

PHY Naming Proposal for Discussion at P802.3dm Ad Hoc Meeting of March 17, 2026 – [Revision A](#)

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HS_PATH	PHY_S HS_TX to PHY_D HS_RX
HS_RX	High speed receiver
HS_TX	High speed transmitter
LS_PATH	PHY_D LS_TX to PHY_S LS_RX
LS_RX	Low speed receiver
LS_TX	Low speed transmitter
PHY_D	LS_TX, HS_RX mode of operation (high speed XGMII destination)
PHY_S	HS_TX, LS_RX mode of operation (high speed XGMII source)

When talking about [the asymmetric](#) PHY communicating on [a shielded balanced pair of conductors](#), use:
[MultiGBASE-AT1](#)

When talking about [the asymmetric](#) PHY communicating on coaxial cable, use:
[MultiGBASE-AV1](#)

When talking about [both asymmetric](#) PHYs, regardless of [medium interface](#), use:
[MultiGBASE-A](#)

The [six modes of operation and MAC data rate combinations for each](#) of the [two](#) PHY types are [shown](#) in

Table 0–1— PHY/PMD type definitions

PHY name	Mode of operation	Transmit MAC data rate	Receive MAC data rate	Medium interface
MultiGBASE-AT1	PHY_D	100 Mb/s	2.5 Gb/s	Differential (balanced)
	PHY_D	100 Mb/s	5 Gb/s	Differential (balanced)
	PHY_D	100 Mb/s	10 Gb/s	Differential (balanced)
	PHY_S	2.5 Gb/s	100 Mb/s	Differential (balanced)
	PHY_S	5 Gb/s	100 Mb/s	Differential (balanced)
	PHY_S	10 Gb/s	100 Mb/s	Differential (balanced)
MultiBASE-AV1	PHY_D	100 Mb/s	2.5 Gb/s	Single-ended (unbalanced)

<u>PHY_D</u>	<u>100 Mb/s</u>	<u>5 Gb/s</u>	<u>Single-ended (unbalanced)</u>
<u>PHY_D</u>	<u>100 Mb/s</u>	<u>10 Gb/s</u>	<u>Single-ended (unbalanced)</u>
<u>PHY_S</u>	<u>2.5 Gb/s</u>	<u>100 Mb/s</u>	<u>Single-ended (unbalanced)</u>
<u>PHY_S</u>	5 Gb/s	100 Mb/s	Single-ended (unbalanced)
<u>PHY_S</u>	10 Gb/s	100 Mb/s	Single-ended (unbalanced)

Additionally, for parameters that scale with the PHY's supported MAC data rate, the parameter S is used for scaling as shown in Table 202-2.

Table 0-1—Scaling parameters

<u>Transmit MAC data rate</u>	<u>S</u>
<u>10_Gb/s</u>	1
<u>5_Gb/s</u>	1
<u>2.5_Gb/s</u>	0.5
<u>100_Mb/s</u>	0.5

Example adjustments that need to be made in other text locations by the Editor and the TDD Champion (refer to resolution of comment #261):

202.1.3.1 PHY_S Physical Coding Sublayer (PCS) in PHY_S mode

The PHY_S PCS couples a 10 Gigabit Media Independent Interface (XGMII), as specified in Clause 46, with the ~~MultiG+100M+BASE-T1/V1~~ Physical Medium Attachment (PMA) sublayer.

202.1.6 Interfaces

All ~~MultiG+100M/100M+MultiGBASE-T1/V1~~MultiGBASE-A PHY implementations are compatible at the XGMII, if implemented. Implementation of the XGMII is optional. All ~~MultiG+100M/100M+MultiGBASE-AT1~~ PHY implementations are compatible at the MDI. All ~~MultiG+100M/100M+MultiGBASE-AV1~~ PHY implementations are compatible at the MDI. The MDI for a single balanced pair of conductors (-T1) and a single coaxial cable (-V1) are different. Designers are free to implement circuitry within the PCS and PMA in an application-dependent manner provided that the MDI and XGMII (if the XGMII is implemented) specifications are met. System operation from the perspective of signals at the MDI and management objects are identical whether the XGMII is implemented or not.

Register names do not need to change. Editor will remove highlighting in these tables. Add Editor's Note before Table 202-12: Recommend to add text to describe references to register usage and naming.

Table 202-12—MDIO/PMA control variable mappings

MDIO control variable§	PMA register name§	Register/bit number§	PMA control variable§
Reset§	PMA/PMD control 1 register/ MultiGBASE-T1 PMA control register§	1.0.15 / 1.2309.15 §	pma_reset§
Transmit disable§	MultiGBASE-T1 PMA control register§	1.2309.14§	PMA_transmit_disable§

Table 202-13—MDIO/PMA status variable mappings

MDIO status variable§	PMA register name§	Register/bit number§	PMA status variable§
Receive fault§	MultiGBASE-T1 PMA status register§	1.2310.1§	PMA_receive_fault§

Labels for Transmitter PSD need to be adjusted to align with Table 202-15

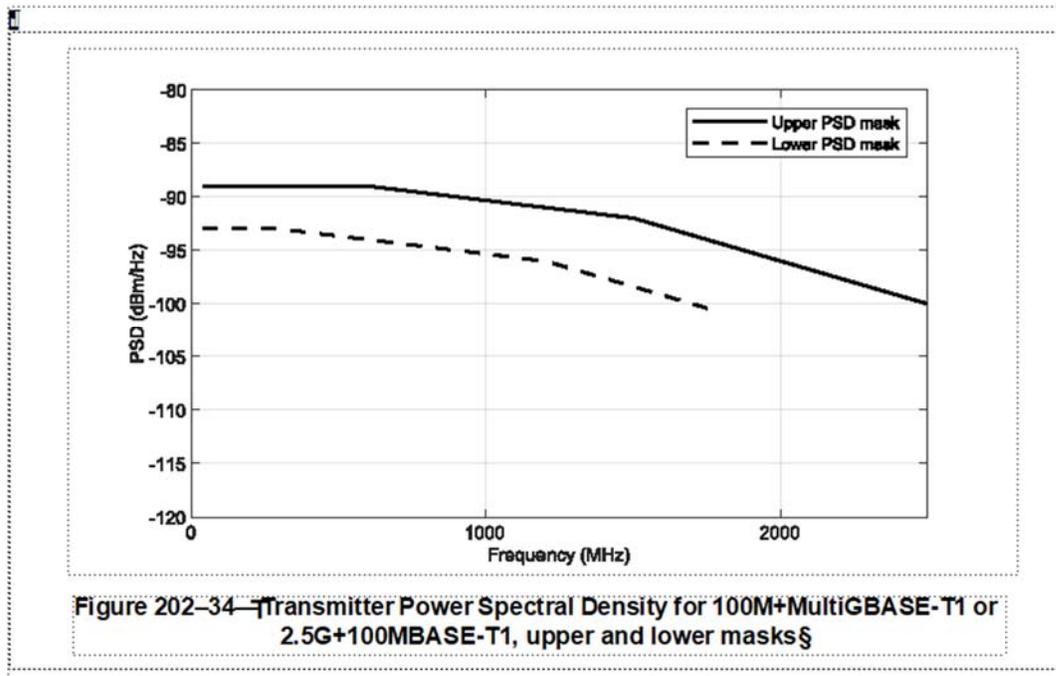


Table 202-15 will look like this:

Table 202-15—Power levels

Transmit MAC data rate	Differential (balanced)		Single-ended (unbalanced)	
	Min (dBm)	Max (dBm)	Min (dBm)	Max (dBm)
100 Mb/s	0	2	-3	-1
2.5 Gb/s	0	2	-3	-1
5 Gb/s	2	4	-1	1
10 Gb/s	0	2	-3	-1

Editor to re- order transmit MAC data rates in all tables, etc. so that rates go from low (100 Mb/s) to high (10 Gb/s). Editor to search for “data rate” (and other forms) and replace with “transmit MAC data rate” (or other form) as appropriate. Same for “receive MAC data rate”.

Recommend to do a global search for “PHY type” and other wording that implies multiple PHY types. Note Table 202-16 refers to PHY type – say what the parameter is, not what the bit is.