.934023 | 4  | 3.9666882 | DP-16QAM | 8 |
|     |    | OpenXR-Wide Spacing <sup>7</sup> |            |    |           |          |   |
| 141 | 8D | XR400-WS-16QAM                   | 484.023917 | 16 | 3.7814369 | DP-16QAM | 8 |
| 142 | 8E | XR200-WS-QPSK                    | 242.011959 | 16 | 3.7814369 | DP-QPSK  | 4 |
| 143 | 8F | XR200-WS-16QAM                   | 242.011959 | 8  | 3.7814369 | DP-16QAM | 8 |
| 144 | 90 | XR100-WS-QPSK                    | 121.005979 | 8  | 3.7814369 | DP-QPSK  | 4 |
| 145 | 91 | XR100-WS-16QAM                   | 121.005979 | 4  | 3.7814369 | DP-16QAM | 8 |
| 146 | 92 | XR400-WS-OTN-16QAM               | 507.736091 | 16 | 3.9666882 | DP-16QAM | 8 |
| 147 | 93 | XR200-WS-OTN-QPSK                | 253.868045 | 16 | 3.9666882 | DP-QPSK  | 4 |
| 148 | 94 | XR200-WS-OTN-16QAM               | 253.868045 | 8  | 3.9666882 | DP-16QAM | 8 |
| 149 | 95 | XR100-WS-OTN-QPSK                | 126.934023 | 8  | 3.9666882 | DP-QPSK  | 4 |
| 150 | 96 | XR100-WS-OTN-16QAM               | 126.934023 | 4  | 3.9666882 | DP-16QAM | 8 |

**Table 4-7 SMF media interface IDs** SFF-8024 Rev 4.11.1

| ID                | ID (Hex) | SM Media Interface (Specification Reference) | Application Bit Rate, Gb/s | Lane Count | Lane Signaling Rate, Gb/s | Modulation       | b/UI               |
|-------------------|----------|----------------------------------------------|----------------------------|------------|---------------------------|------------------|--------------------|
| 94                | 5E       | ZR100-OFEC-QPSK-HB                           | 120.277094                 | 1          | 30.069273                 | DP-QPSK          | 4                  |
| <b>Open ROADM</b> |          |                                              |                            |            |                           |                  |                    |
| 95                | 5F       | FLEXO-4-DO-16QAM/FOIC4.8-DO                  | 505.115743                 | 1          | 63.1394679                | DP-16QAM         | 8                  |
| 96                | 60       | FLEXO-3-DO-8QAM/FOIC3.6-DO                   | 378.836807                 | 1          | 63.1394679                | DP-8QAM          | 6                  |
| 97                | 61       | FLEXO-2-DO-QPSK/FOIC2.4-DO                   | 252.557871                 | 1          | 63.1394679                | DP-QPSK          | 4                  |
| 98                | 62       | FLEXO-2-DO-16QAM/FOIC2.8-DO                  | 252.557871                 | 1          | 31.569734                 | DP-16QAM         | 8                  |
| 99                | 63       | FLEXO-1-DO-QPSK/FOIC1.4-DO                   | 126.278935                 | 1          | 31.569734                 | DP-QPSK          | 4                  |
| 100               | 64       | FLEXO-4e-DO-QPSK/FOIC4e.4-DO                 | 477.8134023                | 1          | 118.2033506               | DP-QPSK          | 4                  |
| 101               | 65       | FLEXO-4-DO-QPSK/FOIC4.4-DO                   | 477.8134023                | 1          | 124.1017128               | DP-QPSK          | 4                  |
| 102               | 66       | FLEXO-8e-DO-16QAM/FOIC8e.8-DO                | 945.6268048                | 1          | 118.2033506               | DP-16QAM         | 8                  |
| 103               | 67       | FLEXO-8-DO-16QAM/FOIC8.8-DO                  | 945.6268048                | 1          | 124.1017128               | DP-16QAM         | 8                  |
| 104               | 68       | FLEXO-8e-DPO-16QAM/FOIC8e.8-DPO              | 1050.695449                | 1          | 131.3370562               | PCS <sup>1</sup> | 3.125 <sup>2</sup> |
| 105               | 69       | FLEXO-8-DPO-16QAM/FOIC8.8-DPO                | 1050.789225                | 1          | 131.2485281               | PCS <sup>1</sup> | 3.261 <sup>2</sup> |
| 106               | 6A       | FLEXO-8e-DPO-16QAM/FOIC8e.8-DPO              | 939.9943560                | 1          | 118.7493745               | PCS <sup>1</sup> | 2.594 <sup>2</sup> |
| 107               | 6B       | FLEXO-8-DPO-16QAM/FOIC8.8-DPO                | 937.3994470                | 1          | 124.6749308               | PCS <sup>1</sup> | 2.594 <sup>2</sup> |
| 12090-191         | 8164-BF  | Reserved                                     |                            |            |                           |                  |                    |
| 192-255           | C0-FF    | Vendor Specific/Custom                       |                            |            |                           |                  |                    |

1. BR code names need link length value and laser wavelength defined direction (upstream or down-stream) to completely specify transceiver capabilities.
2. 100G Lambda MSA.
3. Optical specifications for these codes are being developed in few standards organizations. Refer to vendor specification for more information on compliance.
4. Probabilistic Constellation Shaping

| ID | ID (Hex) | Host Electrical Interface (Specification Reference)          | Application Bit Rate, Gb/s2 | Lane Count | Lane Signaling Rate, Gb/s2 | Modulation | b/ UI |
|----|----------|--------------------------------------------------------------|-----------------------------|------------|----------------------------|------------|-------|
| xx | XX       | FOIC1.1-MFI (ITU-T G.709.5 G.Sup58)<br>See CEI-112G-VSR-PAM4 | 112                         | 1          | 55.905                     | PAM4       | 2     |
| yy | YY       | FOIC4.4-MFI (ITU-T G.709.5 G.Sup58)<br>See CEI-112G-VSR-PAM4 | 447                         | 4          | 55.905                     | PAM4       | 2     |
| zz | ZZ       | FOIC8.8-MFI (ITU-T G.709.1 G.Sup58)<br>See CEI-112G-VSR-PAM4 | 894                         | 8          | 55.905                     | PAM4       | 2     |

Open ROADM

MSA. 6.0 W-Port Digital Specification

## 8 FlexO-x(e)-D[P]O FEC adaptation

The Clause defines the FlexO-x(e) information structure to OFEC Coder Block Group, size  $n$ , (OFCBG<sub>n</sub>)  $n=[42,84]$  adaptation process for the following FlexO-x(e)-D[P]O interfaces.

- FlexO-4-DO-QPSK/FOIC4.4-DO
- FlexO-4e-DO-QPSK/FOIC4e.4-DO
- FlexO-6-DPO-16QAM/FOIC6.8-DPO
- FlexO-6e-DPO-16QAM/FOIC6e.8-DPO
- FlexO-8-DO-16QAM/FOIC8.8-DO
- FlexO-8e-DO-16QAM/FOIC8e.8-DO
- FlexO-8-DPO-16QAM/FOIC8.8-DPO
- FlexO-8e-DPO-16QAM/FOIC8e.8-DPO