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EIA SPECIFICATION

Specification for Mini Multilane 10 Gb/s 4X Common Element Connectors

EIA-974

(Was SFF-8086, Rev 2.3, dated January 5, 2012)

March 2015



Electronic Components Industry Association

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(From Standards Proposal No. 5289, formulated under the cognizance of the CE-2.0 Committee on EIA National Connector and Socket Standards, and previously published by the SFF Committee as SFF-8086.)

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Foreword

(This foreword is informative only and is not part of this specification.)

This Specification is from EIA Standards Proposal No. 5289, formulated under the cognizance of EIA CE-2.0, Committee on Connector and Socket Standards. This project was conducted in liaison with the SFF Committee as representing the disk drive industry. Utilization of this Standard is intended to eliminate misunderstandings or confusion between a manufacturer and user with respect to product performance and testing requirements for this as well as other possible applications.

The development work on this specification was done by the SFF Committee, an industry group. The membership of the committee since its formation in August 1990 has included a mix of companies which are leaders across the industry.

Background

Abstract: This specification defines the physical interface and general performance requirements of the mating interface for the Mini Multilane Connector that is designed for use in high speed serial interconnect applications at speeds up to 10 Gigabits/second. One such use is as the Serial Attached SCSI Mini SAS 4i (wide compact internal connector) and Mini SAS 4X (wide compact external connector).

This specification is made available for public review, and written comments are solicited from readers. Comments received by the members will be considered for inclusion in future revisions of this document.

The description of a connector in this specification does not assure that the specific component is actually available from connector suppliers. If such a connector is supplied it must comply with this specification to achieve interoperability between suppliers.

NOTE - The user's attention is called to the possibility that implementation to this Specification may require use of an invention covered by patent rights.

By publication of this specification, no position is taken with respect to the validity of any such claim(s) or of any patent rights in connection therewith. If a patent holder has filed a statement of willingness to grant a license under these rights on reasonable and nondiscriminatory terms and conditions to applicants desiring to obtain such a license, then details may be obtained from the specification developer.

Specification for Mini Multilane 10 Gb/s 4X Common Element Connectors

(From EIA Standards Proposal No. 5289, formulated under the cognizance EIA CE-2.0 Committee on National Connector and Socket Standards, and previously published by the SFF Committee as SFF-8086.)

1. Introduction

1.1 Scope

1.1.1 This specification defines the terminology and physical requirements for the mating interface and physical characteristics of the Mini Multilane Connector. The dimensions specified apply to the various sizes of the family, which covers a variety of circuit sizes, see EIA-975 (Specification for Mini Multilane 4X Unshielded Receptacle Shell and Plug Connectors) and EIA-976 (Specification for Mini Multilane 4X Shielded Receptacle Shell and Plug Connectors).

1.1.2 Fibre Channel, SAS, and other standards define requirements on the characteristic impedance and ability to transmit multi-gigabit signals for cable assemblies and backplanes. When this connector is used in such an interconnect, it is subject to these requirements.

1.1.3 The SFF Committee activities support the requirements of the storage industry, and it is involved with several standards.

2 Applicable documents

The following documents form a part of this specification to the extent indicated herein. In the event of conflict between this specification and the referenced documents, this specification shall take precedence.

2.1 EIA specifications

— EIA-975	Specification for Mini Multilane 4X Unshielded Receptacle Shell and Plug Connectors
— EIA-976	Specification for Mini Multilane 4X Shielded Receptacle Shell and Plug Connectors

2.2 Industry documents

— T10/1601D	SAS 1-1 (Serial Attached SCSI - 1.1)
— INCITS 352:2002 FC-PI	Fibre Channel Physical Interface
— INCITS 404:200x FC-PI-2	Fibre Channel Physical Interface -2
— T11/1625D	FC-PI-3 Fibre Channel Physical Interface -3
— IEEE 802.3z	Gigabit Task Force
— InfiniBand	IBTA Spec