

192.13 Protocol implementation conformance statement (PICS) proforma for ~~Error! Reference source not found.~~ Clause 192, ~~Error! Reference source not found.~~ Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer, and baseband medium, type MultiGBASE-AT1 and MultiGBASE-AV1¹

192.13.1 Introduction

The supplier of a protocol implementation that is claimed to conform to ~~Error! Reference source not found.~~ Clause 192, ~~Error! Reference source not found.~~ Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer, and baseband medium, type MultiGBASE-AT1 and MultiGBASE-AV1, shall complete the following protocol implementation conformance statement (PICS) proforma.

A detailed description of the symbols used in the PICS proforma, along with instructions for completing the PICS proforma, can be found in [Clause 21](#).

192.13.2 Identification

192.13.2.1 Implementation identification

Supplier ¹	
Contact point for inquiries about the PICS ¹	
Implementation Name(s) and Version(s) ^{1,3}	
Other information necessary for full identification— e.g., name(s) and version(s) for machines and/or operating systems; System Name(s) ²	
NOTE 1—Required for all implementations. NOTE 2—May be completed as appropriate in meeting the requirements for the identification. NOTE 3—The terms Name and Version should be interpreted appropriately to correspond with a supplier’s terminology (e.g., Type, Series, Model).	

¹Copyright release for PICS proformas: Users of this standard may freely reproduce the PICS proforma in this subclause so that it can be used for its intended purpose and may further publish the completed PICS.

192.13.2.1**192.13.2.2 Protocol summary**

Identification of protocol standard	IEEE Std 802.3dm-202x, Error! Reference source not found, Clause 492, Error! Reference source not found, Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer, and baseband medium, type-MultiGBASE-AT1 and MultiGBASE-AV1
Identification of amendments and corrigenda to this PICS proforma that have been completed as part of this PICS	
Have any Exception items been required? No ☐ Yes ☐ (See Clause 21 ; the answer Yes means that the implementation does not conform to IEEE Std 802.3xx-202x.)	

Date of Statement	
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192.13.2.2**192.13.3 Major capabilities/options**

Item	Feature	Subclause	Value/Comment	Status	Support
*OAM	MultiGBASE-A OAM capability	192.3.7	Supports MultiGBASE-A OAM frame exchange function	O	Yes ☐ No ☐
*MDIO	Support of MDIO capability	45.1	Register and interface support	O	Yes ☐ No ☐
*PHY-T1	MultiGBASE-AT1 capability	Error! Reference source not found, 492.1.1	Supports MultiGBASE-AT1 operation	O/1a	Yes ☐ No ☐
*PHY-V1	MultiGBASE-AV1 capability	Error! Reference source not found, 492.1.1	Supports MultiGBASE-AV1 operation	O/1a	Yes ☐ No ☐
*7.5GTX	7.5-Gb/s transmit MAC data rate	192.1.1	Supports 7.5-Gb/s mode of operation, PHY_S	Ø	Yes ☐ No ☐
*10GTX	10-Gb/s transmit MAC data rate	192.1.1	Supports 10-Gb/s mode of operation, PHY_S	Ø	Yes ☐ No ☐

*10GRX	10 Gb/s receive MAC data rate	192.1.1	Supports 10 Gb/s mode of operation, PHY_D	Q	Yes [] No []
*INS-LS, T1	Installation/link segment, -T1	Error! Reference source not found. 192.7	Items marked with INS-LS, T1 include installation and cabling specifications for link segments and are not applicable to a PHY manufacturer	PHY-T1:M	Yes [] No []
*INS-LS, V1	Installation/link segment, -V1	Error! Reference source not found. 192.8	Items marked with INS-LS, V1 include installation and cabling specifications for link segments and are not applicable to a PHY manufacturer	PHY-V1:M	Yes [] No []
*MGAL	MultiGBASE-A Leader capability	192.1	Supports MultiGBASE-A Leader operation	O.1b	Yes [] No []
*MGAF	MultiGBASE-A Follower capability	192.1	Supports MultiGBASE-A Follower operation	O.1b	Yes [] No []
*PHY_D	PHY_D capability	192.1.1	Supports PHY_D mode of operation	O.1c	Yes [] No []
*PHY_S	PHY_S capability	192.1.1	Supports PHY_S mode of operation	O.1c	Yes [] No []
*TX100M	100 Mb/s transmit MAC data rate	192.1.1	Supports transmit MAC data rate of 100 Mb/s	PHY_D: M	Yes [] No []

<u>*RX100M</u>	<u>100 Mb/s receive MAC data rate</u>	<u>192.1.1</u>	<u>Supports receive MAC data rate of 100 Mb/s</u>	<u>PHY S:</u> <u>M</u>	<u>Yes</u> ☐ <u>No</u> ☐
<u>*TX2.5G</u>	<u>2.5 Gb/s transmit MAC data rate</u>	<u>192.1.1</u>	<u>Supports transmit MAC data rate of 2.5 Gb/s</u>	<u>PHY S:</u> <u>O.1d</u>	<u>Yes</u> ☐ <u>No</u> ☐
<u>*TX5G</u>	<u>5 Gb/s transmit MAC data rate</u>	<u>192.1.1</u>	<u>Supports transmit MAC data rate of 5 Gb/s</u>	<u>PHY S:</u> <u>O.1d</u>	<u>Yes</u> ☐ <u>No</u> ☐
<u>*TX7.5G</u>	<u>7.5 Gb/s transmit MAC data rate</u>	<u>192.1.1</u>	<u>Supports transmit MAC data rate of 7.5 Gb/s</u>	<u>PHY S:</u> <u>O.1d</u>	<u>Yes</u> ☐ <u>No</u> ☐
<u>*TX10G</u>	<u>10 Gb/s transmit MAC data rate</u>	<u>192.1.1</u>	<u>Supports transmit MAC data rate of 10 Gb/s</u>	<u>PHY S:</u> <u>O.1d</u>	<u>Yes</u> ☐ <u>No</u> ☐
<u>*RX2.5G</u>	<u>2.5 Gb/s receive MAC data rate</u>	<u>192.1.1</u>	<u>Supports receive MAC data rate of 2.5 Gb/s</u>	<u>PHY D:</u> <u>O.1e</u>	<u>Yes</u> ☐ <u>No</u> ☐
<u>*RX5G</u>	<u>5 Gb/s receive MAC data rate</u>	<u>192.1.1</u>	<u>Supports receive MAC data rate of 5 Gb/s</u>	<u>PHY D:</u> <u>O.1e</u>	<u>Yes</u> ☐ <u>No</u> ☐
<u>*RX7.5G</u>	<u>7.5 Gb/s receive MAC data rate</u>	<u>192.1.1</u>	<u>Supports receive MAC data rate of 7.5 Gb/s</u>	<u>PHY D:</u> <u>O.1e</u>	<u>Yes</u> ☐ <u>No</u> ☐

<u>*RX10G</u>	<u>10 Gb/s receive MAC data rate</u>	<u>192.1.1</u>	<u>Supports receive MAC data rate of 10 Gb/s</u>	<u>PHY D: O.le</u>	<u>Yes []</u> <u>No []</u>
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192.13.3

192.13.4 PICS proforma tables for ~~Error! Reference source not found.~~ **Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA) sublayer, and baseband medium, type MultiGBASE-AT1 and MultiGBASE-AV1**

192.13.4.1 PCS Transmit

Item	Feature	Subclause	Value/Comment	Status	Support
PCST1	PCS Reset	Error! Reference source not found. 192.3.2.1	Meets requirements Error! Reference source not found. 192.3.2.1	M	Yes []
PCST2	Control and management interface restoration	Error! Reference source not found. 192.3.2.1	Restored to operation within 10 ms from the setting of bit 3.2322.15	M	Yes []
PCST3	LS_TX PCS Transmit compliance	Error! Reference source not found. 192.3.2.2	Conforms to the PCS 64B/65B Transmit state diagram in Error! Reference source not found. Figure 192-22 and to the PCS Transmit bit ordering in Error! Reference source not found. Figure 192-5 and Error! Reference source not found. Figure 192-6	PHY D: M	Yes []
PCST3	HS_TX PCS Transmit compliance	Error! Reference source not found.	Conforms to the PCS 64B/65B Transmit state diagram in Error! Reference source not found. and to the PCS Transmit bit ordering in Error! Reference source not found.	PHY S: M	Yes []
PCST4	PMA_TXMODE.indication message SEND_Z value	Error! Reference source not found. 192.3.2.2	PCS Transmit passes Z symbols at each symbol period to the PMA via the PMA_UNITDATA.request primitive	M	Yes []

PCST5	PMA_TXMODE.indication message SEND_TS or SEND_TA value	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2	PCS Transmit generates the O_n sequence defined in <u>Error! Reference source not found.</u> 492.3.4 to the PMA via the PMA_UNITDATA.request primitive	M	Yes []
PCST6	PMA_TXMODE.indication message SEND_N value	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2	The PCS is in the data mode of operation and the PCS Transmit function uses a 65B coding technique to generate code-groups that represent data or control	M	Yes []
PCST7	Idle /I/ insertion and deletion	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.7	Occurs in groups of four. /I/s may not be added while data is being received. The first four characters after a /T/ are not be deleted when deleting /I/s.	M	Yes []
PCST8	RS-FEC (LS) encoding	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.13	Takes the 992-bit vector, consisting of tx_group15x65B, and the 17-bit OAM_field, and generates the six 8-bit parity symbols (48 bits total)	<u>PHY_D</u> :M	Yes []
PCST9	RS-FEC (HS) encoding	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.13	Takes the 976-bit vector, consisting of tx_group15x65B, and the 1-bit OAM_field, and generates the six 8-bit parity symbols (48 bits total)	<u>PHY_S</u> :M	Yes []
PCST10	Transmitter interleaving depth, L	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.14	Round-robin interleaving scheme shown in <u>Error! Reference source not found.</u> Figure 492-8 is applied	<u>PHY_S</u> :M	Yes []
PCST11	Transmitter interleaving depth, L > 1	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.14	Predefined for each data rate and complies with <u>Error! Reference source not found.</u> Table 492-4	M	Yes []
PCST12	Superframe aggregation	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.14	HS_TX PCS Transmit aggregates L RS-FEC input frames into an interleaved RS-FEC input	<u>PHY_S</u> :M	Yes []
PCST13	Scrambled refresh header data bit	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.17	See <u>Error! Reference source not found.</u> Equation (492-4)	M	Yes []

PCST14	PRBS11 scrambler polynomial	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.18	The PRBS11 pattern generator produces the same result as the implementation shown in <u>Error! Reference source not found.</u> Figure 192-10	M	Yes []
PCST15	PRBS11 scrambler state rule	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.18	Scrambler state is never initialized to all zeros	M	Yes []
PCST16	PRBS11 scrambler continuity	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.18	Once started, during PMA training, the scrambler continues to run uninterrupted during the refresh headers of each frame	M	Yes []
PCST17	PRBS11 scrambler stop rule	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.18	Once started, during PMA training, the scrambler stops during the burst payload field and QUIET	M	Yes []
PCST18	PRBS33 scrambler polynomial, Leader	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.19	PCS Transmit uses <u>Error! Reference source not found.</u> Equation (192-9) as the transmitter scrambler generator polynomial superframe	<u>MGAL</u> :M	Yes []
PCST19	PRBS33 scrambler polynomial, Follower	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.19	PCS Transmit uses <u>Error! Reference source not found.</u> Equation (192-10) as the transmitter scrambler generator polynomial superframe	<u>MGAF</u> :M	Yes []
PCST20	PRBS33 scrambler state rule	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.19	Scrambler state is never initialized to all zeros	M	Yes []
PCST21	PRBS33 scrambler continuity	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.19	Once started, during PMA training, the scrambler continues to run uninterrupted during the payload of PMA training frames and data mode frames	M	Yes []
PCST22	PRBS33 scrambler stop rule	<u>Error!</u> <u>Reference source not found.</u> 492.3.2.2.19	Once started, during PMA training, the scrambler stops during QUIET and refresh headers	M	Yes []

PCST23	Gray mapping (Tx) for PAM4	Error! Reference source not found. 192.3.2.2.20	See Error! Reference source not found. 192.3.2.2.20	TX 10G TX :M	Yes [] N/A []
PCST24	Gray mapping (Rx) for PAM4	Error! Reference source not found. 192.3.2.2.20	See Error! Reference source not found. 192.3.2.2.20	RX 10G R X :M	Yes []
PCST25	PAM4 (Tx)	Error! Reference source not found. 192.3.2.2.21	See Error! Reference source not found. 192.3.2.2.21	TX 10G TX :M	Yes []
PCST26	PAM3 (Tx)	Error! Reference source not found. 192.3.2.2.22	See Error! Reference source not found. 192.3.2.2.22	TX 7.5G TX X :M	Yes []

192.13.4.1

192.13.4.2 PCS Receive

Item	Feature	Subclause	Value/Comment	Status	Support
PCSR1	LS_RX PCS Receive compliance	Error! Reference source not found. 192.3.2.3	Conforms to the PCS 64B/65B Receive state diagram in Error! Reference source not found. Figure 192-23 and the PCS Receive bit ordering in Error! Reference source not found. Figure 192-12 for the LS_RX and Figure 192-13 for the HS_RX , including compliance with the associated state variable as specified in Error! Reference source not found. 192.3.5.1.2	PHY S :M	Yes []

PCSR1a	HS_RX PCS Receive compliance	<u>Error!</u> <u>Reference source not found.</u>	Conforms to the PCS 64B/65B Receive state diagram in <u>Error! Reference source not found.</u> and the PCS Receive bit ordering in <u>Error! Reference source not found.</u> including compliance with the associated state variable as specified in <u>Error! Reference source not found.</u>	PHY_D: M	Yes []
PCST2	Frame and block synchronization	<u>Error!</u> <u>Reference source not found.</u> ^{192.3.2.3.1}	The receiving PCS concatenates rx_symb values conveyed by the PMA_UNITDATA.indication during the burst payload according to its data mode (see <u>Error! Reference source not found.</u> ^{192.3.2.3.1})	M	Yes []
PCST3	Descrambler, Leader	<u>Error!</u> <u>Reference source not found.</u> ^{192.3.2.3.2}	The Leader PHY uses the receiver descrambler generator polynomial in <u>Error! Reference source not found.</u> Equation (192-10)	MGAL: M	Yes []
PCST4	Descrambler, Follower	<u>Error!</u> <u>Reference source not found.</u> ^{192.3.2.3.2}	The Follower PHY shall uses the receiver descrambler generator polynomial in <u>Error! Reference source not found.</u> Equation (192-9)	MGAF: M	Yes []
PCST5	RS-FEC parity bit integrity check	<u>Error!</u> <u>Reference source not found.</u> ^{192.3.2.3.3}	The PCS Receive function checks the integrity of the RS-FEC parity bits defined in <u>Error! Reference source not found.</u> ^{192.3.2.2.13}	M	Yes []

192.13.4.2

192.13.4.3 Physical Coding Sublayer (PCS)

Item	Feature	Subclause	Value/Comment	Status	Support
PCS1	SEND_TS frequency	<u>Error!</u> <u>Reference source not found.</u> ^{192.3.4}	Uses a symmetric frame format and transmits at 3 GBd	M	Yes []

PCS2	33-bit scrambler operation	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 3.4	Once started at the beginning of the training payload of the first training burst, continues to run uninterrupted for each symbol during all subsequent payloads and maintains its last state during the QUIET period and refresh headers	M	Yes []
PCS3	Refresh header content	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 3.4.2	Composed of a leading sequence of zeros followed by four bytes of 0x01, followed by four bytes of 0xF0	M	Yes []
PCS4	Scrambler synchronization acquisition and reporting	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 3.4.4	The PCS acquires descrambler state synchronization to the PAM2 training sequence and reports success through scr_status, and continues to use the synchronized state in all subsequent bursts in both data and training modes	M	Yes []
PCS5	DECODE function rule	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 3.5.1.3	Decodes the block as specified in <u>Error! Reference</u> <u>source not</u> <u>found.</u> 192.3.2.2.4	M	Yes []
PCS6	ENCODE function rule	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 3.5.1.3	Encodes the block as specified in <u>Error! Reference</u> <u>source not</u> <u>found.</u> 192.3.2.2.4	M	Yes []
PCS7	PCS functions	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 3.5.2	Performs the functions of RFER monitor, Transmit, and Receive as shown in <u>Error!</u> <u>Reference source not</u> <u>found.</u> Figure 192-24 , <u>Error!</u> <u>Reference source not</u> <u>found.</u> Figure 192-22 , and <u>Error! Reference source not</u> <u>found.</u> Figure 192-23	M	Yes []

192.13.4.3**192.13.4.4 OAM**

Item	Feature	Subclause	Value/Comment	Status	Support
OAM1	State diagram behavior	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>source not</u>	Conforms to <u>Error!</u> <u>Reference source not</u> <u>found.</u> Figure 192-25 and	OAM:M	Yes [] N/A []

		found, 192.3.7.4	Error! Reference source not found, Figure 192-26		
OAM2	HS_TX mode OAM frame structure, first bit	Error! Reference source not found, 192.3.7.2.4	The first bit of the first OAM symbol (OAM<0>) is inserted in the first RS frame in the first superframe of the TDD burst	OAM:M	Yes [] N/A []
OAM3	HS_TX mode OAM frame structure, subsequent bits	Error! Reference source not found, 192.3.7.2.4	One subsequent bit of OAM<0> is inserted into each of second through tenth RS FEC frames	OAM:M	Yes [] N/A []
OAM4	LS_TX mode OAM frame structure	Error! Reference source not found, 192.3.7.2.4	The first symbol (OAM<0>) is inserted in the first ten bits of the OAM field of the RS frame so that one OAM symbols is carried in each TDD burst	OAM:M	Yes [] N/A []
OAM5	When OAM is not implemented	Error! Reference source not found, 192.3.7.2.4	10-bit OAM field is set to all zeros	OAM:M	Yes [] N/A []
OAM6	OAM frame data	Error! Reference source not found, 192.3.7.2.4	Reserved fields are set to zero	OAM:M	Yes [] N/A []
OAM7	MultiGBASE-A OAM Frame acceptance criteria	Error! Reference source not found, 192.3.7.2.13	See Error! Reference source not found, 192.3.7.2.13	OAM:M	Yes [] N/A []
OAM8	mr_tx_received	Error! Reference source not found, 192.3.7.4.3	Clear on read	OAM:M	Yes [] N/A []

192.13.4.4

192.13.4.5 Physical Medium Attachment (PMA)

192.13.4.5.1 PMA Reset

Item	Feature	Subclause	Value/Comment	Status	Support
PMAR1	PMA Reset function	Error!	See Error! Reference	M	Yes []

		<u>Reference source not found, 192.4.2.1</u>	<u>source not found, 192.4.2.1</u>		
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192.13.4.5.1**192.13.4.5.2 PMA Transmit**

Item	Feature	Subclause	Value/Comment	Status	Support
PMAT1	PMA Transmit operation	<u>Error! Reference source not found, 192.4.2.2</u>	Continuously transmits pulses modulated by the symbols given by tx_symb onto the MDI, followed by a QUIET period to complete a TDD cycle, when the PHY Control state diagram (see <u>Error! Reference source not found, Figure 192-34</u>) is not in the DISABLE_TRANSMITTER state	M	Yes []
PMAT2	PMA Transmit signal compliance	<u>Error! Reference source not found, 192.4.2.2</u>	Complies with the electrical specifications given in <u>Error! Reference source not found, 192.5.2</u>	M	Yes []
PMAT3	Clock source, Leader	<u>Error! Reference source not found, 192.4.2.2</u>	The transmit symbol clock TX_TCLK is sourced from a local clock source, while meeting the transmit jitter requirements of <u>Error! Reference source not found, 192.5.2.3</u> , when the management parameter config is LEADER	<u>MGAL:</u> M	Yes []
PMAT4	Loop timing	<u>Error! Reference source not found, 192.4.2.2</u>	The Leader-Follower relationship include loops timing	<u>MGAF:</u> M	Yes []
PMAT5	Clock source, Follower	<u>Error! Reference source not found, 192.4.2.2</u>	The transmit symbol clock TX_TCLK is sourced from the recovered clock of <u>Error! Reference source not found, 192.4.2.6</u> , while meeting the jitter requirements of <u>Error! Reference source not found</u>	<u>MGAF:</u> M	Yes []

			<u>found.192.5.2.3</u> , when the management parameter config is FOLLOWER		
PMAT6	Transmit fault function mapping	<u>Error! Reference source not found.192.4.2.2</u>	Mapped to the transmit fault bit, as specified in 45.2.1.7.4, if the MDIO interface is implemented	<u>MDIO:</u> M	Yes []
PMAT7	Launch power disable	<u>Error! Reference source not found.192.3.2.2.4</u>	The average launch power of the transmitter is as specified in <u>Error! Reference source not found.192.5.2.4</u> when the PMA_transmit_disable variable is set to TRUE and the value of tx_symb is Z	M	Yes []

192.13.4.5.2

192.13.4.5.3 PMA Receive

Item	Feature	Subclause	Value/Comment	Status	Support
PMAR1	PMA Receive <u>FEC error rate</u>	<u>Error! Reference source not found.192.4.2.3</u>	<u>RFER of less than 2×10^{-10} after RS-FEC decoding</u> <u>See 192.4.2.3</u>	M	Yes []
PMAR2	Status constraint	<u>Error! Reference source not found.192.4.2.3</u>	The reception of Z symbols during the TDD QUIET period alone does not trigger setting loc_rcvr_status to NOT_OK	M	Yes []
PMAR3	Receive fault function mapping	<u>Error! Reference source not found.192.4.2.3</u>	Contributed to the receive fault bit specified in 45.2.1.7.5, if the MDIO interface is implemented	<u>MDIO:</u> M	Yes []

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192.13.4.5.3**192.13.4.5.4 PHY Control**

Item	Feature	Subclause	Value/Comment	Status	Support
CNTRL	PHY control compliance	<u>Error! Reference source not found.</u> 192.4.2.4	Complies with the state diagram in <u>Error! Reference source not found.</u> Figure 192-34	M	Yes []

192.13.4.5.4**192.13.4.5.5 Infocfield**

Item	Feature	Subclause	Value/Comment	Status	Support
IF1	12-octet Infocfield fields	<u>Error! Reference source not found.</u> 192.4.2.4	Include the fields in <u>Error! Reference source not found.</u> 192.4.2.4.2 through <u>Error! Reference source not found.</u> 192.4.2.4.8 as shown in <u>Error! Reference source not found.</u> Figure 192-28 and <u>Error! Reference source not found.</u> Figure 192-29	M	Yes []
IF2	Infocfield transmission	<u>Error! Reference source not found.</u> 192.4.2.4	Transmit Infocfield at least 16 times with each change to octets 7 to 10 when PMA_state = 00	M	Yes []
IF3	Infocfield reserved bits	<u>Error! Reference source not found.</u> 192.4.2.4.4	Unused values are set to zero on transmit and ignored when received by the link partner	M	Yes []
IF4	Infocfield start of frame delimiter	<u>Error! Reference source not found.</u> 192.4.2.4.2	Uses the hexadecimal value 0xBBA700	M	Yes []

192.13.4.5.5

192.13.4.5.6 Message Field

Item	Feature	Subclause	Value/Comment	Status	Support
MF1	PMA state communication	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 4.2.4.4	Bits PMA_state<7:6> communicate the state of the transmitting transceiver to the link partner	M	Yes []
MF2	Training phase signal	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 4.2.4.4	Bits training_phase<4:3> communicate the training phase of the transmitting transceiver to the link partner	M	Yes []
MF3	Invalid value transmission	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 4.2.4.4	Values not listed in <u>Error!</u> <u>Reference source not</u> <u>found.</u> Table 192–13 for the Leader or Follower are not transmitted and ignored at the receiver	M	Yes []
MF4	Initial Message Field setting	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 4.2.4.4	The Message Field setting for the first transmitted PMA burst is the first row of <u>Error!</u> <u>Reference source not</u> <u>found.</u> Table 192–13 for the Leader, and the first or second row of Table 192–10 for the Follower	M	Yes []
MF5	Next Message Field	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 4.2.4.4	Is the same Message Field setting or the Message Field setting corresponding to a row below the current setting in <u>Error! Reference source not</u> <u>found.</u> Table 192–13	M	Yes []

192.13.4.5.6

192.13.4.5.7 PHY capability

Item	Feature	Subclause	Value/Comment	Status	Support
CAP1	OAM capability <u>enable</u>	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 192. 4.2.4.5	Enabled only if both PHYs set the capability bit OAMen=1	<u>OM</u>	Yes []

CAP2	OAM capability validity	Error! Reference source not found. 192. 4.2.4.5	Valid only when loc_rcvr_status<5> bit is one	QM	Yes []
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192.13.4.5.7**192.13.4.5.8 TDD delay counter**

Item	Feature	Subclause	Value/Comment	Status	Support
DLY1	Delay counter rule	Error! Reference source not found. 192. 4.2.4.6	delay_count set to a value between 0 to 63 and the delay_count_valid bit set to one after the Leader detects the Follower TDD burst position and estimates the link segment delay	MGAL: M	Yes []
DLY2	Delay count acceptance	Error! Reference source not found. 192. 4.2.4.6	The Follower accepts the received remote delay_count only when received remote delay_count_valid bit is set to one	MGAF: M	Yes []
DLY3	Delay count storage	Error! Reference source not found. 192. 4.2.4.6	The Follower stores delay_count number	MGAF: M	Yes []
DLY4	Delay acknowledgment	Error! Reference source not found. 192. 4.2.4.6	The Follower sends back its own delay_count field as acknowledgment of delay_count reception, and set its delay_count_valid to one	MGAF: M	Yes []
DLY5	Negotiation success rule	Error! Reference source not found. 192. 4.2.4.6	The Leader or the Follower sets negotiation_done to OK when it finishes the exchange of delay count and the negotiated data rates	M	Yes []
DLY6	Follower burst adjustment	Error! Reference source not found. 192. 4.2.4.6	The Follower adjusts its transmit burst position according to the stored delay_count, starting from Asymmetric training and continuing through to the data mode	MGAF: M	Yes []

192.13.4.5.8

192.13.4.5.9 Phase switch

Item	Feature	Subclause	Value/Comment	Status	Support
PS1	PhaseSwBC24 burst count	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.7</u>	A minimum of 16 and a maximum of 256 from the BC24 value sent in the first burst after entering a COUNTDOWN state	M	Yes []

192.13.4.5.9

192.13.4.5.10 CRC16

Item	Feature	Subclause	Value/Comment	Status	Support
CRC1	CRC16 Infocfield	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.9</u>	Implements the CRC16 polynomial $(x + 1)(x^{15} + x + 1)$ of the previous 7 octets, Oct4<7:0>, Oct5<7:0>, Oct6<7:0>, Oct7<7:0>, Oct8<7:0>, Oct9<7:0>, and Oct10<7:0>	M	Yes []
CRC2	CRC16 verification	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.9</u>	Produces the same result as the implementation shown in <u>Error! Reference source not found.</u> <u>Figure 192-30</u>	M	Yes []
CRC3	CRC16 initialization	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.9</u>	The 16 delay elements in <u>Error! Reference source not found.</u> <u>Figure 192-30</u> are initialized to zero	M	Yes []

192.13.4.5.10

192.13.4.5.11 Startup

Item	Feature	Subclause	Value/Comment	Status	Support
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ST1	Startup sequence compliance	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.11</u>	Complies with the state diagram description given in <u>Error! Reference source not found.</u> <u>Figure 192-31</u>	M	Yes []
ST2	TRAINING0 alignment	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.11</u>	The first symbol of the Follower's transmit PMA training frame at the transmit MDI is aligned at 400 ± 1 transmit symbols after arrival of the last PMA training payload symbol from the Leader at the Follower input MDI	<u>MGAF:</u> M	Yes []
ST3	Alignment maintenance	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.11</u>	The Follower maintains alignment while in the TRAINING0 and COUNTDOWN0 (i.e., while tx_mode = SEND_TS) states	<u>MGAF:</u> M	Yes []
ST4	TRAINING1 alignment	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.11</u>	The Follower uses the Leader transmitted delay_count to align its transmit PMA training frame to be $17 \text{ ns} - \text{delay_count} \times 5.333 \text{ ns}$ ($\pm 5.333 \text{ ns}$) after the last PMA training payload symbol from the Leader appears on the Follower input MDI	<u>MGAF:</u> M	Yes []
ST5	Alignment maintenance	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> <u>192.</u> <u>4.2.4.11</u>	The Follower maintains its alignment while tx_mode is SEND_TA or SEND_N	<u>MGAF:</u> M	Yes []

192.13.4.5.11**192.13.4.5.12 Link monitor**

Item	Feature	Subclause	Value/Comment	Status	Support
LM1	Link Monitor function compliance	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>192</u> <u>4.2.5</u>	Complies with the state diagram of <u>Error! Reference source not found.</u> <u>Figure 192-33</u>	M	Yes []

192.13.4.5.12

192.13.4.5.13 Clock recovery

Item	Feature	Subclause	Value/Comment	Status	Support
CR1	Clock Recovery function	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> 492 <u>4.2.6</u>	Provides a clock suitable for signal sampling so that the RFER indicated in <u>Error!</u> <u>Reference source not</u> <u>found.</u> 492.4.2.3 is achieved	M	Yes []

192.13.4.5.13

192.13.4.6 MDI signals

Item	Feature	Subclause	Value/Comment	Status	Support
MDIS1	MDI symbol response compliance	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> 492 <u>4.3.1</u>	Complies with the electrical specifications given in <u>Error!</u> <u>Reference source not</u> <u>found.</u> 492.5.2	M	Yes []

192.13.4.6

192.13.4.7 Timers

Item	Feature	Subclause	Value/Comment	Status	Support
TIM1	link_fail_timer expiration	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> 492 <u>4.4.2</u>	Expires 97.5 ms ± 5 ms after being started	M	Yes []
TIM2	minwait_timer expiration	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> 492 <u>4.4.2</u>	Expires 975 µs ± 50 µs after being started	M	Yes []

TIM3	tdd_watchdog_timer expiration	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.4.4.2</u>	Expires 96 μ s $\pm$ 5 μ s after being started	M	Yes []
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192.13.4.7**192.13.4.8 PMA electrical specifications****192.13.4.8.1 Test modes**

Item	Feature	Subclause	Value/Comment	Status	Support
TM1	Test modes	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.5.1</u>	Implemented in PHY to allow testing transmitter electrical requirements	M	Yes []
TM2	Enable test modes	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.5.1</u>	Enable by setting control register, 1.2313.15:13 as described in <u>Error!</u> <u>Reference source not</u> <u>found.</u> <u>492</u> <u>.5.1</u> when MDIO implemented; enabling of test modes is provided otherwise when MDIO is not implemented	<u>MDIO:</u> M	Yes []
TM3	Test mode operation	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.5.1</u>	Test modes only change data symbols provided to the transmitter circuitry	M	Yes []
TM4	Test mode 1	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.5.1</u>	When enabled, PHY provides access to a frequency reduced version of the transmit symbol clock or TX_TCLK_187.5	M	Yes []
TM5	Test mode 2	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.5.1</u>	When enabled, PHY transmits a continuous repeating pattern of {+1, -1} symbols with the transmitted symbols timed by TX_TCLK derived from its local clock reference	M	Yes []

TM6	Test mode 4, PAM2 mode at 3 GBd	<u>Error!</u> <u>Reference source not found.</u> <u>192.5.1</u>	When enabled, PHY transmits the sequence of symbols generated by the PCS scrambler generator polynomial per <u>Error!</u> <u>Reference source not found.</u> <u>Equation (192–16)</u> . All PHYs support transmission of this signal at 3 GBd. PHYs that support 5 Gb/s, and 7.5 Gb/s, and 10 Gb/s transmit rates support transmission of this signal at 6 GBd.	M	Yes []
TM6a	Test mode 4, PAM2 mode at 6 GBd	<u>Error!</u> <u>Reference source not found.</u>	When enabled, PHY transmits the sequence of symbols generated by the PCS scrambler generator polynomial per <u>Error!</u> <u>Reference source not found.</u> <u>PHYs that support 5 Gb/s, and 7.5 Gb/s, and 10 Gb/s transmit rates support transmission of this signal at 6 GBd.</u>	<u>TX5G:M</u> <u>TX7.5G:M</u> <u>TX10G:M</u>	Yes []
TM7	Test mode 4, PAM3 mode	<u>Error!</u> <u>Reference source not found.</u> <u>192.5.1</u>	When enabled, PHY transmits the PCS scrambler generator polynomial per <u>Error!</u> <u>Reference source not found.</u> <u>Equation (192–16)</u> . PHYs that support 7.5 Gb/s transmit rates support transmission of this signal at 6 GBd.	<u>TX7.5G:M</u>	Yes []
TM8	Test mode 4, PAM4 mode	<u>Error!</u> <u>Reference source not found.</u> <u>192.5.1</u>	When enabled, PHY transmits the PCS scrambler generator polynomial per <u>Error!</u> <u>Reference source not found.</u> <u>Equation (192–16)</u> . PHYs that support 10 Gb/s transmit rates support transmission of this signal at 6 GBd.	<u>TX10G:M</u>	Yes []
TM9	Test mode 5	<u>Error!</u> <u>Reference source not found.</u> <u>192.5.1</u>	When enabled, PHY transmits continuously with no QUIET period or refresh header and with transmit signal level corresponding to the data mode of operation	M	Yes []

TM10	Test mode 6	Error! Reference source not found. 492.5.1	When enabled, PHY transmits a continuous pattern of 30 {+1} symbols followed by 30 {-1} symbols with the transmitted symbols timed from its local 3 GHz clock source	M	Yes []
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192.13.4.8.1**192.13.4.8.2 Transmitter Electrical Specifications**

Item	Feature	Subclause	Value/Comment	Status	Support
PMAT1 T ES1	Coupling	Error! Reference source not found. 492.5.2	Electrical input is ac-coupled	M	Yes []
PMAT2 T ES2	Transmitter electrical specifications	Error! Reference source not found. 492.5.2	Meets requirements of Error! Reference source not found. 492.5.2	M	Yes []
PMAT3 T ES3	Transmitter output droop	Error! Reference source not found. 492.5.2.1	Less than 24%, measured with respect to an initial value at 2 ns after the zero crossing and a final value at 8 ns after the zero crossing, when measured in test mode 6 using transmitter test fixture 1 or test fixture 3	M	Yes []
PMAT4 T ES4	Captured block length and sampling	Error! Reference source not found. 492.5.2.2	At least 4000 transmitted symbols long and sampled with a minimum of 10x oversampling	M	Yes []
PMAT5 T ES5	Transmitter peak distortion	Error! Reference source not found. 492.5.2.2	Less than 20 mV when the peak signal level is normalized to 1 V for PAM2 transmitters and less than 15 mV for PAM4 transmitters, measured at a minimum of ten equally spaced phases of a single symbol period	M	Yes []

PMAT6 T ES6	RMS jitter, Leader mode	Error! Reference source not found. 492-5.2.3	Less than 1 ps when supporting 10 Gb/s, less than 1.5 ps when supporting 7.5 Gb/s, less than 2 ps when supporting 5 Gb/s, and less than 4 ps when supporting 2.5 Gb/s for jitter frequencies greater than 100 kHz, measured in test mode 2 using test fixture 1 for -T1 and test fixture 3 for -V1	MGAL: M	Yes []
PMAT7 T ES7	Time Interval Error, Leader mode	Error! Reference source not found. 492-5.2.3	Less than 10 ps when supporting 10 Gb/s, less than 15 ps when supporting 7.5 Gb/s, less than 20 ps when supporting 5 Gb/s, and less than 40 ps when supporting 2.5 Gb/s, measured in test mode 1 using test fixture 2 over a period of 100 ms	MGAL: M	Yes []
PMAT8 T ES8	RMS jitter, Follower mode	Error! Reference source not found. 492-5.2.3	Less than 1 ps when supporting 10 Gb/s, less than 1.5 ps when supporting 7.5 Gb/s, less than 2 ps when supporting 5 Gb/s, and less than 4 ps when supporting 2.5 Gb/s for jitter frequencies greater than 1 MHz, measured in test mode 1	MGAF: M	Yes []
PMAT9 T ES9	Time Interval Error, Follower mode	Error! Reference source not found. 492-5.2.3	Less than 15 ps when supporting 10 Gb/s, less than 22.5 ps when supporting 7.5 Gb/s, less than 30 ps when supporting 5 Gb/s, and less than 60 ps when supporting 2.5 Gb/s, measured in test mode 1 over 50 overlapping periods of 10 ms	MGAF: M	Yes []
PMAT10 T ES10	Transmitter power levels	Error! Reference source not found. 492-5.2.4	In the range of values specified in Error! Reference source not found. Table 492-22 when using the PSD measurement test fixture	M	Yes []
PMAT11 T ES11	MDI transmit signal	Error! Reference source not found. 492-5.2.4	Nominally zero and less than -36 dBm for frequencies greater 10 MHz	M	Yes []

PMAT12 T ES12	Transmitter power spectral density, -T1	Error! Reference source not found. 492 5.2.4	Between the upper mask specified in Error! Reference source not found. Equation (192-17) and the lower mask specified in Error! Reference source not found. Equation (192-18), measured into a 100 Ω differential load using test fixture 1	*PHY-T1:M	Yes [] N/A []
PMAT13 T ES13	Symbol transmission rate	Error! Reference source not found. 492 5.2.6	Within the range of $6 \times S \text{ GBd} \pm 100 \text{ ppm}$ with drift less than 1 ppm/sec	M	Yes []
PMAT14 T ES14	Recovered symbol rate	Error! Reference source not found. 492 5.2.6	Within $\pm 10 \text{ ppm}$ of the recovered clock used by the Follower	MGAF: M	Yes []
TES12a	Transmitter power spectral density, -V1	Error! Reference source not found.	Between the upper mask specified in Error! Reference source not found. lowered by 3dB and the lower mask specified in Error! Reference source not found. lowered by 3dB, measured into a 50 Ω differential load using test fixture 1	*PHY-V1:M	Yes [] N/A []

192.13.4.8.2**192.13.4.8.3 Receiver**

Item	Feature	Subclause	Value/Comment	Status	Support
PMAR1	Bit error rate, -T1	Error! Reference source not found. 492 5.3.1	Less than 10^{-12} after RS-FEC decoding	*PHY-T1:M	Yes [] N/A []
PMAR2	Bit error rate, -V1	Error! Reference source not found. 492 5.3.1	Less than 10^{-12} after RS-FEC decoding	*PHY-V1:M	Yes [] N/A []

192.13.4.8.3

192.13.4.9 Link segment**192.13.4.9.1 Link segment characteristics, -T1**

Item	Feature	Subclause	Value/Comment	Status	Support
LST1	Insertion loss, -T1	<u>Error!</u> <u>Reference source not found,492.7.1.1</u>	Meets requirements of <u>Error!</u> <u>Reference source not found,492.7.1.1</u>	INS-LS, T1:M	Yes [☐ N/A [☐
LST2	Return loss, -T1	<u>Error!</u> <u>Reference source not found,492.7.1.3</u>	Meets requirements of <u>Error!</u> <u>Reference source not found,492.7.1.3</u>	INS-LS, T1:M	Yes [☐ N/A [☐
LST3	Coupling attenuation, -T1	<u>Error!</u> <u>Reference source not found,492.7.1.4</u>	Meets requirements of <u>Error!</u> <u>Reference source not found,492.7.1.4</u>	INS-LS, T1:M	Yes [☐ N/A [☐
LST4	Screening attenuation, -T1	<u>Error!</u> <u>Reference source not found,492.7.1.5</u>	Meets requirements of <u>Error!</u> <u>Reference source not found,492.7.1.5</u>	INS-LS, T1:M	Yes [☐ N/A [☐
LST5	Propagation delay, -T1	<u>Error!</u> <u>Reference source not found,492.7.1.6</u>	Not more than 160 ns for all frequencies between 10 MHz and 5 GHz	INS-LS, T1:M	Yes [☐ N/A [☐
LST6	PSANEXT loss, -T1	<u>Error!</u> <u>Reference source not found,492.7.2.1</u>	Meets requirements of <u>Error!</u> <u>Reference source not found,492.7.2.1</u>	INS-LS, T1:M	Yes [☐ N/A [☐
LST7	PSAACRF, -T1	<u>Error!</u> <u>Reference source not found,492.7.2.2</u>	Meets requirements of <u>Error!</u> <u>Reference source not found,492.7.2.2</u>	INS-LS, T1:M	Yes [☐ N/A [☐

192.13.4.9.1

192.13.4.9.2 Link segment characteristics, -V1

Item	Feature	Subclause	Value/Comment	Status	Support
LSV1	Insertion loss, -V1	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.8.1.1</u>	Meets requirements of <u>Error!</u> <u>Reference source not</u> <u>found.</u> <u>492.8.1.1</u>	INS-LS, V1:M	Yes [☐ N/A [☐
LSV2	Return loss, -V1	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.8.1.3</u>	Meets requirements of <u>Error!</u> <u>Reference source not</u> <u>found.</u> <u>492.8.1.3</u>	INS-LS, V1:M	Yes [☐ N/A [☐
LST3	Screening attenuation, -V1	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.8.1.5</u>	Measured in accordance with ISO 19642–11 and meets requirements of <u>Error!</u> <u>Reference source not</u> <u>found.</u> <u>492.8.1.5</u>	INS-LS, V1:M	Yes [☐ N/A [☐
LST4	Propagation delay, -V1	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.8.1.6</u>	Not more than 160 ns for all frequencies between 10 MHz and 5 GHz	INS-LS, V1:M	Yes [☐ N/A [☐
LST5	Coupling parameter test methodologies, -V1	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.8.2</u>	Applied with adaptation to unbalanced coaxial cabling and using a 50 Ω termination to ground	INS-LS, V1:M	Yes [☐ N/A [☐
LST6	PSANEXT loss, -V1	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.8.2.1</u>	Meets requirements of <u>Error!</u> <u>Reference source not</u> <u>found.</u> <u>492.8.2.1</u>	INS-LS, V1:M	Yes [☐ N/A [☐
LST7	PSAACRF, -V1	<u>Error!</u> <u>Reference</u> <u>source</u> <u>not</u> <u>found.</u> <u>492</u> <u>.8.2.2</u>	Meets requirements of <u>Error!</u> <u>Reference source not</u> <u>found.</u> <u>492.8.2.2</u>	INS-LS, V1:M	Yes [☐ N/A [☐

192.13.4.9.2**192.13.4.10 MDI****192.13.4.10.1 MDI specification, -T1**

Item	Feature	Subclause	Value/Comment	Status	Support
MDIT1	Electrical requirements, -T1	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 492. 9.2	Electrical requirements are for when a PHY is connected to the -T1 MDI connector mated with a specified connector to a shielded balanced pair of conductors	*PHY-T1:M	Yes [☐ N/A [☐
MDIT2	Return loss, -T1	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 492. 9.2.1	For each transmitter/receiver, measured with a nominal impedance of 50 Ω	*PHY-T1:M	Yes [☐ N/A [☐
MDIT3	Fault tolerance, -T1	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 492. 9.3	Meets requirements of 96.8.3	*PHY-T1:M	Yes [☐ N/A [☐

192.13.4.10.1**192.13.4.10.2 MDI specification, -V1**

Item	Feature	Subclause	Value/Comment	Status	Support
MDIV1	Electrical requirements, -V1	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 492. 40.2	Electrical requirement are for when a PHY is connected to the -V1 MDI connector mated with a specified connector to a single coaxial cable	*PHY-V1:M	Yes [☐ N/A [☐
MDIV2	Return loss, -V1	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 492. 40.2.1	For each transmitter/receiver, measured with a nominal impedance of 50 Ω	*PHY-V1:M	Yes [☐ N/A [☐

MDIT3	Fault tolerance, -V1	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 492- 40.3	MDI coaxial cable interface withstands, without damage, 50 V dc with the source current limited to 150 mA. Normal operation resumes after all short circuits are removed. Single MDI conductor withstands, without damage, high-voltage transient noises and ESD per application requirements.	*PHY-V1:M	Yes [] N/A []
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192.13.4.10.2

192.13.4.11 Delay constraints

Item	Feature	Subclause	Value/Comment	Status	Support
DC1	Delay constraints	<u>Error!</u> <u>Reference</u> <u>source not</u> <u>found.</u> 492- 42	Complies with <u>Error!</u> <u>Reference source not</u> <u>found.</u> Table 492-27	M	Yes []

192.13.4.11