

Past PHY naming – some thoughts

David Law

David_Law@3Com.com

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|-----------------|---|
| 2BASE-TL-O | Voice grade CO UTP PHY as specified in Clause 61 and 63 |
| 2BASE-TL-R | Voice grade subscriber UTP PHY as specified in Clause 61 and 63 |
| 10BASE5 | Thick coax MAU as specified in Clause 8 (deprecated) |
| FOIRL | FOIRL MAU as specified in 9.9 (deprecated) |
| 10BASE2 | Thin coax MAU as specified in Clause 10 |
| 10BROAD36 | Broadband DTE MAU as specified in Clause 11 (deprecated) |
| 10BASE-T | UTP MAU as specified in Clause 14, duplex mode unknown |
| 10PASS-TS-O | Voice grade CO UTP PHY as specified in Clause 61 and 62 |
| 10PASS-TS-R | Voice grade subscriber UTP PHY as specified in Clause 61 and 62 |
| 10BASE-FP | Passive fiber MAU as specified in Clause 16 |
| 10BASE-FB | Synchronous fiber MAU as specified in Clause 17 |
| 10BASE-FL | Asynchronous fiber MAU as specified in Clause 18 |
| 100BASE-T4 | Four-pair Category 3 UTP as specified in Clause 23 |
| 100BASE-TX | Two-pair Category 5 UTP as specified in Clause 25 |
| 100BASE-BX10-D | One-fiber OLT PHY as specified in Clause 58 |
| 100BASE-BX10-U | One-fiber ONU PHY as specified in Clause 58 |
| 100BASE-FX | X fiber over PMD as specified in Clause 26 |
| 100BASE-LX10 | Two-fiber PHY as specified in Clause 58 |
| 100BASE-T2 | Two-pair Category 3 UTP as specified in Clause 32 |
| 1000BASE-BX10-D | One-fiber OLT PHY as specified in Clause 59 |
| 1000BASE-BX10-U | One-fiber ONU PHY as specified in Clause 59 |

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|-----------------|---|
| 1000BASE-LX | X fiber over long-wavelength laser PMD as specified in Clause 38 |
| 1000BASE-LX10 | Two-fiber 10 km PHY as specified in Clause 59 |
| 1000BASE-LX10 | Two-fiber 10 km PHY as specified in Clause 59 |
| 1000BASE-PX10-D | One-fiber OMP OLT 10 km PHY as specified in Clause 60 |
| 1000BASE-PX10-U | One-fiber OMP ONU 10 km PHY as specified in Clause 60 |
| 1000BASE-PX20-D | One-fiber OMP OLT 20 km PHY as specified in Clause 60 |
| 1000BASE-PX20-U | One-fiber OMP ONU 20 km PHY as specified in Clause 60 |
| 1000BASE-SX | X fiber over short-wavelength laser PMD as specified in Clause 38 |
| 1000BASE-CX | X copper over 150-Ohm balanced cable PMD as specified in Clause 39 |
| 1000BASE-KX | X PCS/PMA over an electrical backplane PMD as specified in Clause 70 |
| 1000BASE-T | Four-pair Category 5 UTP PHY as specified in Clause 40 |
| 10GBASE-LX4 | X fiber over WWDW optics as specified in Clause 53 |
| 10GBASE-CX4 | X copper over 8 pair 100-Ohm balanced cable as specified in Clause 54 |
| 10GBASE-KX4 | X PCS/PMA over an electrical backplane PMD as specified in Clause 71 |
| 10GBASE-ER | R fiber over 1550 nm optics as specified in Clause 52 |
| 10GBASE-LR | R fiber over 1310 nm optics as specified in Clause 52 |
| 10GBASE-SR | R fiber over 850 nm optics as specified in Clause 52 |
| 10GBASE-LRM | R fiber over 1310 nm optics as specified in Clause 68 |
| 10GBASE-KR | R PCS/PMA over an electrical backplane PMD as specified in Clause 72 |
| 10GBASE-EW | W fiber over 1550 nm optics as specified in Clause 52 |
| 10GBASE-LW | W fiber over 1310 nm optics as specified in Clause 52 |

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|------------------|--|
| 10GBASE-LW | W fiber over 1310 nm optics as specified in Clause 52 |
| 10GBASE-SW | W fiber over 850 nm optics as specified in Clause 52 |
| 10GBASE-T | Four-pair twisted-pair balanced copper cabling PHY as specified in Clause 55 |
| 10/1GBASE-PRX-D1 | One single-mode fiber 10.3125 GBd continuous downstream / 1.25 GBd burst mode upstream OLT PHY as specified in Clause 75, 10 km and a split ratio of at least 1:16 |
| 10/1GBASE-PRX-D2 | One single-mode fiber 10.3125 GBd continuous downstream / 1.25 GBd burst mode upstream OLT PHY as specified in Clause 75, 10 km and the split ratio of at least 1:32 |
| 10/1GBASE-PRX-D3 | One single-mode fiber 10.3125 GBd continuous downstream / 1.25 GBd burst mode upstream OLT PHY as specified in Clause 75, 20 km and a split ratio of at least 1:32 |
| 10/1GBASE-PRX-U1 | One single-mode fiber 10.3125 GBd continuous downstream / 1.25 GBd burst mode upstream ONU PHY as specified in Clause 75, 10 km and a split ratio of at least 1:16 |
| 10/1GBASE-PRX-U2 | One single-mode fiber 10.3125 GBd continuous downstream / 1.25 GBd burst mode upstream ONU PHY as specified in Clause 75, 10 km and the split ratio of at least 1:32 |
| 10/1GBASE-PRX-U3 | One single-mode fiber 10.3125 GBd continuous downstream / 1.25 GBd burst mode upstream ONU PHY as specified in Clause 75, 20 km and a split ratio of at least 1:32 |
| 10GBASE-PR-D1 | One single-mode fiber 10.3125 GBd continuous downstream / burst mode upstream OLT PHY as specified in Clause 75, 10 km and a split ratio of at least 1:16 |
| 10GBASE-PR-D2 | One single-mode fiber 10.3125 GBd continuous downstream / burst mode upstream OLT PHY as specified in Clause 75, 10 km and the split ratio of at least 1:32 |
| 10GBASE-PR-D3 | One single-mode fiber 10.3125 GBd continuous downstream / burst mode upstream OLT PHY as specified in Clause 75, 20 km and a split ratio of at least 1:32 |
| 10GBASE-PR-U1 | One single-mode fiber 10.3125 GBd continuous downstream / burst mode upstream ONU PHY as specified in Clause 75, 10 km and a split ratio of at least 1:16 |
| 10GBASE-PR-U3 | One single-mode fiber 10.3125 GBd continuous downstream / burst mode upstream ONU PHY as specified in Clause 75, 20 km and a split ratio of at least 1:32 |

Note: PHY types added by IEEE P802.3av 10Gb/s EPON included as the last recirculation just closed with 100% approval and no comments.

MAU/PHY naming

Data rate:

| | |
|-------|-----------------------------------|
| 2 | 2Mb/s |
| 10 | 10Mb/s |
| 100 | 100Mb/s |
| 1000 | 1000Mb/s |
| 10G | 10Gb/s |
| 10/1G | 10Gb/s downstream, 1Gb/s upstream |

Modulation type:

| | |
|-------|-----------|
| BASE | Baseband |
| BROAD | Broadband |
| PASS | Passband |

nTYPE-LLLm-Eo

Additional distinction:

First letter (media or wavelength)

| | |
|---|--------------------------------|
| B | Bidirectional optics |
| C | Twin axial copper |
| E | Extra long wavelength (1550nm) |
| F | Fiber |
| K | Backplane |
| L | Long wavelength (1310nm) |
| P | Passive optics |
| S | Short wavelength (850nm) |
| T | Twisted pair |

Second letter (reach or PCS encoding)

| | |
|---|---|
| B | Backbone |
| L | Link (10BASE-FL), Long reach (2BASE-TL) |
| P | Passive optics |
| R | Scrambled coding (64B66B) |
| S | Short reach |
| W | WAN coding (SONET/SDH) |
| X | External sourced coding (4B5B, 8B10B) |

Third letter

| | |
|---|---------------------------------------|
| M | Multimode |
| X | External sourced coding (4B5B, 8B10B) |

Length/Pairs/PMD Lanes

Optical PHY with data rate ≤ 1000 Mb/s (optional)
 Maximum segment length in km
 Copper PHY with data rate = 100 Mb/s (optional)
 Number of pairs used
 PHY with data rate ≥ 10 Gb/s
 Number of lanes

End (Asymmetric PHYs only)

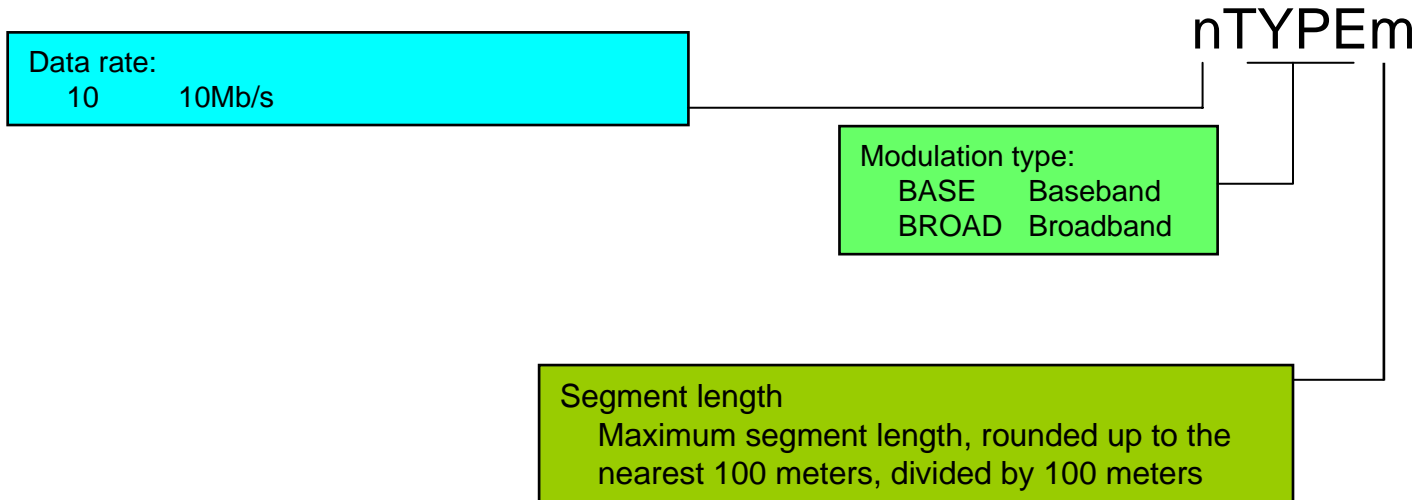
| | |
|---|------------------|
| D | Downstream (OLT) |
| U | Upstream (ONU) |
| O | Central Office |
| R | Subscriber |

Optical budget (10Gb/s EPON PHYs only)

| | |
|---|--|
| 1 | 10 km and a split ratio of at least 1:16 |
| 2 | 10 km and the split ratio of at least 1:32 |
| 3 | 20 km and a split ratio of at least 1:32 |

Note - The PCS and PMD family names based on use of either the first or second letter. Examples are 10GBASE-L for 10Gb/s long wavelength PMD family and 10GBASE-R for 10Gb/s scrambled encoding PCS family.

Legacy naming for 10Mb/s Coax MAUs



Note: Naming convention for 10BASE5, 10BASE2 and 10BROAD36