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SFF Committee

SFF-8133 Specification for

**12 Pin CE-ATA Connector in the 30x40mm Form Factor**

Rev 1.6 March 8, 2006

Secretariat: SFF Committee

Abstract: This specification defines the connector position and cable for the 12 Pin CE-ATA Parallel connector on 30x40mm form factor disk drives.

This document provides a common specification for systems manufacturers, system integrators, and suppliers of magnetic disk drives. This is an internal working document of the SFF Committee, an industry ad hoc group.

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 specification.

Support: This specification is supported by the identified member companies of the SFF Committee.

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**EXPRESSION OF SUPPORT BY MANUFACTURERS**

The following member companies of the SFF Committee voted in favor of this industry specification.

EMC  
ENDL  
FCI  
Foxconn  
Hitachi GST  
Sun Microsystems  
Tyco AMP

The following SFF member companies voted no on the technical content of this industry specification.

Seagate

The following member companies of the SFF Committee voted to abstain on this industry specification.

Amphenol  
Hewlett Packard  
LSI Logic  
Maxtor  
Molex  
Vitesse Semi

**Foreword**

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.

When 2 1/2" diameter disk drives were introduced, there was no commonality on external dimensions e.g. physical size, mounting locations, connector type, connector location, between vendors.

The first use of these disk drives was in specific applications such as laptop portable computers and system integrators worked individually with vendors to develop the packaging. The result was wide diversity, and incompatibility.

The problems faced by integrators, device suppliers, and component suppliers led to the formation of the SFF Committee as an industry ad hoc group to address the marketing and engineering considerations of the emerging new technology.

During the development of the form factor definitions, other activities were suggested because participants in the SFF Committee faced more problems than the physical form factors of disk drives. In November 1992, the charter was expanded to address any issues of general interest and concern to the storage industry. The SFF Committee became a forum for resolving industry issues that are either not addressed by the standards process or need an immediate solution.

Those companies which have agreed to support a specification are identified in the first pages of each SFF Specification. Industry consensus is not an essential requirement to publish an SFF Specification because it is recognized that in an emerging product area, there is room for more than one approach. By making the documentation on competing proposals available, an integrator can examine the alternatives available and select the product that is felt to be most suitable.

SFF Committee meetings are held during T10 weeks (see [www.t10.org](http://www.t10.org)), and Specific Subject Working Groups are held at the convenience of the participants. Material presented at SFF Committee meetings becomes public domain, and there are no restrictions on the open mailing of material presented at committee meetings.

Most of the specifications developed by the SFF Committee have either been incorporated into standards or adopted as standards by EIA (Electronic Industries Association), ANSI (American National Standards Institute) and IEC (International Electrotechnical Commission).

If you are interested in participating or wish to follow the activities of the SFF Committee, the signup for membership and/or documentation can be found at:

[www.sffcommittee.com/ie/join.html](http://www.sffcommittee.com/ie/join.html)

The complete list of SFF Specifications which have been completed or are currently being worked on by the SFF Committee can be found at:

<ftp://ftp.seagate.com/sff/SFF-8000.TXT>

If you wish to know more about the SFF Committee, the principles which guide the activities can be found at:

<ftp://ftp.seagate.com/sff/SFF-8032.TXT>

Suggestions for improvement of this specification will be welcome. They should be sent to the SFF Committee, 14426 Black Walnut Ct, Saratoga, CA 95070.

SFF Committee --

## **12 Pin CE-ATA Connector in the 30x40mm Form Factor**

### **1. Scope**

The 813x suite of specifications defines the configuration characteristics associated with 30x40mm disk drives.

The purpose of the 813x suite is to define the external characteristics of drives such that products from different vendors may be used in the same mounting configurations. The set of specifications provide external dimensions, connectors, connector placement, and interface pinouts to assist manufacturers in the systems integration of small form factor disk drives.

- SFF-8131 defines the dimensions of 30x40mm disk drives.

In an effort to broaden the applications for storage devices, an ad hoc industry group of companies representing system integrators, peripheral suppliers, and component suppliers decided to address the issues involved.

The SFF Committee was formed in August, 1990 and the first working document was introduced in January, 1991.

### **1.1 Description of Clauses**

Clause 1 contains the Scope and Purpose.

Clause 2 contains Referenced and Related Standards and SFF Specifications.

Clause 3 begins the specification

## **2. References**

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

### **2.1 Industry Documents**

The following interface standards are relevant to this Specification.

- CE-ATA Embedded Cable and Connector Specification (version to be updated before publication)

### **2.2 SFF Specifications**

There are several projects active within the SFF Committee. The complete list of specifications which have been completed or are still being worked on are listed in the specification at <ftp://ftp.seagate.com/sff/SFF-8000.TXT>

### **2.3 Sources**

Those who join the SFF Committee as an Observer or Member receive electronic copies of the minutes and SFF specifications (<http://www.sffcommittee.com/ie/join.html>).

Copies of ANSI standards may be purchased from the International Committee for Information Technology Standards (<http://tinyurl.com/c4psg>).

Copies of SFF, T10 (SCSI), T11 (Fibre Channel) and T13 (ATA) standards and standards still in development are available on the HPE version of CD\_Access (<http://tinyurl.com/85fts>).

## 2.4 Conventions

The American convention of numbering is used i.e., the thousands and higher multiples are separated by a comma and a period is used as the decimal point. This is equivalent to the ISO/IEC convention of a space and comma.

American:	ISO:
0.6	0,6
1,000	1 000
1,323,462.9	1 323 462,9

## 2.5 Definitions

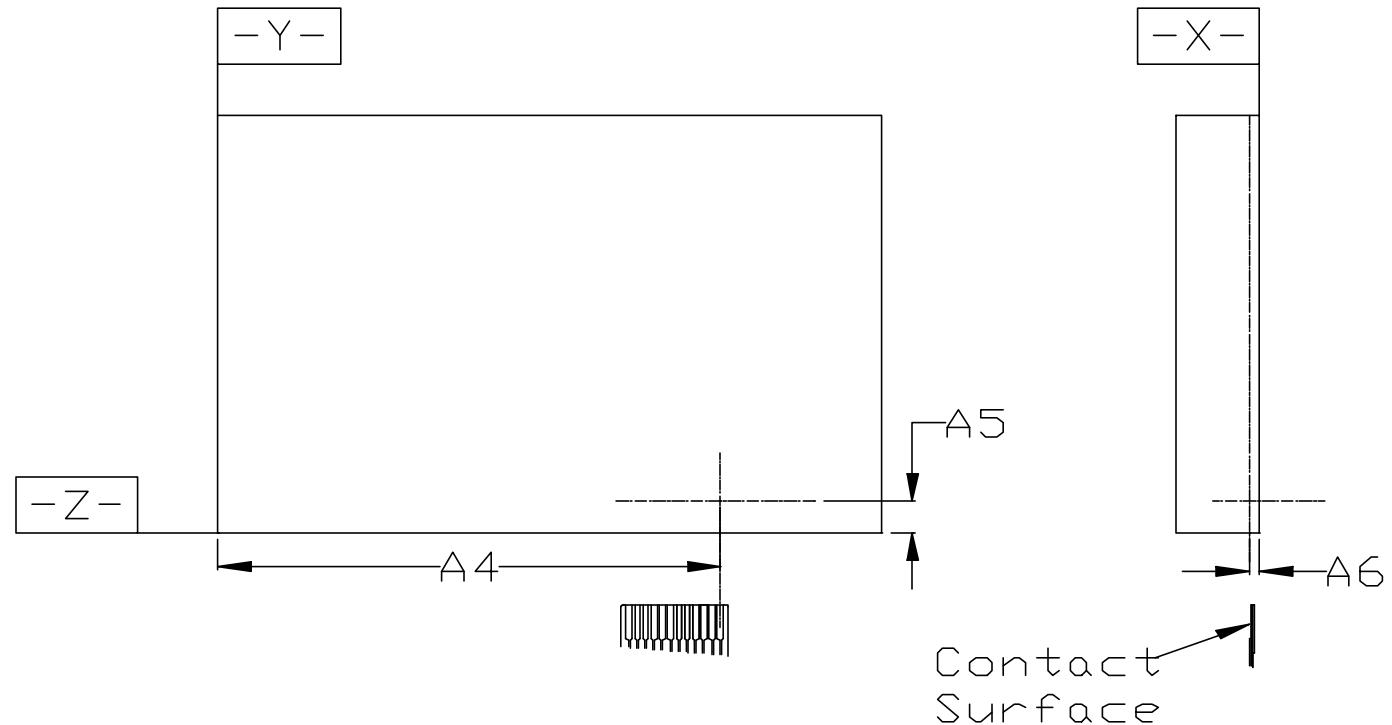
For the purpose of SFF Specifications, the following definitions apply:

[Add any abbreviations or terms specific to the connector being defined]  
[Remove abbreviations that are not relevant to this specification]

### 3. Introduction

This document describes the 12 pin parallel CE-ATA interface connector position for the 30x40mm disk drive form factor.

### 4. Physical Configuration



**Figure 1: Pin 1 location in 30x40mm Form Factor**

**Table 1: Pin 1 Location in 30x40mm Form Factor**

Dimension	Millimeters	Tolerance	Notes
A4	30.25	$\pm 0.20$	Pin 1 Center From <b>Y</b> Datum
A5	3.32	$\pm 0.20$	Front Edge of FPC From <b>Z</b> Datum
A6	0.80	$\pm 0.50$	Contact Surface From <b>X</b> Datum

See: 2.1 Industry Documents CE-ATA Embedded Cable and Connector Specification for cable specification and pin out.