

INTERNATIONAL STANDARD

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Information technology – High-Performance Parallel Interface – Part 2: Framing Protocol (HIPPI-FP)

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INFORMATION TECHNOLOGY – HIGH-PERFORMANCE PARALLEL INTERFACE –

Part 2: Framing protocol (HIPPI-FP)

FOREWORD

- 1) ISO (International Organization for Standardization) and IEC (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.
- 2) In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC1. 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.
- 3) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

International Standard ISO/IEC 11518-2 was prepared by subcommittee 25: Interconnection of information technology equipment, of ISO/IEC joint technical committee 1: Information technology.

This edition cancels and replaces the first edition published in 1996. This second edition was updated as follows:

- the figure in the foreword was removed;
- a list of acronyms was added (see 3.3);
- the upper-layer protocol identifiers were updated (see 5.4.1).

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

ISO/IEC 11518 consists of the following parts, under the general title *Information technology – High-Performance Parallel Interface*:

- *Part 1: Mechanical, electrical and signalling protocol specification (HIPPI-PH)*
- *Part 2: Framing Protocol (HIPPI-FP)*
- *Part 3: Encapsulation of ISO/IEC 8802-2 (IEEE Std 802.2) – Logical Link Control Protocol Data Units (HIPPI-LE)*
- *Part 4: Mapping of HIPPI to IPI device generic command sets (HIPPI-IPI) (under consideration)*
- *Part 5: Memory Interface (HIPPI-MI) (under consideration)*
- *Part 6: Physical Switch Control (HIPPI-SC)*
- *Part 8: Mapping to Asynchronous Transfer Mode (HIPPI-ATM)*
- *Part 9: Serial Specification (HIPPI-Serial)*

Annexes A, B and C are for information only.

INTRODUCTION

This standard defines the data framing for an efficient simplex high-performance point-to-point interface.

Characteristics of HIPPI-FP include:

- large block data transfers with framing to split the data into smaller bursts;
- separation of user control and data information, and early delivery of the control information;
- identifiers for multiple upper-layer protocols (ULPs);
- support for simplex topology;
- support for ULP non-word-aligned and an arbitrary number of byte transfers;
- error notifications, from the underlying physical layer, e.g. HIPPI-PH, are passed through this framing protocol to notify the upper layers of damaged data;
- provides a connection-less data service;
- best effort delivery of data, i.e. datagram;
- connection control information, which may be used for physical layer switching, is supported.

INFORMATION TECHNOLOGY – HIGH-PERFORMANCE PARALLEL INTERFACE –

Part 2: Framing protocol (HIPPI-FP)

1 Scope

This part of ISO/IEC 11518 provides data framing for a high-performance point-to-point interface between data-processing equipment. This part of ISO/IEC 11518 does not protect against certain errors that might be introduced by intermediate devices interconnecting multiple HIPPI-PHs.

The purpose of this part of ISO/IEC 11518 is to facilitate the development and use of the HIPPI in computer systems by providing common data framing. It provides an efficient framing protocol for interconnections between computers, high-performance display systems, and high-performance, intelligent block-transfer peripherals.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 11518. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO/IEC 11518 are encouraged to investigate the possibility of applying the most recent edition of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/IEC 11518-1:1995, *Information technology, High-Performance Parallel Interface – Part 1: Mechanical, electrical, and signalling protocol specification (HIPPI-PH)*