INTERNATIONAL STANDARD

ISO/IEC 9314-13

First edition
1998-08

Information technology –
Fibre Distributed Data Interface (FDDI) –
Part 13:
Conformance Test Protocol Implementation Conformance Statement (CT-PICS) Proforma

Reference number
ISO/IEC 9314-13:1998(E)

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

INTERNATIONAL STANDARD

ISO/IEC 9314-13

First edition
1998-08

Information technology –
Fibre Distributed Data Interface (FDDI) –
Part 13:
Conformance Test Protocol Implementation Conformance Statement (CT-PICS) Proforma

© ISO/IEC 1998

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

ISO/IEC Copyright Office • Case postale 56 • CH-1211 Genève 20 • Switzerland



PRICE CODE P

For price, see current catalogue

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS

Not for Resale

CONTENTS

Page

FOREWORD iii

INTRODUCTION iv

Clause

1 Scope 1

2 Normative references 1

3 Definitions 1

3.1 Definition of concepts and special terms 1

3.2 Abbreviations 2

4 General description 2

4.1 Conformance clause 2

4.2 General statement of conformance 2

4.3 Instructions 2

4.4 Notations and conventions. 3

4.5 Identification of the implementation 4

5 Protocol implementation conformance statements (PICS) Proforma 5

5.1 PICS Proforma for PMD 5

5.2 PICS Proforma for PHY 6

5.3 PICS Proforma for MAC. 8

5.4 PICS Proforma for station management (SMT) 10

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

INFORMATION TECHNOLOGY – Fibre Distributed Data Interface (FDDI) –

Part 13: Conformance Test Protocol Implementation Conformance Statement (CT-PICS) Proforma

FOREWORD

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

International Standard ISO/IEC 9314-13 was prepared by Joint Technical Committee ISO/IEC JTC 1 *Information technology*, Subcommittee SC 25*, Interconnection of information technology equipment.*

ISO/IEC 9314 consists of the following parts, under the general title *Information technology – Fibre Distributed Data Interface (FDDI):*

- *Part 1: Token Ring Physical Layer Protocol (PHY) (1989)*
- *Part 2: Token Ring Media Access Control (MAC) (1989)*
- *Part 3: Physical Layer Medium Dependent (PMD) (1990)*
- *Part 4: Single Mode Fibre Physical Layer Medium Dependent (SMF-PMD)*[1)]
- *Part 5: Hybrid Ring Control (HRC) (1995)*
- *Part 6: Station Management (SMT)*
- *Part 7: Physical Layer Protocol (PHY-2)*
- *Part 8: Media Access Control-2 (MAC-2)*
- *Part 9: Low-Cost Fibre – Physical Medium Dependent (LCF-PMD) (under consideration)*
- *Part 10: Token Ring Twisted Pair Physical layer Medium Dependent (TP-PMD) (under consideration)*
- *Part 13: Conformance Test Protocol Implementation Conformance Statement Proforma (CT-PICS)*
- *Part 20: Physical Medium Dependent Conformance Testing (PMD-ATS) (under consideration)*
- *Part 21: Physical Layer Protocol Conformance Testing (PHY-ATS) (under consideration)*
- *Part 25: Abstract test suite for FDDI – Station Management Conformance Testing (SMT-ATS*
- *Part 26: Media Access Control Conformance Testing (MAC-ATS) (under consideration)*

_____

1) To be published.

--`,,```,,,,````-`-`,,`,,`,`,,`---
Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

INTRODUCTION

To evaluate the conformance of this particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a given OSI protocol. Such a statement is called a *Protocol Implementation Conformance Statement* (PICS).

The Fibre Distributed Data Interface (FDDI) is intended for use in a high-performance, general-purpose multistation network and is designed for efficient operation with a peak data rate of 100 Mbit/s. It uses a Token Ring Architecture with optical fiber as the transmission medium. FDDI provides for hundreds of stations operating over an extent of tens of kilometres.

FDDI PICS Proforma specifies the protocol features that are mandatory and optional within the base standards. This document is supported by four separate Abstract Test Suite (ATS) standards that specify the test architecture required to prove conformance of an FDDI implementation.

The four ATS standards under development, which will provide a complete conformance test of an FDDI station, are:

a) An ATS for FDDI Physical Medium Dependent (PMD) that provides a conformance test for FDDI PMD. PMD specifies the optical interface of FDDI stations. PMD is not a protocol standard and this ATS requires the measurement of physical quantities such as optical power, wavelength and signal jitter. The PMD ATS differs from the methodology of higher-level protocol conformance tests written using the Tree and Tabular Combined Notation (TTCN) as specified by ISO/IEC 9646-3, because the TTCN notation does not provide a suitable vehicle for Physical Layer testing, where there is no concept of a protocol data unit and where physical quantities must be measured.

b) An ATS for the FDDI Physical Layer Protocol (PHY) that provides a conformance test for FDDI PHY. PHY specifies the upper sublayer of the Physical Layer for the FDDI, including the data encode/decode, framing and clocking, as well as the elasticity buffer, smoothing, and repeat filter functions. FDDI PHY, however, does contain several state machines and implements a protocol at the level of FDDI code symbols. The only physical quantity that must be measured in this conformance test is frequency. The PHY ATS cannot use the TTCN notation and a notation is developed in the PHY ATS for specifying test patterns and expected results in terms of FDDI code symbol strings.

c) An ATS for FDDI Media Access Control (MAC) that provides a conformance test for FDDI MAC. MAC specifies the lower sublayer of the Data Link Layer for FDDI. It specifies access to the medium, including addressing, data checking, and data framing. MAC also specifies the receiver and transmitter state machines. Since MAC is a protocol that deals primarily with complete PDUs, the Tree and Tabular Combined Notation (TTCN) language specified in ISO/IEC 9646-3 is used to specify MAC protocol tests.

d) An ATS for FDDI Station Management (SMT) that provides a conformance test for FDDI SMT. SMT specifies the local portion of the system management application process for FDDI, including the control required for proper operation of an FDDI station in an FDDI ring. SMT provides services such as connection management, station insertion and removal, station initialization, configuration management, fault recovery, communication protocol for external authority, scheduling policies, and the collection of statistics. SMT interacts with PMD, PHY and MAC for testing.

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

INFORMATION TECHNOLOGY – Fibre Distributed Data Interface (FDDI) –

Part 13: Conformance Test Protocol Implementation Conformance Statement (CT-PICS) Proforma

1 Scope

This part of ISO/IEC 9314 provides the PICS proforma for the Fibre Distributed Data Interface (FDDI) specified in the base standards as denoted in clause 5.

2 Normative References

The following standards contain provisions which, through reference in the text, constitute provisions of this part of ISO/IEC 9314. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC 9314 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 9314-1:1989, *Information processing systems – Fibre Distributed Data Interface (FDDI) – Part 1: Token Ring Physical Layer Protocol (PHY)*

ISO/IEC 9314-2:1989, *Information processing systems – Fibre Distributed Data Interface (FDDI) – Part 2: Token Ring Media Access Control (MAC)*

ISO/IEC 9314-3:1990, *Information processing systems – Fibre Distributed Data Interface (FDDI) – Part 3: Physical Layer Medium Dependent (PMD)*

ISO/IEC 9314-6:1994, *Information technology – Fibre Distributed Data Interface (FDDI) – Part 6: Station Management (SMT)*

ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model*

ISO/IEC 9646-1:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts*

ISO/IEC 9646-2:1994 *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 2: Abstract Test Suite specification*

3 Definitions

3.1 Definition of concepts and special terms

3.1.1 conformance testing: A series of tests, based on the FDDI standards, that when completed will increase the probability that different implementations that pass the conformance testing will interoperate.

3.1.2 protocol implementation conformance statement (PICS) proforma: A document, in the form of a questionnaire, designed by the protocol specifier or conformance test suite specifier, that specifies all mandatory and optional features that shall be tested in the course of a formal conformance test.

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

3.1.3 protocol implementation conformance statement (PICS): A statement made by the vendor supplying the implementation under test (IUT), stating which capabilities and options were implemented for the system being delivered for testing.

3.2 Abbreviations

ATS Abstract Test Suite

IUT Implementation Under Test

PICS Protocol Implementation Conformance Statement

4 General description

4.1 Conformance clause

The supplier of the Implementation Under Test (IUT), which claims to be conformant to International Standards on Fibre Distributed Data Interface (FDDI), shall complete the requisite PICS Proforma.

The supplier of the Implementation Under Test (IUT) shall complete the PICS Proforma by marking whether mandatory and optional features listed here have been implemented. The completed PICS shall be delivered, along with the IUT, to the certifying conformance test facility. The conformance test facility shall use the completed PICS as the basis for selection of test cases to test thoroughly the IUT for conformance to the FDDI standards

The International Standard committee on FDDI has produced several standards. A PICS Proforma for each FDDI standard is a part of this conformance standard. The requisite PICS Proforma subclauses that provide a cross reference to the FDDI standards are listed below:

Subclause	International Standard
5.1	ISO/IEC 9314-3:1990 FDDI Physical Medium Dependent (PMD)
5.2	ISO/IEC 9314-1:1989 FDDI Physical(PHY) Layer Protocol
5.3	ISO/IEC 9314-2:1989 FDDI Media Access Control (MAC)
5.4	ISO/IEC 9314-6:1994 FDDI Station Management (SMT)

4.2 General statement of conformance

Does the Implementation Under Test (IUT) submitted, meet all the requirements as stated in this PICS Proforma and the governing International Standards that are the basis for the Proforma?

4.3 Instructions

The supplier of an FDDI implementation shall take the following steps to complete this PICS Proforma.

1) The supplier shall complete the identification section;
2) A completed PICS Proforma is the PICS for the implementation in question. The PICS is a statement of which capabilities and options of the protocol have been implemented. The PICS can have a number of uses, including:
   - by the protocol implementor, as a checklist to reduce the risk of failure to conform to the standard through oversight;
   - by the supplier and acquirer (or potential acquirer) of the implementation, as a detailed indication of the capabilities of the implementation, stated relative to the common basis of understanding provided by the standard PICS Proforma;
   - by the user (or potential user) of the implementation, as a basis for initially checking the possibility of interworking with another implementation;

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

NOTE – Although interworking can never be guaranteed, failure to interwork can often be predicted from incompatible PICSs.

– by the protocol tester, as the basis for selecting appropriate tests against which to assess the claim of conformance to the applicable standard;

3) The supplier shall mark an X in the 'Y' or 'N' brackets in the 'SUPPORT' column of each of the following tables. The supplier shall enter an 'X' in the 'Y' box if the feature, timer, parameter, or capability is implemented. The supplier shall enter an 'X' for implemented features even if optional access to the feature is not provided. The supplier shall enter an 'X' in the 'N' box if the feature, timer, parameter, or capability is not implemented. If the supplier enters a 'X' in the 'N' box for a mandatory feature, the supplier shall attach an explanation as to why the feature was not implemented;

4) The supplier shall enter the specified ranges, values, default values and units of measure, where applicable, for all implemented parameters. Continuous ranges shall be entered in the form: lowest value-highest value. A series of discrete values shall be entered from lowest to highest value with each value separated by commas. Two lines are provided for entering all station address values. If units are not applicable, the 'Units' column shall have a "_" entry.

4.4 Notations and conventions

In the following tables, the Standard Type and Notation shall apply:

m	mandatory field/function
o.x	optional field/function
cx	conditional requirements, as modified by the conditions as stated in 'x'
N/A	not applicable
Y[ ]	is for the purpose of indicating the item is implemented
N[ ]	is for the purpose of indicating the item is not implemented
"_"	units not applicable
Tx	transmit
Rx	receive
Rpt	repeat

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

4.5 Identification of the implementation

Date _____

ISO/IEC standard version _____

Vendor information _____

Company name _____

Technical representative _____

Address _____

_____

_____

_____

Phone: _____ Fax No: _____

E-Mail: _____

Implementation information

Implementation name: _____

Implementation identifier (include version/release):

_____

NOTE – The supplier of the IUT shall complete that portion of this clause, so as to identify unambiguously the product submitted for test.

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5 Protocol implementation conformance statements (PICS) Proforma

5.1 PICS Proforma for PMD

General conformance statement: Does the implementation delivered implement all mandatory capabilities in ISO/IEC 9314-3? Answering "No" to this question indicates nonconformance to the protocol specification. Non-supported mandatory capabilities are to be identified, with an explanation of why the implementation is nonconforming.

Yes[ ] No[ ]

5.1.1 Active output interface

Item #	Item name	Ref #	STD Type/range		Status	Support
			Min	Max		
PMD1.1	Center Wavelength	8.1	1270 nm	1380 nm	m	Y[ ] N[ ]
PMD1.2	Average Power	8.1	–20 dBm	–14 dBm	m	Y[ ] N[ ]
PMD1.3	FWHM	8.1	See fig. 9		m	Y[ ] N[ ]
PMD1.4	Rise Time	8.1	0,6 ns	3,5 ns	m	Y[ ] N[ ]
PMD1.5	Fall Time	8.1	0,6 ns	3,5 ns	m	Y[ ] N[ ]
PMD1.6	DCD, (P-to-P)	8.1	–	1,0 ns	m	Y[ ] N[ ]
PMD1.7	DDJ, (P-P)	8.1	–	0,76 ns	m	Y[ ] N[ ]
PMD1.8	Random Jitter (P-P)	8.1	–	0,6 ns	m	Y[ ] N[ ]
PMD1.9	Extinction Ratio	8.1	–	10,0%	m	Y[ ] N[ ]

5.1.2 Active input interface

Item #	Item name	Ref #	STD Type/range		Status	Support
			Min	Max		
PMD2.1	Center Wavelength	8.2	1270 nm	1380 nm	m	Y[ ] N[ ]
PMD2.2	Average Power	8.2	–31 dBm	–14 dBm	m	Y[ ] N[ ]
PMD2.3	Rise Time	8.2	0,6 ns	5,0 ns	m	Y[ ] N[ ]
PMD2.4	Fall Time	8.2	0,6 ns	5,0 ns	m	Y[ ] N[ ]
PMD2.5	DCD, (P-to-P)	8.2	–	1,0 ns	m	Y[ ] N[ ]
PMD2.6	Random Jitter	8.2	–	0,76 ns	m	Y[ ] N[ ]
PMD2.7	DDJ, (P-to-P)	8.2	–	1,2 ns	m	Y[ ] N[ ]

5.1.3 Station bypass interface (optional)

Item #	Item name	Ref #	STD Type/range		Status	Support
			Min	Max		
PMD3.1	Attenuation	8.4	0,0 dB	2,5 dB	m	Y[ ] N[ ]
PMD3.2	Interchannel Isolation	8.4	40,0 dB	–dB	m	Y[ ] N[ ]
PMD3.3	Switch Time(Tsi)	8.4	–	25 ms	m	Y[ ] N[ ]
PMD3.4	Media Interrupt Time	8.4	–	15 ms	m	Y[ ] N[ ]

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.1.4 Optical receiver

Item #	Item name	Ref #	STD Type/range		Status	Support
			Min	Max		
PMD4.1	Assert Pwr(Pa)	9.1.1.2	Pd+1,5 dBm	–31,0 dBm	m	Y[ ] N[ ]
PMD4.2	Deassert Pwr(Pd)	9.1.1.3	–45 dBm or Pb*	–	m	Y[ ] N[ ]
PMD4.3	Hysteresis	9.1.1.2	1,5 dB	–	m	Y[ ] N[ ]

* Where Pb is the power level into the active input. Hysteresis will use whichever power is higher in order to yield a BER of 0,01 or less.

5.1.5 Optical transmitter

Item #	Item name	Ref #	STD Type/range		Status	Support
			Min	Max		
PMD5.1	TX Disable	9.2	–45,0 dBm		m	Y[ ] N[ ]
PMD5.2	TX Enable	9.2	–	1,0 µs	m	Y[ ] N[ ]

5.1.6 Receptacle requirements

Item #	Item name	Ref #	STD Type/range		Status	Support
			Min	Max		
PMD6.1	MIC A and MIC B provide for attachment of DAS	7.1			o.1	Y[ ] N[ ]
PMD6.2	MIC M used with a concentrator, provide for attachment	7.1			o.1	Y[ ] N[ ]
PMD6.3	MIC S provide for attachment of SAS to a concentrator	7.1			o.1	Y[ ] N[ ]
PMD6.4	Polarization	7.1			m	Y[ ] N[ ]

o.1 One or more of the above connection requirements must be selected.

5.2 PICS Proforma for PHY

General conformance statement: Does the implementation delivered implement all mandatory capabilities in ISO/IEC 9314-1? Answering "No" to this question indicates nonconformance to the protocol specification. Non-supported mandatory capabilities are to be identified, with an explanation of why the implementation is nonconforming.

5.2.1 Line state detection and transmission

Item #	Item name	Ref #	STD Type/range	Status	Support
PMD1.1	Quiet (Tx/Rx)	7.3.1		m	Y[ ] N[ ]
PHY1.2	Master (Tx/Rx)	7.3.2		m	Y[ ] N[ ]
PHY1.3	Halt (Tx/Rx)	7.3.3		m	Y[ ] N[ ]
PHY1.4	Idle (Tx/Rx)	7.3.4		m	Y[ ] N[ ]
PHY1.5	Active (Tx/Rx)	7.3.5		m	Y[ ] N[ ]
PHY1.6	Noise (detect)	7.3.6		m	Y[ ] N[ ]
PHY1.7	Violation symbol/invalid code symbol	7.2.4	Table 1 p. 14 ISO/IEC 9314-1:1989	m	Y[ ] N[ ]

NOTE – Detect and pass the results to MAC for PHY 1.4, PHY 1.5, and PHY 1.7 cases and detect and pass the results to SMT for PHY 1.1, PHY 1.2, PHY 1.3 and PHY 1.6 cases.

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.2.2 Elasticity buffer function

Item #	Item name	Ref #	STD Type/range	Status	Support
PHY2.1	Insertion of code bit ones	8.2.4		m	Y[ ] N[ ]
PHY2.2	Deletion of code bit ones	8.2.4		m	Y[ ] N[ ]
PHY2.3	Repeating of max size frame with: RCRCLK=125,000 MHz (-0,005%)	8.2.4	RCRCLK=125,000 MHz (–0,005 %)	m	Y[ ] N[ ]
PHY2.4	Repeating of max size frame with: RCRCLK=125,000 MHz (+0,005%)	8.2.4	RCRCLK=125,000 MHz (+0,005 %)	m	Y[ ] N[ ]
PHY2.5	Realignment of JK with ALS	8.2.4		m	Y[ ] N[ ]

5.2.3 Smoothing function

Item #	Item name	Ref #	STD Type/range	Status	Support
PHY3.1	Reclaim fragments of stripped partials	8.3		m	Y[ ] N[ ]
PHY3.2	Reclaim space from other partial frames w/o format errors	8.3		o	Y[ ] N[ ]
PHY3.3	Insert Idles	8.3		m	Y[ ] N[ ]
PHY3.4	Delete Idles	8.3		m	Y[ ] N[ ]

5.2.4 Repeat filter function (Mandatory w/o MAC else optional)

Item #	Item name	Ref #	STD Type/range	Status	Support
PHY4.1	Symbols following I revert to I until JK	8.4		m	Y[ ] N[ ]
PHY4.2	Detect Violation Symbol (Isolated J)	8.4		m	Y[ ] N[ ]
PHY4.3	SD in ALS	8.4		m	Y[ ] N[ ]
PHY4.4	Replace Invalid Symbols with HHHH	8.4		m	Y[ ] N[ ]

5.2.5 Parameters

Item #	Item name	Ref #	STD Type/range	Status	Support
PHY5.1	SD_Min (ns)	8.5.2	74 bits	m	Y[ ] N[ ]
PHY5.2	Lcl_clk Freq (MHz)	8.2.7	125 ±0,005%	m	Y[ ] N[ ]
PHY5.3	Phase Jitter (Deg)	8.2.7	±8 deg	m	Y[ ] N[ ]
PHY5.4	Harmonic	8.2.7	<–20 dB	m	Y[ ] N[ ]
PHY5.5	AT_Max: Max PHY acquisition time	8.2.6	<= 100 s	m	Y[ ] N[ ]
PHY5.6	LS_Max: Max Line state Change time	8.2.6	<= 15 s	m	Y[ ] N[ ]

5.2.6 Path latency

Item #	Item name	Ref #	STD Type/range	Status	Support
PHY6.1	Min Latency w/MAC in the Path	8.5.1	2 Symbols (min)	m	Y[ ] N[ ]
PHY6.2	Min Latency w/o MAC	8.5.1	3 Symbols (min)	m	Y[ ] N[ ]

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.3 PICS Proforma for MAC

General conformance statement: Does the implementation delivered implement all mandatory capabilities in ISO/IEC 9314-2? Answering "No" to this question indicates nonconformance to the protocol specification. Non-supported mandatory capabilities are to be identified, with an explanation of why the implementation is nonconforming.

Yes[ ] No[ ]

5.3.1 Protocol data units

Item #	Item name	Ref #	Status			Support		
			Tx	Rx	Rpt	Tx	Rx	Rpt
MAC1.1	Token	7.2.1/8.1.2	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Preamble		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Start Delimiter(JK)		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Frame Control		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	1X00 0000		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	End Delimiter(TT)		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC1.2	Frame	7.2.2/8.1.1	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Preamble		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Start Delimiter(JK)		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Frame Control		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Destination Address		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Source Address		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Data Field => 0		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Frame Check Seq.		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	End Delimiter (T)		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
	Frame Status		m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.3.2 Token class

Item #	Item name	Ref #	Status			Support		
			Tx	Rx	Rpt	Tx	Rx	Rpt
MAC2.1	Unrestricted Token (FC = 1000 0000)	7.3.3.3	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC2.2	Restricted Token (FC = 1100 0000)	7.3.3.3	o	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]

5.3.3 Data frames

Item #	Item name	Ref #	Status			Support		
			Tx	Rx	Rpt	Tx	Rx	Rpt
MAC3.1	MAC Beacon (FC = 1L00 0010)	8.1.5.3	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC3.2	MAC Claim (FC = 1L00 0011)	8.1.5.1	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC3.3	SMT Next STN Address (FC = 0L00 1111)	7.3.3.4	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC3.4	Asynch LLC Frame (FC0L01 rPPP)	8.1.4.2	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC3.5	Synch LLC Frame (FC = 1L10 0000)	8.1.4.1	o	o	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC3.6	Implementor Frame (FC = CL10 rXXX)	7.3.3.4	–	–	m	–	Y[ ] N[ ]	Y[ ] N[ ]
MAC3.7	Strip Function	8.1.3	–	–	m	–	Y[ ] N[ ]	Y[ ] N[ ]
MAC3.8	SMT Frame (FC = 0100 1111)	7.3.3.4	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC3.9	Void Frames FC + (0X00 0000)	7.3.3.4	–	m	m	–	Y[ ] N[ ]	Y[ ] N[ ]

5.3.4 Address format

Item #	Item name	Ref #	Status			Support		
			Tx	Rx	Rpt	Tx	Rx	Rpt
MAC4.1	I/G BIT = 1	7.3.4	o	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC4.2	U/L BIT = 1	7.3.4	o	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC4.3	16 bit	7.3.4	o	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]
MAC4.4	48 bit	7.3.4	m	m	m	Y[ ] N[ ]	Y[ ] N[ ]	Y[ ] N[ ]

5.3.5 Timers

Item #	Item name	Ref #	STD Type/range	Status	Support
MAC5.1	Token Holding Timer	7.4	< TRT ms	m	Y[ ] N[ ]
MAC5.2	Valid Transmission Timer	7.4	> 3,0 ms	m	Y[ ] N[ ]
MAC5.3	Token Rotation Timer	7.4	T_Min to T_Max	m	Y[ ] N[ ]
MAC5.4	T_Min	7.4	<=4,0 ms	m	Y[ ] N[ ]
MAC5.5	T_Max	7.4	>165 ms (def)	m	Y[ ] N[ ]
MAC5.6	T_Pri(N) Threshold	7.4	N≤ 6	o	Y[ ] N[ ]

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.3.6 Counters

Item #	Item name	Ref #	STD Type/range	Status	Support
MAC6.1	Frame Count	7.5.1		m	Y[ ] N[ ]
MAC6.2	Error Count	7.5.2		m	Y[ ] N[ ]
MAC6.3	Lost Count	7.5.3		m	Y[ ] N[ ]
MAC6.4	Late Count	7.5.5		m	Y[ ] N[ ]

5.4 PICS Proforma for station management (SMT)

General conformance statement: Does the implementation delivered implement all mandatory capabilities in ISO/IEC 9314-6? Answering "No" to this question indicates nonconformance to the protocol specification. Non-supported mandatory capabilities are to be identified, with an explanation of why the implementation is nonconforming.

Yes[ ] No[ ]

5.4.1 Station management (SMT) components

Item #	Item name	Ref #	Status	Support
CFM.1	Single MAC – Dual Attachment Station	5.1	o.1	Y[ ] N[ ]
CFM.2	Dual MAC – Dual Attachment Station	5.1	o.1	Y[ ] N[ ]
CFM.3	Single Attachment Station	5.1	o.1	Y[ ] N[ ]
CFM.4	Dual Attachment Concentrator	5.1	o.1	Y[ ] N[ ]
CFM.5	Single Attachment Concentrator	5.1	o.1	Y[ ] N[ ]
CFM.6	Null Attachment Concentrator	5.1	o.1	Y[ ] N[ ]

o.1 Must specify one of the above FDDI node types.

5.4.1.1 Connection rules

Item #	Item name	Ref #	Status	Support
CON.1	Accept the connection if at least one node's policy is to allow such a connection	5.1	m	Y[ ] N[ ]
CON.2	Reject the connection if both nodes have a policy that disallows such a connection	5.1	m	Y[ ] N[ ]
CON.3	Reject M to M connection	5.1	m	Y[ ] N[ ]

5.4.1.2 SMT frame size

Item #	Item name	Ref #	STD Type/range	Status	Support
SMT.1	SMT Protocol Header	7.1.2	20	m	Y[ ] N[ ]
SMT.2	SMT Protocol Info Field	7.1.2.5	$0 \leq N \leq 4458$	m	Y[ ] N[ ]
SMT.3	SMT ECHO Frame size	7.1.2.5	$0 \leq N \leq 4478$	m	Y[ ] N[ ]
SMT.4	SMT Max ECHO Data	7.1.2.5/ 8.6.1	$0 \leq N \leq 4454$	m	Y[ ] N[ ]
SMT.5	Size of SMT Info field transmitted by SMT excluding ECHO request and ECHO response frames	7.1.2.5	$0 \leq N \leq 4352$	m	Y[ ] N[ ]

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.1.3 SMT header

Item #	Item name	Ref #	STD Type/range	Status	Support
SMH.1	Frame_Class	7.1.2	1	m	Y[ ] N[ ]
SMH.2	Frame_Type	7.1.2	1	m	Y[ ] N[ ]
SMH.3	Version_ID	7.1.2	2	m	Y[ ] N[ ]
SMH.4	Transaction_ID	7.1.2	4	m	Y[ ] N[ ]
SMH.5	Station_ID	7.1.2	8	m	Y[ ] N[ ]
SMH.6	Pad	7.1.2	2	m	Y[ ] N[ ]

NOTE – For SMH Version_ID shall support the following: a) NIF/SIF/ECF = X'00 01'
b) All others = X'00 02'

5.4.1.4 SMT InfoField

Item #	Item name	Ref #	STD Type/Range	Status	Support
SMI.1	Parameter Type	7.1.3	2	m	Y[ ] N[ ]
SMI.2	Parameter Length	7.1.3	2	m	Y[ ] N[ ]
SMI.3	Resource Index (MAC/PORT/PATH)	7.1.3	2	m	Y[ ] N[ ]
SMI.4	Resource Index (SMT/OOzz)	7.1.3	0	m	Y[ ] N[ ]

NOTE – Entry of multiple parameter listing is allowed in the InfoField, as long as the length does not exceed 4352 bytes, except for Echo request/response.

5.4.1.5 Addressing

Item #	Item name	Ref #	STD Type/Range	Status	Support
SMD.1	SMT-Directed-Beacon-DA	7.1.6	01-80-C2-00-01-00	m	Y[ ] N[ ]
SMD.2	SMT-SRF-DA	7.1.6	01-80-C2-00-01-10	m	Y[ ] N[ ]
SMD.3	SMT-Unknown-Address	7.1.6	00-00-F8-00-00-00	m	Y[ ] N[ ]
SMD.4	SMT-SBA-DA	7.1.6	01-80-C2-00-01-30	o	Y[ ] N[ ]
SMD.5	SMT Concentrator-MACs	7.3	01-80-C2-00-01-20	o	Y[ ] N[ ]

NOTE – The "SMT Concentrator-MACs" has no use specified in this standard.

5.4.2 MIB summary

5.4.2.1 SMT attributes

Item #	Item name	Ref #	Status	Para Type	Reg	Support
SMA.1	fddiSMTStationIdGrp	6.4.5.3.1	m	10 0A	fddiSMT 10	Y[ ] N[ ]
SMA.2	fddiSMTStationId	6.4.5.4.1	m	10 0B	fddiSMT 11	Y[ ] N[ ]
SMA.3	fddiSMTOpVersionId	6.4.5.4.1	m	10 0D	fddiSMT 13	Y[ ] N[ ]
SMA.4	fddiSMTHiVersionId	6.4.5.4.1	m	10 0E	fddiSMT 14	Y[ ] N[ ]
SMA.5	fddiSMTLoVersionId	6.4.5.4.1	m	10 0F	fddiSMT 15	Y[ ] N[ ]
SMA.6	fddiSMTManufactureData	6.4.5.4.1	o	10 10	fddiSMT 16	Y[ ] N[ ]
SMA.7	fddiSMTUserData	6.4.5.4.1	m	10 11	fddiSMT 17	Y[ ] N[ ]
SMA.8	fddiSMTMIBVersionId	6.4.5.4.1	m	10 12	fddiSMT 18	Y[ ] N[ ]
SMA.9	fddiStationConfigGrp	6.4.5.3.1	m	10 14	fddiSMT 20	Y[ ] N[ ]
SMA.10	fddiSMTMac-Ct	6.4.5.4.1	m	10 15	fddiSMT 21	Y[ ] N[ ]
SMA.11	fddiSMTNonMaster-Ct	6.4.5.4.1	m	10 16	fddiSMT 22	Y[ ] N[ ]
SMA.12	fddiSMTMaster-Ct	6.4.5.4.1	m	10 17	fddiSMT 23	Y[ ] N[ ]
SMA.14	fddiSMTConfig-Capabilities	6.4.5.4.1	m	10 19	fddiSMT 25	Y[ ] N[ ]

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

Item #	Item name	Ref #	Status	Para Type	Reg	Support
SMA.15	fddiSMTConfigPolicy	6.4.5.4.1	m	10 1A	fddiSMT 26	Y[ ] N[ ]
SMA.16	fddiSMTConnection-Policy	6.4.5.4.1	m	10 1B	fddiSMT 27	Y[ ] N[ ]
SMA.17	fddiSMT-Notify	6.4.5.4.1	m	10 1D	fddiSMT 29	Y[ ] N[ ]
SMA.18	fddiSMTStatRptPolicy	6.4.5.4.1	m	10 1E	fddiSMT 30	Y[ ] N[ ]
SMA.19	fddiSMTTrace-MaxExpiration	6.4.5.4.1	m	10 1F	fddiSMT 31	Y[ ] N[ ]
SMA.20	fddiSMTPORTIndexes	6.4.5.4.1	m	10 20	fddiSMT 32	Y[ ] N[ ]
SMA.21	fddiSMTMACIndexes	6.4.5.4.1	m	10 21	fddiSMT 33	Y[ ] N[ ]
SMA.22	fddiSMTBypassPresent	6.4.5.4.1	m	10 22	fddiSMT 34	Y[ ] N[ ]
SMA.23	fddiSMTStatusGrp	6.4.5.4.1	m	10 28	fddiSMT 40	Y[ ] N[ ]
SMA.24	fddiSMTECMState	6.4.5.4.1	m	10 29	fddiSMT 41	Y[ ] N[ ]
SMA.25	fddiSMTCF-State	6.4.5.4.1	m	10 2A	fddiSMT 42	Y[ ] N[ ]
SMA.26	fddiSMTHoldState	6.4.5.4.1	o	10 2B	fddiSMT 43	Y[ ] N[ ]
SMA.27	fddiSMTRemote-DisconnectFlag	6.4.5.4.1	m	10 2C	fddiSMT 44	Y[ ] N[ ]
SMA.28	fddiSMTStationStatus	6.4.5.4.1	m	10 2D	fddiSMT 45	Y[ ] N[ ]
SMA.29	fddiSMTPeerWrapFlag	6.4.5.4.1	m	10 2E	fddiSMT 46	Y[ ] N[ ]
SMA.30	fddiSMTMIBOperationGrp	6.4.5.4.1	m	10 32	fddiSMT 50	Y[ ] N[ ]
SMA.31	fddiSMTTimeStamp	6.4.5.4.1	m	10 33	fddiSMT 51	Y[ ] N[ ]
SMA.32	fddiSMTTransition-TimeStamp	6.4.5.4.1	m	10 34	fddiSMT 52	Y[ ] N[ ]
SMA.33	fddiSMTSetCount	6.4.5.4.1	o.1	10 35	fddiSMT 53	Y[ ] N[ ]
SMA.34	fddiSMTLastSet-StationId	6.4.5.4.1	o.1	10 36	fddiSMT 54	Y[ ] N[ ]
SMA.35	fddiSMTVendorAttrib	6.4.5.4.1	o	10 FF	fddiSMT 255	Y[ ] N[ ]

o.1 fddiSMT parameter management package is implemented.

5.4.2.2 MAC attributes

Item #	Item name	Ref #	Status	Para Type	Reg	Support
MAC.1	fddiMACCapabilitiesGrp	6.4.5.3.2	c1	20 0A	fddiMAC 10	Y[ ] N[ ]
MAC.2	fddiMACFrameStatusFunctions	6.4.5.4.2	c1	20 0B	fddiMAC 11	Y[ ] N[ ]
MAC.3	fddiMACBridgeFunctions	6.4.5.4.2	o.4	20 0C	fddiMAC 13	Y[ ] N[ ]
MAC.4	fddiMACT-MaxCapability	6.4.5.4.2	c1	20 0D	fddiMAC 14	Y[ ] N[ ]
MAC.5	fddiMACTVXCapability	6.4.5.4.2	c1	20 0E	fddiMAC 15	Y[ ] N[ ]
MAC.6	fddiMACConfigGrp	6.4.5.3.2	m	20 14	fddiMAC 20	Y[ ] N[ ]
MAC.7	fddiMACAvailablePaths	6.4.5.4.2	c1	20 16	fddiMAC 22	Y[ ] N[ ]
MAC.8	fddiMACCurrentPath	6.4.5.4.2	c1	20 17	fddiMAC 23	Y[ ] N[ ]
MAC.9	fddiMACUpstreamNbr	6.4.5.4.2	c1	20 18	fddiMAC 24	Y[ ] N[ ]
MAC.10	fddiMACDownstreamNbr	6.4.5.4.2	c1	20 19	fddiMAC 25	Y[ ] N[ ]
MAC.11	fddiMACOldUpstreamNbr	6.4.5.4.2	c1	20 1A	fddiMAC 26	Y[ ] N[ ]
MAC.12	fddiMACOldDownstreamNbr	6.4.5.4.2	c1	20 1B	fddiMAC 27	Y[ ] N[ ]
MAC.13	fddiMACDupAddressTest	6.4.5.4.2	c1	20 1D	fddiMAC 29	Y[ ] N[ ]
MAC.14	fddiMACRequestedPaths	6.4.5.4.2	m	20 20	fddiMAC 32	Y[ ] N[ ]
MAC.15	fddiMACDownstreamPORT-Type	6.4.5.4.2	c1	20 21	fddiMAC 33	Y[ ] N[ ]
MAC.16	fddiMACIndex	6.4.5.4.2	m	20 22	fddiMAC 34	Y[ ] N[ ]
MAC.17	fddiMACAddressGrp	6.4.5.3.2	c1	20 28	fddiMAC 40	Y[ ] N[ ]
MAC.18	fddiMACSMTAddress	6.4.5.4.2	c1	20 29	fddiMAC 41	Y[ ] N[ ]
MAC.19	fddiMACLongGrpAddress	6.4.5.4.2	o.4	20 2C	fddiMAC 44	Y[ ] N[ ]
MAC.20	fddiMACShortGrpAddress	6.4.5.4.2	o.4	20 2D	fddiMAC 45	Y[ ] N[ ]
MAC.21	fddiMACOperationGrp	6.4.5.3.2	c1	20 32	fddiMAC 50	Y[ ] N[ ]
MAC.22	fddiMACT-Req	6.4.5.4.2	c1	20 33	fddiMAC 51	Y[ ] N[ ]
MAC.23	fddiMACT-Neg	6.4.5.4.2	c1	20 34	fddiMAC 52	Y[ ] N[ ]
MAC.24	fddiMACT-Max	6.4.5.4.2	c1	20 35	fddiMAC 53	Y[ ] N[ ]

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

Item #	Item name	Ref #	Status	Para Type	Reg	Support
MAC.25	fddiMACTvxValue	6.4.5.4.2	c1	20 36	fddiMAC 54	Y[ ] N[ ]
MAC.26	fddiMACT-Pri0	6.4.5.4.2	o.3	20 38	fddiMAC 56	Y[ ] N[ ]
MAC.27	fddiMACT-Pri1	6.4.5.4.2	o.3	20 39	fddiMAC 57	Y[ ] N[ ]
MAC.28	fddiMACT-Pri2	6.4.5.4.2	o.3	20 3A	fddiMAC 58	Y[ ] N[ ]
MAC.29	fddiMACT-Pri3	6.4.5.4.2	o.3	20 3B	fddiMAC 59	Y[ ] N[ ]
MAC.30	fddiMACT-Pri4	6.4.5.4.2	o.3	20 3C	fddiMAC 60	Y[ ] N[ ]
MAC.31	fddiMACT-Pri5	6.4.5.4.2	o.3	20 3D	fddiMAC 61	Y[ ] N[ ]
MAC.32	fddiMACT-Pri6	6.4.5.4.2	o.3	20 3E	fddiMAC 62	Y[ ] N[ ]
MAC.33	fddiMACCountersGrp	6.4.5.3.2	c1	20 46	fddiMAC 70	Y[ ] N[ ]
MAC.34	fddiMACFrame-Ct	6.4.5.4.2	c1	20 47	fddiMAC 71	Y[ ] N[ ]
MAC.35	fddiMACCopied-Ct	6.4.5.4.2	c1	20 48	fddiMAC 72	Y[ ] N[ ]
MAC.36	fddiMACTransmit-Ct	6.4.5.4.2	c1	20 49	fddiMAC 73	Y[ ] N[ ]
MAC.37	fddiMACToken-Ct	6.4.5.4.2	o.4	20 4A	fddiMAC 74	Y[ ] N[ ]
MAC.38	fddiMACError-Ct	6.4.5.4.2	c1	20 51	fddiMAC 81	Y[ ] N[ ]
MAC.39	fddiMACLost-Ct	6.4.5.4.2	c1	20 52	fddiMAC 82	Y[ ] N[ ]
MAC.40	fddiMACTvxExpired-Ct	6.4.5.4.2	o.4	20 53	fddiMAC 83	Y[ ] N[ ]
MAC.41	fddiMACNotCopied-Ct	6.4.5.4.2	o.1	20 54	fddiMAC 84	Y[ ] N[ ]
MAC.42	fddiMACLate-Ct	6.4.5.4.2	o.4	20 55	fddiMAC 85	Y[ ] N[ ]
MAC.43	fddiMACRingOp-Ct	6.4.5.4.2	o.4	20 56	fddiMAC 86	Y[ ] N[ ]
MAC.44	fddiMACFrameErrorCondition-Grp	6.4.5.3.2	m	20 5A	fddiMAC 90	Y[ ] N[ ]
MAC.45	fddiMACFrameErrorThreshold	6.4.5.4.2	m	20 5F	fddiMAC 95	Y[ ] N[ ]
MAC.46	fddiMACFrameErrorRatio	6.4.5.4.2	o.2	20 60	fddiMAC 96	Y[ ] N[ ]
MAC.47	fddiMACNotCopiedCondition-Grp	6.4.5.3.2	o.2	20 64	fddiMAC 100	Y[ ] N[ ]
MAC.48	fddiMACNotCopiedThreshold	6.4.5.4.2	o	20 67	fddiMAC 103	Y[ ] N[ ]
MAC.49	fddiMACNotCopiedRatio	6.4.5.4.2	o.1	20 69	fddiMAC 105	Y[ ] N[ ]
MAC.50	fddiMACStatusGrp	6.4.5.3.2	m	20 6E	fddiMAC 110	Y[ ] N[ ]
MAC.51	fddiMACRMTState	6.4.5.4.2	c1	20 6F	fddiMAC 111	Y[ ] N[ ]
MAC.52	fddiMACDA-Flag	6.4.5.4.2	c1	20 70	fddiMAC 112	Y[ ] N[ ]
MAC.53	fddiMACUNDA-Flag	6.4.5.4.2	c1	20 71	fddiMAC 113	Y[ ] N[ ]
MAC.54	fddiMACFrameErrorFlag	6.4.5.4.2	c1	20 72	fddiMAC 114	Y[ ] N[ ]
MAC.55	fddiMACNotCopiedFlag	6.4.5.4.2	o.1	20 73	fddiMAC 115	Y[ ] N[ ]
MAC.56	fddiMACMA-UnitdataAvailable	6.4.5.4.2	c1	20 74	fddiMAC 116	Y[ ] N[ ]
MAC.57	fddiMACHardwarePresent	6.4.5.4.2	m	20 75	fddiMAC 117	Y[ ] N[ ]
MAC.58	fddiMACMA-UnitdataEnable	6.4.5.4.2	m	20 76	fddiMAC 118	Y[ ] N[ ]
MAC.59	fddiMACVendorAttrib	6.4.5.4.2	"o"	20 FF	fddiMAC 255	Y[ ] N[ ]

o.1 Optional, if FameNotCopied package is implemented and hardware is present.

c 1 Mandatory, if hardware to support this attribute is present.

o.2 Optional, if FrameNotCopied management package is implemented.

o.3 Optional, if priority threshold package is implemented.

o.4 Optional, but present only when hardware is present.

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.2.3 PATH attributes

Item #	Item name	Ref #	Status	Para Type	Reg	Support
PAT.1	fddiConfigGrp	6.4.5.3.3	m	32 0A	fddiPATH 10	Y[ ] N[ ]
PAT.2	fddiPATHIndex	6.4.5.4.3	m	32 0B	fddiPATH 11	Y[ ] N[ ]
PAT.3	fddiPATHRingLatency	6.4.5.4.3	o	32 0D	fddiPATH 13	Y[ ] N[ ]
PAT.4	fddiPATHTraceStatus	6.4.5.4.3	o	32 0E	fddiPATH 14	Y[ ] N[ ]
PAT.5	fddiPATHSbaPayload	6.4.5.4.3	o.1	32 0F	fddiPATH 15	Y[ ] N[ ]
PAT.6	fddiPATHSbaOverhead	6.4.5.4.3	o.1	32 10	fddiPATH 16	Y[ ] N[ ]
PAT.7	fddiPATHConfiguration	6.4.5.4.3	m	32 12	fddiPATH 18	Y[ ] N[ ]
PAT.8	fddiPATHT-Rmode	6.4.5.4.3	o	32 13	fddiPATH 19	Y[ ] N[ ]
PAT.9	fddiPATHSbaAvailable	6.4.5.4.3	o	32 14	fddiPATH 20	Y[ ] N[ ]
PAT.10	fddiPATHTVXLowerBound	6.4.5.4.3	m	32 15	fddiPATH 21	Y[ ] N[ ]
PAT.11	fddiPATHT-MaxLowerBound	6.4.5.4.3	m	32 16	fddiPATH 22	Y[ ] N[ ]
PAT.12	fddiPATHMaxT-Req	6.4.5.4.3	m	32 17	fddiPATH 23	Y[ ] N[ ]
PAT.13	fddiPATHVendorAttrib	6.4.5.4.3	o	32 FF	fddiPATH 255	Y[ ] N[ ]

o.1 optional, if syncbevreq package is implemented.

5.4.2.4 PORT attributes

Item #	Item name	Ref #	Status	Para Type	Reg	Support
POR.1	fddiPORTConfigGrp	6.4.5.3.4	m	40 0A	fddiPORT 10	Y[ ] N[ ]
POR.2	fddiPORTMy-Type	6.4.5.4.4	m	40 0C	fddiPORT 12	Y[ ] N[ ]
POR.3	fddiPORTNeighbourType	6.4.5.4.4	c1	40 0D	fddiPORT 13	Y[ ] N[ ]
POR.4	fddiPORTConnection-Policies	6.4.5.4.4	m	40 0E	fddiPORT 14	Y[ ] N[ ]
POR.5	fddiPORTMACIndicated	6.4.5.4.4	c1	40 0F	fddiPORT 15	Y[ ] N[ ]
POR.6	fddiPORTCurrentPath	6.4.5.4.4	c1	40 10	fddiPORT 16	Y[ ] N[ ]
POR.7	fddiPORTRequestedPaths	6.4.5.4.4	m	40 11	fddiPORT 17	Y[ ] N[ ]
POR.8	fddiPORTMACPlacement	6.4.5.4.4	c1	40 12	fddiPORT 18	Y[ ] N[ ]
POR.9	fddiPORTAvailablePaths	6.4.5.4.4	c1	40 13	fddiPORT 19	Y[ ] N[ ]
POR.10	fddiPORTMACLoop-Time	6.4.5.4.4	o	40 15	fddiPORT 21	Y[ ] N[ ]
POR.11	fddiPORTPMDClass	6.4.5.4.4	c1	40 16	fddiPORT 22	Y[ ] N[ ]
POR.12	fddiPORTConnection-Capabilities	6.4.5.4.4	c1	40 17	fddiPORT 23	Y[ ] N[ ]
POR.13	fddiPORTIndex	6.4.5.4.4	m	40 1D	fddiPORT 29	Y[ ] N[ ]
POR.14	fddiPORTOperationGrp	6.4.5.3.4	c1	40 1E	fddiPORT 30	Y[ ] N[ ]
POR.15	fddiPORTMaint-LS	6.4.5.4.4	o	40 1F	fddiPORT 31	Y[ ] N[ ]
POR.16	fddiPORTBS-Flag	6.4.5.4.4	c1	40 21	fddiPORT 33	Y[ ] N[ ]
POR.17	fddiPORTPC-LS	6.4.5.4.4	o.1	40 22	fddiPORT 34	Y[ ] N[ ]
POR.18	fddiPORTErrorCtrsGrp	6.4.5.3.4	c1	40 28	fddiPORT 40	Y[ ] N[ ]
POR.19	fddiPORTEBError-Ct	6.4.5.4.4	o.1	40 29	fddiPORT 41	Y[ ] N[ ]
POR.20	fddiPORTLCTFail-Ct	6.4.5.4.4	c1	40 2A	fddiPORT 42	Y[ ] N[ ]
POR.21	fddiPORTLerGrp	6.4.5.3.4	m	40 32	fddiPORT 50	Y[ ] N[ ]
POR.22	fddiPORTLer-Estimate	6.4.5.4.4	c1	40 33	fddiPORT 51	Y[ ] N[ ]
POR.23	fddiPORTLem-Reject-Ct	6.4.5.4.4	c1	40 34	fddiPORT 52	Y[ ] N[ ]
POR.24	fddiPORTLem-Ct	6.4.5.4.4	c1	40 35	fddiPORT 53	Y[ ] N[ ]
POR.25	fddiPORTLer-Cutoff	6.4.5.4.4	m	40 3A	fddiPORT 58	Y[ ] N[ ]
POR.26	fddiPORTLer-Alarm	6.4.5.4.4	m	40 3B	fddiPORT 59	Y[ ] N[ ]
POR.27	fddiPORTStatusGrp	6.4.5.3.4	m	40 3C	fddiPORT 60	Y[ ] N[ ]
POR.28	fddiPORTConnectState	6.4.5.4.4	c1	40 3D	fddiPORT 61	Y[ ] N[ ]
POR.29	fddiPORTPCMState	6.4.5.4.4	c1	40 3E	fddiPORT 62	Y[ ] N[ ]
POR.30	fddiPORTPC-Withhold	6.4.5.4.4	c1	40 3F	fddiPORT 63	Y[ ] N[ ]
POR.31	fddiPORTLerFlag	6.4.5.4.4	c1	40 40	fddiPORT 64	Y[ ] N[ ]
POR.32	fddiPORTHardwarePresent	6.4.5.4.4	m	40 41	fddiPORT 65	Y[ ] N[ ]
POR.33	fddiPORTVendorAttrib	6.4.5.4.4	o	40 FF	fddiPORT 255	Y[ ] N[ ]

o.1 Optional, but present only when hardware is present.
c1 Mandatory if hardware to support this attribute is present.

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.2.5 Actions

Item #	Item name	Ref #	Status	Para Type	Reg	Support
ACT.1	fddiSMTStationAction	6.4.5.5.1	m	10 3C	fddiSMT 60	Y[ ] N[ ]
ACT.2	fddiSMTVendorAction	6.4.5.5.1	o	10 FE	fddiSMT 254	Y[ ] N[ ]
ACT.3	fddiMACVendorAction	6.4.5.5.2	o	20 FE	fddiMAC 254	Y[ ] N[ ]
ACT.4	fddiPATHVendorAction	6.4.5.5.3	o	32 FE	fddiPATH 254	Y[ ] N[ ]
ACT.5	fddiPORTActions	6.4.5.5.4	m	40 46	fddiPORT 70	Y[ ] N[ ]
ACT.6	fddiPORTVendorAction	6.4.5.5.4	o	40 FE	fddiPORT 254	Y[ ] N[ ]

5.4.2.6 Notifications

Item #	Item name	Ref #	Status	Para Type	Reg	Support
NOT.1	fddiSMTHoldCondition	6.4.5.6.1	o	10 47	fddiSMT 71	Y[ ] N[ ]
NOT.2	fddiSMTPeerWrapCondition	6.4.5.6.1	m	10 48	fddiSMT 72	Y[ ] N[ ]
NOT.3	fddiSMTVendorNotification	6.4.5.6.1	o	10 FC	fddiSMT 252	Y[ ] N[ ]
NOT.4	fddiMACDuplicateAddress-Condition	6.4.5.6.2	m	20 8C	fddiMAC 140	Y[ ] N[ ]
NOT.5	fddiMACFrameErrorCondition	6.4.5.6.2	m	20 8D	fddiMAC 141	Y[ ] N[ ]
NOT.6	fddiMACNotCopiedCondition	6.4.5.6.2	o	20 8E	fddiMAC 142	Y[ ] N[ ]
NOT.7	fddiMACNeighbourChange-Event	6.4.5.6.2	m	20 8F	fddiMAC 143	Y[ ] N[ ]
NOT.8	fddiMACPathChangeEvent	6.4.5.6.2	m	20 90	fddiMAC 144	Y[ ] N[ ]
NOT.9	fddiMACVendorNotification	6.4.5.6.2	o	20 FC	fddiMAC 252	Y[ ] N[ ]
NOT.10	fddiPATHVendorNotification	6.4.5.6.3	o	32 FC	fddiPATH 252	Y[ ] N[ ]
NOT.11	fddiPORTLerCondition	6.4.5.6.4	m	40 50	fddiPORT 80	Y[ ] N[ ]
NOT.12	fddiPORTUndesired-ConnectionAttemptEvent	6.4.5.6.4	m	40 51	fddiPORT 81	Y[ ] N[ ]
NOT.13	fddiPORTEBErrorCondition	6.4.5.6.4	o	40 52	fddiPORT 82	Y[ ] N[ ]
NOT.14	fddiPORTPathChangeEvent	6.4.5.6.4	m	40 53	fddiPORT 83	Y[ ] N[ ]
NOT.15	fddiPORTVendorNotification	6.4.5.6.4	o	40 FC	fddiPORT 252	Y[ ] N[ ]

5.4.3 SMT frames and frame parameters

5.4.3.1 Neighbour information frame (NIF)

Item #	Item name	Ref	Send		Receive	
			Status	Support	Status	Report
NIF.1	NIF Announcment	7.2.1.1	o	Y[ ] N[ ]	m	Y[ ] N[ ]
NIF.2	NIF Request	7.2.1.2	m	Y[ ] N[ ]	m	Y[ ] N[ ]
NIF.3	NIF Response	7.2.1.3	m	Y[ ] N[ ]	m	Y[ ] N[ ]

NOTE – For NIF.2 station is required to transmit a NIF Request frame with an FC = NSA to the broadcast address nominally every T_Notify.

5.4.3.1.1 NIF announcement parameters (Optional)

Item #	Item name	Ref #	Status	Para Type	Support
NIA.1	Upstream Neighbour Address	7.2.1.1	m	X'00 01'	Y[ ] N[ ]
NIA.2	Station Descriptor	7.2.1.1	m	X'00 02'	Y[ ] N[ ]
NIA.3	Station State	7.2.1.1	m	X'00 03'	Y[ ] N[ ]
NIA.4	fddiMACframeStatusFunctions	7.2.1.1	m	X'20 0B'	Y[ ] N[ ]

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.3.1.2 NIF request parameters

Item #	Item name	Ref #	Status	Para Type	Support
NIB.1	Upstream Neighbour Address	7.2.1.2	m	X'00 01'	Y[ ] N[ ]
NIB.2	Station Descriptor	7.2.1.2	m	X'00 02'	Y[ ] N[ ]
NIB.3	Station State	7.2.1.2	m	X'00 03'	Y[ ] N[ ]
NIB.4	fddiMACFrameStatusFunctions	7.2.1.2	m	X'20 0B'	Y[ ] N[ ]

NOTE – Additional Parameters (e.g. vendor specific) shall be processed by the station.

5.4.3.1.3 NIF response parameters

Item #	Item name	Ref #	Status	Para Type	Support
NIC.1	Upstream Neighbour Address	7.2.1.2	m	X'00 01'	Y[ ] N[ ]
NIC.2	Station Descriptor	7.2.1.2	m	X'00 02'	Y[ ] N[ ]
NIC.3	Station State	7.2.1.2	m	X'00 03'	Y[ ] N[ ]
NIC.4	fddiMACFrameStatusFunctions	7.2.1.2	m	X'20 0B'	Y[ ] N[ ]

5.4.3.2 Status information frame (SIF)

Item #	Item name	Ref #	Status		
			Tx	Rx	Support
SIF.1	SIF Conf. Request	7.2.2.1	o	m	Y[ ] N[ ]
SIF.2	SIF Conf. Response	7.2.2.2	m	o	Y[ ] N[ ]
SIF.3	SIF Oper. Request	7.2.2.3	o	m	Y[ ] N[ ]
SIF.4	SIF Oper. Response	7.2.2.4	m	o	Y[ ] N[ ]

5.4.3.2.1 SIF configuration frame

Item #	Item name	Ref #	Status	Para Type	Support
SIA.1	MsgTimeStamp	7.2.2.2	m	X'00 04'	Y[ ] N[ ]
SIA.2	Station Descriptor	7.2.2.2	m	X'00 02'	Y[ ] N[ ]
SIA.3	SMT Supported Versions	7.2.2.2	m	X'00 14'	Y[ ] N[ ]
SIA.4	Station State	7.2.2.2	m	X'00 03'	Y[ ] N[ ]
SIA.5	Station Policies	7.2.2.2	m	X'00 05'	Y[ ] N[ ]
SIA.6	Path Latency Contribution/Ring	7.2.2.2	o	X'00 06'	Y[ ] N[ ]
SIA.7	MAC Neighbours	7.2.2.2	m	X'00 07'	Y[ ] N[ ]
SIA.8	Path Descriptor	7.2.2.2	m	X'00 08'	Y[ ] N[ ]
SIA.9	SetCount	7.2.2.2	c1	X'10 35'	Y[ ] N[ ]

c1 Optional, but mandatory if Parameter Management PMF Set is supported (fddiSMTSetCount)

5.4.3.2.2 SIF operation frame

Item #	Item name	Ref #	Status	Para Type	Support
SIB.1	MsgTimeStamp	7.2.2.4	m	X'00 04'	Y[ ] N[ ]
SIB.2	MAC Status	7.2.2.4	m	X'00 09'	Y[ ] N[ ]
SIB.3	PORT LEM Status	7.2.2.4	m	X'00 0A'	Y[ ] N[ ]
SIB.4	MAC Frame Counters	7.2.2.4	m	X'00 0B'	Y[ ] N[ ]
SIB.5	MAC Frame Not Copied Count	7.2.2.4	o	X'00 0C'	Y[ ] N[ ]
SIB.6	MAC Priority Values	7.2.2.4	o	X'00 0D'	Y[ ] N[ ]
SIB.7	PORT EB Status	7.2.2.4	o	X'00 0E'	Y[ ] N[ ]
SIB.8	Manufacturer Field	7.2.2.4	o	X'00 0F'	Y[ ] N[ ]
SIB.9	User Field	7.2.2.4	c1	X'00 10'	Y[ ] N[ ]
SIB.10	SetCount	7.2.2.4	c1	X'10 35'	Y[ ] N[ ]

c1 Optional, but mandatory if Parameter Management PMF Set is supported.(fddiSMTSetCount)

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.3.3 ECHO frame (ECF)

Item #	Item name	Ref	Send		Receive	
			Status	Support	Status	Support
ECF.1	ECHO Request	7.2.3.1	o	Y[ ] N[ ]	m	Y[ ] N[ ]
ECF.2	ECHO Response	7.2.3.2	m	Y[ ] N[ ]	c1	Y[ ] N[ ]

c1 if ECF.1 {send} then the recipient of an ECHO Request frame is required to respond with an ECHO Response frame. Otherwise NA.

5.4.3.4 Resource allocation frame (RAF)

Item #	Item name	Ref	Send		Receive	
			Status	Support	Status	Support
RAF.1	SBA Request Frame	7.2.4.1	o	Y[ ] N[ ]	c1	Y[ ] N[ ]
RAF.2	SBA Response Frame	7.2.4.2	c1	Y[ ] N[ ]	c2	Y[ ] N[ ]

c1 if RAF.1 {send} then {receive}=m else skip to 5.4.2.5

c2 if RAF.1 {send} then o else skip to 5.4.3.5

NOTE – If the SMT MIB supports synchronous bandwidth package, then the RAF is mandatory, else N/A.

5.4.3.4.1 SBA resource allocation request parameters (Optional)

Item #	Item name	Ref #	Status	Para Type	Support
RAA.1	Resource Type	7.2.4.1	o	X'00 15'	Y[ ] N[ ]
RAA.2	SBA Command	7.2.4.1	c1	X'00 16'	Y[ ] N[ ]

c1 if RAA.1 then RAA.2 else N/A

5.4.3.4.1.1 Request allocation parameters for the SBA resource allocation request parameter SBA command

Item #	Item name	Ref #	Status	Para Type	Support
SBA.1	Path_Type	7.2.4.1	m	X'32 0B'	Y[ ] N[ ]
SBA.2	SBA Payload Request	7.2.4.1	m	X'00 17'	Y[ ] N[ ]
SBA.3	SBA Overload Request	7.2.4.1	m	X'00 18'	Y[ ] N[ ]
SBA.4	Current SBA Payload for this Path	7.2.4.1	m	X'32 0F'	Y[ ] N[ ]
SBA.5	Current SBA Overhead for this Path	7.2.4.1	m	X'32 10'	Y[ ] N[ ]
SBA.6	Allocation Address	7.2.4.1	m	X'00 19'	Y[ ] N[ ]
SBA.7	Category	7.2.4.1	m	X'00 1A'	Y[ ] N[ ]
SBA.8	Max T_neg	7.2.4.1	m	X'00'1B'	Y[ ] N[ ]
SBA.9	Min Segment	7.2.4.1	m	X'00'1C'	Y[ ] N[ ]

5.4.3.4.1.2 Change allocation parameters for the SBA resource allocation request parameter SBA command

Item #	Item name	Ref #	Status	Para Type	Support
SBB.1	PATH Type	7.2.4.1	m	X'32 0B'	Y[ ] N[ ]
SBB.2	New Current SBA Payload for this PATH	7.2.4.1	m	X'32 0F	Y[ ] N[ ]
SBB.3	New Current SBA Overhead for this PATH	7.2.4.1	m	X'32 10'	Y[ ] N[ ]
SBB.4	Category	7.2.4.1	m	X'00 1A'	Y[ ] N[ ]

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.3.4.2 SBA resource allocation response parameters

Item #	Item name	Ref #	Status	Para Type	Support
RAB.1	Resource Type	7.2.4.2	o	X'00 15'	Y[ ] N[ ]
RAB.2	SBA Command	7.2.4.2	c1	X'00 16'	Y[ ] N[ ]

c1 If RAB.1 then RAB.2 else N/A

5.4.3.4.2.1 Request allocation parameters for the SBA resource allocation response parameter SBA command

Item #	Item name	Ref #	Status	Para Type	Support
SBC.1	Reason Code	7.2.4.2	m	X'00 12'	Y[ ] N[ ]
SBC.2	PATH_Type	7.2.4.2	m	X'32 0B'	Y[ ] N[ ]
SBC.3	Current SBA Payload for this Path	7.2.4.2	m	X'32 0F'	Y[ ] N[ ]
SBC.4	Current SBA Overload for this Path	7.2.4.2	m	X'32 10'	Y[ ] N[ ]
SBC.5	Allocation Address	7.2.4.2	m	X'00 19'	Y[ ] N[ ]
SBC.6	Category	7.2.4.2	m	X'00 1A'	Y[ ] N[ ]
SBC.7	SBA Allocatable	7.2.4.2	m	X'00 1D'	Y[ ] N[ ]

5.4.3.4.2.2 Report allocation parameters for the SBA resource allocation response parameter SBA command

Item #	Item name	Ref #	Status	Para Type	Support
SBD.1	PATH_Type-Primary Path	7.2.4.2	m	X'32 0B'	Y[ ] N[ ]
SBD.2	Current SBA Payload for the Primary Path	7.2.4.2	m	X'32 0F'	Y[ ] N[ ]
SBD.3	Current SBA Overhead for the Primary Path	7.2.4.2	m	X'32 10'	Y[ ] N[ ]
SBD.4	Path_Type-Secondary Path	7.2.4.2	o	X'32 0B'	Y[ ] N[ ]
SBD.5	Current SBA Payload for the Secondary Path	7.2.4.2	c1	X'32'0F'	Y[ ] N[ ]
SBD.6	Current SBA Overhead for the Secondary Path	7.2.4.2	c1	X'32 10'	Y[ ] N[ ]

c1 If SBD.4 then m

5.4.3.4.2.3 Change allocation parameters for the SBA resource allocation response parameter SBA command

Item #	Item name	Ref #	Status	Para Type	Support
SBE.1	PATH Type-Primary PATH	7.2.4.2	m	X'32 0B'	Y[ ] N[ ]
SBE.2	Current SBA Payload	7.2.4.2	m	X'32 0F'	Y[ ] N[ ]
SBE.3	Current SBA Overhead	7.2.4.2	m	X'32 10'	Y[ ] N[ ]
SBE.4	Category (from the request)	7.2.4.2	m	X'00 1A'	Y[ ] N[ ]
SBE.5	PATH Type-Secondary PATH	7.2.4.2	o	X'32'0B'	Y[ ] N[ ]
SBE.6	Current SBA Payload	7.2.4.2	c1	X'32'0F'	Y[ ] N[ ]
SBE.7	Current SBA Overhead	7.2.4.2	c1	X'32'10'	Y[ ] N[ ]
SBE.8	Category of the allocation for the change	7.2.4.2	m	X'00'1A'	Y[ ] N[ ]

c1 If SBE.5 then m

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.3.5 Request denied frame (RDF)

Item #	Item name	Ref #	Status	Support
RDF.1	RDF Response	7.2.5	c1	Y[ ] N[ ]

c1 Transmitting RDF is mandatory for "Frame Class not supported" and "Frame Version not supported" and is optional for "Length Error". Reception is optional.

5.4.3.5.1 RDF parameters

Item #	Item name	Ref #	Status	Para Type	Support
RDA.1	Reason Code	7.2.5	m	X'00 12'	Y[ ] N[ ]
RDA.2	SMT Supported Versions	7.2.5	c1	X'00 14'	Y[ ] N[ ]
RDA.3	Reject Frame Beginning	7.2.5	c2	X'00 13'	Y[ ] N[ ]

c1 If reason code = "Frame Version Not Supported" then m. Shall pad at end if there are an odd number of versions

c2 If reason code = "Frame Version Not Supported" then m. Shall be truncated, to fit in a maximum length SMT Frame or to assure that the SMT_Parameter is a multiple of four bytes in length.

5.4.3.6 Extended service frame (ESF)

Item #	Item name	Ref	Send		Receive	
			Status	Support	Status	Report
ESF.1	ESF Announcement	7.2.6	o	Y[ ] N[ ]	o	Y[ ] N[ ]
ESF.2	ESF Request	7.2.6	o	Y[ ] N[ ]	o	Y[ ] N[ ]
ESF.3	ESF Response	7.2.6	o	Y[ ] N[ ]	o	Y[ ] N[ ]

5.4.3.6.1 ESF annoucement parameters

Item #	Item name	Ref #	Status	Para Type	Support
ESA.1	ESF ID	7.2.6	m	X'FF FF'	Y[ ] N[ ]
ESA.2	Additional Parameter	7.2.6	c1	X'xx xx'	Y[ ] N[ ]

c1 Specified by the owner of ESF ID.

5.4.3.6.2 ESF request parameters

Item #	Item name	Ref #	Status	Para Type	Support
ESB.1	ESF ID	7.2.6	m	X'FF FF'	Y[ ] N[ ]
ESB.2	Additional Parameter	7.2.6	c1	X'xx xx'	Y[ ] N[ ]

c1 Specified by the owner of ESF ID.

5.4.3.6.3 ESF response parameters

Item #	Item name	Ref #	Status	Para Type	Support
ESC.1	ESF ID	7.2.6	m	X'FF FF'	Y[ ] N[ ]
ESC.2	Additional Parameter	7.2.6	c1	X'xx xx'	Y[ ] N[ ]

c1 Specified by the owner of ESF ID.

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.3.7 Parameter management frame (PMF)

NOTE – All stations shall implement the PMF GET Response Frame. Stations may optionally implement PMF GET/SET Request and PMF SET Response.

5.4.3.7.1 PMF frame class

Item #	Item name	Ref	Status	Support
PMF.1	PMF Get Request	7.2.8.1	o	Y[ ] N[ ]
PMF.2	PMF Get Response	7.2.8.1	m	Y[ ] N[ ]
PMF.3	PMF Set Request	7.2.8.1	o	Y[ ] N[ ]
PMF.4	PMF Set Response	7.2.8.1	o	Y[ ] N[ ]

5.4.3.7.2 PMF get request parameters

Item #	Item name	Ref #	Status	Para Type	Support
PMA.1	Request Parameter (attribute)	7.2.8.1	m	X'xx xx'	Y[ ] N[ ]

5.4.3.7.3 PMF get response parameters

Item #	Item name	Ref #	Status	Para Type	Support
PMB.1	Reason Code	7.2.8.2	m	X'00 12'	Y[ ] N[ ]
PMB.2	Msg Time Stamp	7.2.8.2	m	X'10 33'	Y[ ] N[ ]
PMB.3	Set Count	7.2.8.2	c1	X'10 35'	Y[ ] N[ ]
PMB.4	Last Set Station ID	7.2.8.2	c1	X'10 36'	Y[ ] N[ ]
PMB.5	Requested SMT Parameter	7.2.8.2	c2	X'xx xx'	Y[ ] N[ ]

c1 Available only if the parameter management frame package is available in the MIB.

c2 if (Reason code <> success), then some or all requested SMT parameters may be omitted.

5.4.3.7.4 PMF set request parameters

Item #	Item name	Ref #	Status	Para Type	Support
PMC.1	Authorization	7.2.8.3	o	X'00 21'	Y[ ] N[ ]
PMC.2	Set Count	7.2.8.3	o	X'10 35'	Y[ ] N[ ]
PMC.3	Target Parameter (attribute)	7.2.8.3	m	X'xx xx'	Y[ ] N[ ]

5.4.3.7.5 PMF set response parameters

Item #	Item name	Ref #	Status	Para Type	Support
PME.1	Reason Code	7.2.8.4	m	X'00 12'	Y[ ] N[ ]
PME.2	Msg Time Stamp	7.2.8.4	m	X'10 33'	Y[ ] N[ ]
PME.3	Set Count	7.2.8.4	m	X'10 35'	Y[ ] N[ ]
PME.4	Last Set Station ID	7.2.8.4	m	X'10 36'	Y[ ] N[ ]
PME.5	Requested Parameter (attribute)	7.2.8.4	c1	X'xx xx'	Y[ ] N[ ]

c1 if (PME.1 = (Success or BadSetCount)) then m else o

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.4 Frame based management

5.4.4.1 Frame processing

5.4.4.1.1 SMT header processing

Item #	Item name	Ref #	Status	Support
SHP.1	Unsupported Frame Class	8.1.3.1.1	m	Y[ ] N[ ]
SHP.2	Unsupported Frame Type	8.1.3.1.2	m	Y[ ] N[ ]
SHP.3	Unsupported Version ID	8.1.3.1.3	m	Y[ ] N[ ]
SHP.4	Invalid InfoField Length	8.1.3.1.4	m	Y[ ] N[ ]

5.4.4.2 Neighbour notification

5.4.4.2.1 Variables

Item #	Item name	Ref #	Status	Support
NNA.1	UNA	8.2.2.1	m	Y[ ] N[ ]
NNA.2	Old UNA	8.2.2.1	m	Y[ ] N[ ]
NNA.3	DNA	8.2.2.1	m	Y[ ] N[ ]
NNA.4	Old DNA	8.2.2.1	m	Y[ ] N[ ]
NNA.5	Dup_Addr_Test	8.2.2.1	m	Y[ ] N[ ]
NNA.6	UNDA Flag	8.2.2.1	m	Y[ ] N[ ]
NNA.7	NN_Transaction_ID	8.2.2.1	m	Y[ ] N[ ]

NOTE – For NNA.5 the frame type and contents of a SMT Frame are the implementor's choice.

5.4.4.2.2 Timer expiration values

As far as a timer value meets the range specified in this enclosure, the determination of the timer expiration value is a local matter.

Item #	Item name	Ref #	STD Type/Range	Status	Support
TEV.1	TNN: T_Notify	8.2.2.3	2 s$\leq$ T_Notify $\leq$ 30 s	m	Y[ ] N[ ]
TEV.2	TVU and TVD: T_NN_Out	8.2.2.3	228 s	m	Y[ ] N[ ]

5.4.4.2.3 Signals

Item #	Item name	Ref #	Status	Support
NNB.1	TNN_expires	8.2.2.4	m	Y[ ] N[ ]
NNB.2	UNA_change	8.2.2.1	m	Y[ ] N[ ]
NNB.3	DNA_change	8.2.2.1	m	Y[ ] N[ ]

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.4.3 Status report protocol

5.4.4.3.1 SRF conditions

Item #	Item name	Ref #	Status	Support
SRG.1	Frame Error Condition	8.3.1.1	m	Y[ ] N[ ]
SRG.2	LER Condition	8.3.1.1	m	Y[ ] N[ ]
SRG.3	Duplicate Address Condition	8.3.1.1	m	Y[ ] N[ ]
SRG.4	Peer Wrap Condition	8.3.1.1	m	Y[ ] N[ ]
SRG.5	Hold Condition	8.3.1.1	m	Y[ ] N[ ]
SRG.6	NotCopied Condition	8.3.1.1	o	Y[ ] N[ ]
SRG.7	EB Error Condition	8.3.1.1	o	Y[ ] N[ ]
SRG.8	Vendor-Specific Condition	8.3.1.1	o	Y[ ] N[ ]

5.4.4.3.2 SRF events

Item #	Item name	Ref #	Status	Support
SRH.1	MAC Path Change	8.3.1.2	m	Y[ ] N[ ]
SRH.2	Port Path Change	8.3.1.2	m	Y[ ] N[ ]
SRH.3	MAC Neighbour	8.3.1.2	m	Y[ ] N[ ]
SRH.4	Undesirable Connection	8.3.1.2	m	Y[ ] N[ ]
SRH.5	Vendor Specific Events	8.3.1.2	o	Y[ ] N[ ]

5.4.4.3.3 SRF variables

Item #	Item name	Ref #	Status	Support
SRI.1	SRThreshold	8.3.2.1	m	Y[ ] N[ ]
SRI.2	RT_Flag	8.3.2.1	m	Y[ ] N[ ]
SRI.3	ReportRequired	8.3.2.1	m	Y[ ] N[ ]
SRI.4	MultipleOccurrence	8.3.2.1	m	Y[ ] N[ ]
SRI.5	ConditionState	8.3.2.1	m	Y[ ] N[ ]
SRI.6	SR Enable	8.3.2.1	m	Y[ ] N[ ]
SRI.7	TimeStamp	8.3.2.1	m	Y[ ] N[ ]
SRI.8	TransitionTimesStamp	8.3.1.1	m	Y[ ] N[ ]

5.4.4.3.4 SRF timer expiration value

Item #	Item name	Ref #	Status	Support
SRJ.1	TSR: T_Limit	8.3.2.3	m	Y[ ] N[ ]

5.4.4.3.5 SRF signals

Item #	Item name	Ref #	Status	Support
SRK.1	Condition_Asserted	8.3.2.4	m	Y[ ] N[ ]
SRK.2	Condition_Deasserted	8.3.2.4	m	Y[ ] N[ ]
SRK.3	Event_Occurred	8.3.2.4	m	Y[ ] N[ ]

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.4.4 Synchronous bandwidth allocation

Item #	Item name	Ref #	Status	Support
SBM.1	Allocation	8.7.2.1	c1	Y[ ] N[ ]
SBM.2	Monitoring	8.7.2.1	c1	Y[ ] N[ ]
SBM.3	Claim Process	8.7.2.1	c1	Y[ ] N[ ]
SBM.4	Recovery	8.7.2.1	c1	Y[ ] N[ ]

c1 Mandatory if Synchronous Bandwidth Allocation is implemented and optional if SBa. not supported.

5.4.5 Connection management (CMT)

5.4.5.1 Timer expirations

5.4.5.1.1 ECM timer expiration values

Item #	Item name	Ref #	STD Type/Range	Status	Support
TEC.1	I_Max	9.4.4.2.2	$\leq$ 25,0 ms	c1	Y[ ] N[ ]
TEC.2	IN_Max	9.4.4.2.2	$\geq$ 36,198 ms	c1	Y[ ] N[ ]
TEC.3	TD_Min	9.4.4.2.2	$\geq$ 3,025 ms	m	Y[ ] N[ ]
TEC.4	Trace_Max	9.4.4.2.2	$\geq$ 6,001773 s	m	Y[ ] N[ ]

c1 Mandatory when system supports optional Bypass switch fuction.

5.4.5.1.2 PCM timer expiration values

Item #	Item name	Ref #	STD Type/Range	Status	Support
TPC.1	C_Min	9.4.4.2.3	≥1,2 ms	m	Y[ ] N[ ]
TPC.2	TL_Min	9.4.4.2.3	≥50 µs	m	Y[ ] N[ ]
TPC.3	LS_Min	9.4.4.2.3	0,48 µs ≤LS_Min≤25 µs	m	Y[ ] N[ ]
TPC.4	TB_Min	9.4.4.2.3	≥4,823 ms	m	Y[ ] N[ ]
TPC.5	TB_Max	9.4.4.2.3	≥30,0 ms	m	Y[ ] N[ ]
TPC.6	T_Out	9.4.4.2.3	≥100 ms	m	Y[ ] N[ ]
TPC.7	NS_Max	9.4.4.2.3	0,7255 ms ≤NS_Max≤5,8 ms	m	Y[ ] N[ ]
TPC.8	LC_Short(T_Next)	9.4.4.2.3	≥50 ms	m	Y[ ] N[ ]
TPC.9	LC_Medium(T_Next)	9.4.4.2.3	≥500 ms	m	Y[ ] N[ ]
TPC.10	LC_Long(T_Next)	9.4.4.2.3	≥5,0 s	m	Y[ ] N[ ]
TPC.11	LC_Extended(T_Next)	9.4.4.2.3	≥50 s	m	Y[ ] N[ ]
TPC.12	T_Next(9)	9.4.4.2.3	≥200 ms (optional)	m	Y[ ] N[ ]

5.4.5.1.3 CFM timer expiration values

Item #	Item name	Ref #	STD Type/Range	Status	Support
TCF.1	T_Scrub	9.4.4.2.4	1,773 ms≤T_Scrub ≤7,092 ms	m	Y[ ] N[ ]

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.5.2 Link confidence test

Item #	Item name	Ref #	Status	Support
LCT.1	Transmitting Idle symbols and counting Link errors	9.4.6	m	Y[ ] N[ ]
LCT.2	Transmitting PDUs and counting Link errors	9.4.6	o.1	Y[ ] N[ ]
LCT.3	Transmitting PDUs and counting FCS errors	9.4.6	o.1	Y[ ] N[ ]
LCT.4	Loopback symbols received from the other end of the connection and counting Link errors on reception	9.4.6	o.1	Y[ ] N[ ]

NOTE – LCT.1 shall be performed as a minimum, but LCT.2, .3, or .4 may additionally or optionally be used.

5.4.5.3 Link error monitor (LEM)

5.4.5.3.1 Link error event detector

Item #	Item name	Ref #	Status	Support
LED.1	Transition from ILS to LSU with the duration of LSU exceeding two symbol times	9.4.7.2	m	Y[ ] N[ ]
LED.2	Transition from ALS to LSU with the duration of LSU exceeding eight symbol times	9.4.7.2	m	Y[ ] N[ ]
LED.3	Transition from ALS to LSU provided the transition is not caused by a HALT symbol	9.4.7.2	o	Y[ ] N[ ]
LED.4	Transition from ALS to LSU provided the transition is not caused by a JK symbol pair, or action of the Elasticity buffer or Decode function in the same PHY	9.4.7.2	o	Y[ ] N[ ]
LED.5	Transition from the ILS to LSU of duration not exceed two symbol times, provided the transition is not caused by a JK symbol pair, or action of the Elasticity buffer or Decode function in the same PHY	9.4.7.2	o	Y[ ] N[ ]

5.4.5.3.2 Link error rate threshold test

Item #	Item name	Ref #	STD Type/Range	Status	Support
LER.1	LER_Cutoff	9.4.7.4	10^{-4} – 10^{-15}	m	Y[ ] N[ ]
LER.2	LER_Alarm	9.4.7.4	10^{-4} – 10^{-15}	m	Y[ ] N[ ]

5.4.5.3.3 Link error monitor estimator

Item #	Item name	Ref #	STD Type/Range	Status	Support
LEE.1	LER_Estimate	9.4.7.5	10^{-4}– 10^{-15}	m	Y[ ] N[ ]

5.4.5.4 Trace functions

Item #	Item name	Ref #	Status	Support
TFA.1	Trace initiation	9.4.9.1	m	Y[ ] N[ ]
TFA.2	Trace propagation	9.4.9.2	m	Y[ ] N[ ]
TFA.3	Trace termination	9.4.9.3	m	Y[ ] N[ ]
TFA.4	Trace acknowledge	9.4.9.4	m	Y[ ] N[ ]

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.5.5 ECM capabilities

Item #	Item name	Ref #	Status	Support
ECM.1	Connection without Bypass	9.5.2.1	m	Y[ ] N[ ]
ECM.2	Connection with Bypass	9.5.2.1	o	Y[ ] N[ ]
ECM.3	Trace	9.5.2.3	m	Y[ ] N[ ]
ECM.4	Disconnection without Bypass	9.5.2.4	m	Y[ ] N[ ]
ECM.5	Disconnection with Bypass	9.5.2.5	c1	Y[ ] N[ ]
ECM.6	Wait until the optical bypass switch has completed switching	9.5.2.5	c1	Y[ ] N[ ]
ECM.7	Wait until the optical bypass switch to deinsert	9.2.2.5	c1	Y[ ] N[ ]
ECM.8	Start Hold	9.5.2.2	o	Y[ ] N[ ]
ECM.9	End Hold	9.5.2.2	c2	Y[ ] N[ ]

c1 if ECM.2 then m. If optical Bypass Switch is not implemented, the use of Optical Bypass Switching functions is prohibited.

c2 if ECM.8 then m. The node type is Dual MAC _ Dual Attachment Station

NOTE – ECM 8 and ECM 9 require DM-DAS configuration for operation.

5.4.5.6 PCM capabilities

Item #	Item name	Ref #	Status	Support
PCM.1	Initialization Sequence	9.6	m	Y[ ] N[ ]
PCM.2	Maintenance Support	9.6	m	Y[ ] N[ ]
PCM.3	MAC Local Loop Function	9.6	o	Y[ ] N[ ]

5.4.5.7 CFM capabilities

5.4.5.7.1 Path

Item #	Item name	Ref #	Status	Support
PATH.X	Primary Path	9.7.2	m	Y[ ] N[ ]
PATH.X	Secondary Path	9.7.2	c1	Y[ ] N[ ]
PATH.X	Local Path	9.7.2	o	Y[ ] N[ ]
PATH.X	Concatenated Path	9.7.2	c1	Y[ ] N[ ]
PATH.X	Thru	9.7.2	c1	Y[ ] N[ ]
PATH.X	Isolated	9.7.2	m	Y[ ] N[ ]

c1 Mandatory if DAS

5.4.5.7.2 CFM function

Item #	Item name	Ref #	Status	Support
CFS.1	Scrub Function	9.7.5.1	m	Y[ ] N[ ]
CFS.2	Non-Concat of Frames	9.7.5.2	m	Y[ ] N[ ]
CFS.3	Logical Ring Integrity	9.7.5.3	m	Y[ ] N[ ]

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

5.4.6 Ring management (RMT)

5.4.6.1 Ring management timer expiration values

Item #	Item name	Ref #	STD Type/Range	Status	Support
TRM.1	T_NON_OP	10.2.2.2.2	≥0,775 s	m	Y[ ] N[ ]
TRM.2	T_Stuck	10.2.2.2.2	≥7,0 s	m	Y[ ] N[ ]
TRM.3	T_Direct	10.2.2.2.2	≥362,773 ms	m	Y[ ] N[ ]
TRM.4	T_Jam	10.2.2.2.2	≥172,893 ms	o.1	Y[ ] N[ ]
TRM.5	T_DBJ	10.2.2.2.2	6,893 ms ≤T_DBJ≤82,0 ms	o.1	Y[ ] N[ ]
TRM.6	T_Announce	10.2.2.2.2	≥2,140 s	m	Y[ ] N[ ]
TRM.7	T_Rmode	10.2.2.2.2	0≤T_Rmode≤343597 ms	c1	Y[ ] N[ ]
TRM.8	T_Req	10.2.2.2.2	≥to 165 ms	c2	Y[ ] N[ ]

o.1 One or other needs to be selected

c1 Mandatory when monitoring or restricted token Dialogue is supported.

c2 Standard Type/Range of 4-165 is correct if performity leave action intitated. Otherwise T_Req must be greater than 165 ms.

5.4.6.2 Ring management operation

Item #	Item name	Ref #	Status	Support
RMT.1	Stuck Beacon Recovery	10.3.1.1	m	Y[ ] N[ ]
RMT.2	Trace Initiation	10.3.1.1	m	Y[ ] N[ ]
RMT.3	Duplicate Address Detection	10.3.1.2	m	Y[ ] N[ ]
RMT.4	Resolution of Duplicate Address: Changing the MAC address	10.3.1.3	o.1	Y[ ] N[ ]
RMT.5	JAM/DBL JAM	10.3.1.3	o.1	Y[ ] N[ ]
RMT.6	Removing the MAC	10.3.1.3	o.1	Y[ ] N[ ]
RMT.7	Monitoring of Restricted Token Dialogue	10.3.1.4	o	Y[ ] N[ ]

o.1 Either Jam or Double Jam may be selected.

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS Not for Resale

Standards Survey

The IEC would like to offer you the best quality standards possible. To make sure that we continue to meet your needs, your feedback is essential. Would you please take a minute to answer the questions overleaf and fax them to us at +41 22 919 03 00 or mail them to the address below. Thank you!

Customer Service Centre (CSC)

International Electrotechnical Commission
3, rue de Varembé
1211 Genève 20
Switzerland

or

Fax to: **IEC**/CSC at +41 22 919 03 00

Thank you for your contribution to the standards-making process.

Nicht frankieren
Ne pas affranchir

Non affrancare
No stamp required

A Prioritaire

RÉPONSE PAYÉE

SUISSE

Customer Service Centre (CSC)
International Electrotechnical Commission
3, rue de Varembé
1211 GENEVA 20
Switzerland

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

Q1 Please report on **ONE STANDARD** and **ONE STANDARD ONLY**. Enter the exact number of the standard: *(e.g. 60601-1-1)*

.....

Q2 Please tell us in what capacity(ies) you bought the standard *(tick all that apply).* I am the/a:

purchasing agent ❑
librarian ❑
researcher ❑
design engineer ❑
safety engineer ❑
testing engineer ❑
marketing specialist ❑
other.....

Q3 I work for/in/as a: *(tick all that apply)*

manufacturing ❑
consultant ❑
government ❑
test/certification facility ❑
public utility ❑
education ❑
military ❑
other.....

Q4 This standard will be used for: *(tick all that apply)*

general reference ❑
product research ❑
product design/development ❑
specifications ❑
tenders ❑
quality assessment ❑
certification ❑
technical documentation ❑
thesis ❑
manufacturing ❑
other.....

Q5 This standard meets my needs: *(tick one)*

not at all ❑
nearly ❑
fairly well ❑
exactly ❑

Q6 If you ticked NOT AT ALL in Question 5 the reason is: *(tick all that apply)*

standard is out of date ❑
standard is incomplete ❑
standard is too academic ❑
standard is too superficial ❑
title is misleading ❑
I made the wrong choice ❑
other .....

Q7 Please assess the standard in the following categories, using the numbers:
(1) unacceptable,
(2) below average,
(3) average,
(4) above average,
(5) exceptional,
(6) not applicable

timeliness.....
quality of writing.....
technical contents.....
logic of arrangement of contents .....
tables, charts, graphs, figures.....
other .....

Q8 I read/use the: *(tick one)*

French text only ❑
English text only ❑
both English and French texts ❑

Q9 Please share any comment on any aspect of the IEC that you would like us to know:

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS
Not for Resale

ISBN 2-8318-4472-X



ICS 35.100.10

Typeset and printed by the IEC Central Office
GENEVA, SWITZERLAND

--`,,```,,,,````-`-`,,`,,`,`,,`---

Copyright International Organization for Standardization
Provided by IHS under license with ISO
No reproduction or networking permitted without license from IHS

Not for Resale