92.4 Protocol implementation conformance statement (PICS) proforma for Clause 92, Reconciliation Sublayer (RS), Physical Coding Sublayer (PCS), and Physical Media Attachment (PMA) for point–to–point media, types 10GBASE–PR and 10/1GBASE–PRX[a]

92.4.1 Introduction

The supplier of a protocol implementation that is claimed to conform to @@Clause 92@@, Reconciliation Sublayer (RS), Physical Coding Sublayer (PCS), and Physical Media Attachment (PMA) for point–to–point media, types 10GBASE–PR and 10/1GBASE–PRX, 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.

92.4.2 Identification

92.4.2.1 Implementation identification

Supplier	
Contact point for enquiries about the PICS	
Implementation Name(s) and Version(s)	
Other information necessary for full identification—e.g., name(s) and version(s) for machines and/or operating systems; System Name(s)	
Only the first three items are required for all implementations; other information may be completed as appropriate in meeting the requirements for the identification. The terms Name and Version should be interpreted appropriately to correspond with a supplier's terminology (e.g., Type, Series, Model).	

[a]*Copyright 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.

92.4.2.2 Protocol summary

Identification of protocol standard	IEEE Std 802.3–2008, Reconciliation Sublayer (RS), Physical Coding Sublayer (PCS), and Physical Media Attachment (PMA) for point–to–point media, types 10GBASE–PR and 10/1GBASE–PRX
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 802.3–2008)	
Date of Statement	

92.4.3 Major capabilities/options

Item	Feature	Subclause	Value/Comment	Status	Support
*OLT	OLT functionality	@@92.1.1 @@	Device supports functionality required for OLT	O.1	Yes [ ] No [ ]
*ONU	ONU functionality	@@92.1.1 @@	Device supports functionailty required for ONU	O.1	Yes [ ] No [ ]
*FECEn coder	Operation of forward error correction encoder	@@92.2.2. 4@@	Device supports FEC encoding for multipoint optical links	O	Yes [ ] No [ ]
*FEC-Decoder	Operation of forward error correction decoder	@@92.2.3. 2@@	Device supports FEC decoding for multipoint optical links	O	Yes [ ] No [ ]

92.4.4 PICS proforma tables for Reconciliation Sublayer (RS), Physical Coding Sublayer (PCS), and Physical Media Attachment (PMA) for point–to–point media, types 10GBASE–PR and 10/1GBASE–PRX

92.4.4.1 Operating modes of OLT MACs

Item	Feature	Subclause	Value/Comment	Status	Support
OM1	Unidirectional mode	@@92.1.3 @@	Device operates in unidirectional transmission mode	OLT:M	Yes [ ]
OM2	Dual-rate mode	@@92.1.2. 3@@	Device operates in dual-rate mode	OLT:O	Yes [ ] No [ ]

92.4.4.2 ONU and OLT variables

Item	Feature	Subclause	Value/Comment	Status	Support
FS1	enable variable	@@92.1.6.2.1@@	True for ONU MAC, TRUE for OLT MAC if enabled, FALSE for OLT MAC if not enabled	M	Yes [ ]
FS2	mode variable	@@92.1.6.2.1@@	0 for ONU MAC, 0 or 1 for enabled OLT MAC	M	Yes [ ]
FS3	logical_link_id variable	@@92.1.6.2.1@@	Set to 0x7FFE until ONU MAC is registered Set to any value for enabled OLT MAC. Set to any value other then 0x7FFE for registered ONU MAC	M	Yes [ ]

92.4.4.3 Preamble mapping and replacement

Item	Feature	Subclause	Value/Comment	Status	Support
PM1	CRC-8 generation	@@92.1.6.2.2@@	CRC calculation produces same result as serial implementation	M	Yes [ ] No [ ]
PM2	CRC-8 initial value	@@92.1.6.2.2@@	CRC shift register initialized to 0x00 before each new calculations	M	Yes [ ] No [ ]
PM3	SLD parsing	@@92.1.6.2.3.1@@	If SLD is not found then discard packet	M	Yes [ ] No[ ]
PM4	SLD replacement	@@92.1.6.2.3.1@@	Replace SLD with preamble	M	Yes [ ] No [ ]
PM5	LLID matching	@@92.1.6.2.3.2@@	If LLID does not match then discard packet	M	Yes [ ] No [ ]
PM6	LLID Replacement	@@92.1.6.2.3.2@@	Replace LLID with preamble	M	Yes [ ] No [ ]
PM7	CRC-8 checking	@@92.1.6.2.3.3@@	If CRC does not match then discard packet	M	Yes [ ] No [ ]
PM8	CRC-8 replacement	@@92.1.6.2.3.3@@	Replace CRC with preamble	M	Yes [ ] No [ ]

92.4.4.4 Data detection

Item	Feature	Subclause	Value/Comment	Status	Support
DD1	Buffer depth	@@92.2.2.5@@	Depth sufficient to turn on laser and send laser synchronization pattern, Burst Delimiter pattern and a predefined number of IDLE control character (receiver settle).	ONU:M	Yes [ ] No [ ]
DD2	OLT laser control	@@92.2.2.5.1.4@@	Always takes the value ON	OLT:M	Yes [ ] No [ ]
DD3	State diagrams	@@92.2.2.5.1.6@@	Meets the requirements of @@Figure 92–16@@	ONU:M	Yes [ ] No[ ]

92.4.4.5 Alignment and IDLE control character deletion

Item	Feature	Subclause	Value/Comment	Status	Support
AIC1	IDLE control character deletion	@@92.2.2.1@@	If the minimum IPG was transmitted after a frame, then 4 IDLE control character are deleted for every 27 vectors transmitted.	ONU:M	Yes [ ] No [ ]
AIC2	Alignment and Idle Detection function implementation in ONU	@@92.2.2.1@@	Meets the requirements of @@Figure 92–10@@	ONU:M	Yes [ ] No [ ]
AIC3	Alignment and Idle Detection function implementation in OLT	@@92.2.2.1@@	Meets the requirements of @@Figure 92–11@@	OLT:M	Yes [ ] No [ ]

92.4.4.6 FEC requirements

Item	Feature	Subclause	Value/Comment	Status	Support
FE1	FEC Coding Choice	@@92.2.2.4@@	Reed-Solomon (RS) code (255,223)	FEC:M	Yes [ ] No [ ]
FE2	Uncorrectable block indication	@@92.2.3.2@@	Mark all code-groups in an uncorrectable block by setting all sync headers for the received payload blocks of the FEC codeword to the value of {SH.0,SH.1} = 00.	FEC:O	Yes [ ] No [ ]

92.4.4.7 FEC state machines

Item	Feature	Subclause	Value/Comment	Status	Support
SM1	Transmit	@@92.2.2.4.1@@	Meets the requirements of @@Figure 92-12@@ and @@Figure 92-12@@	FEC:M	Yes [ ]
SM2	Receive synchronization	@@92.2.3.1@@	Meets the requirements of @@Figure 92-18@@	FEC:M	Yes [ ]
SM3	Bit stream forming process during receive	@@92.2.3.1@@	Meets the requirements of @@Figure 92–18@@.	FEC:M	Yes [ ]
SM4	Receive	@@92.2.3.2@@	Meets the requirements of @@Figure 92-XX@@	FEC:M	Yes [ ]

92.4.4.8 PMA

Item	Feature	Subclause	Value/Comment	Status	Support
BMC1	Loop Timing	@@92.3.1.2@@	ONU RX clock tracks OLT TX clock	ONU:M	Yes [ ] No [ ]

92.4.4.9 Delay variation

Item	Feature	Subclause	Value/Comment	Status	Support
DV1	Delay variation	@@92.3.3@@	Combined delay variation through RS, PCS, and PMA sublayers is limited to 16 bit times	M	Yes [ ] No [ ]