

*INCITS Technical Report
for Information Technology –
Fibre Channel –
Device Attach (FC-DA)*

INCITS TR-36-2004

Developed by



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INCITS TR-36-2004

**INCITS Technical Report
for Information Technology –
Fibre Channel –
Device Attach (FC-DA)**

Abstract

This technical report selects and restricts logical options from the Fibre Channel Framing and Signaling, Fibre Channel Protocol for SCSI, Fibre Channel Arbitrated Loop, Fibre Channel Generic Services, and Fibre Channel Single Byte Command Set standards. The intent of this technical report is to facilitate interoperability between devices whether they are connected in a loop or Fabric topology.

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Foreword (This foreword is not part of INCITS Technical Report INCITS TR-36-2004.)

The Fibre Channel Device Attach (FC-DA) Technical Report describes a model for end devices (i.e., Nx_Ports), facilitating interoperability in both loop and Fabric environments.

This technical report was developed by Technical Committee T11 of Accredited Standards Committee INCITS during 2001-2003. The final approval process started in 2003.

Requests for interpretation, suggestions for improvements or addenda, or defect reports are welcome. They should be sent to the INCITS Secretariat, Information Technology Industry Council, 1250 Eye Street, NW, Suite 200, Washington, DC 20005-3922.

This technical report was processed and approved for submittal to ANSI by the International Committee for Information Technology Standards (INCITS). Committee approval of the technical report does not necessarily imply that all committee members voted for approval. At the time it approved this technical report, INCITS had the following members:

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1 Introduction and scope

This technical report defines a model for end devices (i.e., Nx_Ports). This technical report is intended to serve as an implementation guide whose primary objective is to maximize the likelihood of interoperability between conforming implementations. This technical report prohibits or requires some features that are in the referenced ANSI/INCITS standards.

This technical report is divided into 5 clauses:

Clause 1 is the introduction and scope of this technical report.

Clause 2 enumerates the normative references that apply to this technical report.

Clause 3 describes the definitions, abbreviations, and conventions used in this technical report.

Clause 4 specifies the end device model consisting of arbitrated loop behaviors (Public and Private), initialization, naming, login and login validation, arbitrated loop features, FC framing and signaling features, Link Services, well-known address usage, Name Server queries, N_Port_ID Virtualization, CS_CTL/Priority header field usage, logout, management and discovery, and Fabric event notification.

Clause 5 specifies applicable FC-4 behavior for an end device. Currently FCP, FC-SB-3, and IP behaviors are specified.

This technical report has one annex:

Annex A is an informative annex that provides examples and rationale for the discovery and management processes described in the end device model.

This technical report, in combination with technical report FC-MI-2, covers the same scope as, but does not replace, technical report FC-MI. This technical report includes, corrects, and extends to cover more recent standards, the guidelines specified by FC-MI for end devices. Technical report FC-MI-2 serves the same purpose for fabric elements.

Another objective of this technical report is to simplify implementations and their associated documentation, testing, and support requirements. As a result, there may be some optional features of the referenced ANSI/INCITS standards that are not mutually exclusive, but are prohibited or required for the purpose of this simplification. Features that some, but not all, of the referenced ANSI/INCITS standards require for compliance may be optional in this technical report. Each specification of such an optional feature in this technical report identifies the referenced ANSI/INCITS standards for which the feature is required.

Internal characteristics of conformant implementations are not defined by this technical report. This technical report incorporates features from the standards described in clause 2.