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Information technology — Control network protocol —

Part 2: Twisted pair communication

Technologies de l'information — Protocole de réseau de contrôle —

Partie 2: Communication de pair torsadée

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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.

ISO/IEC 14908-2 was prepared by CEN/TC 247 and was adopted, under a special “fast-track procedure”, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in parallel with its approval by the national bodies of ISO and IEC.

ISO/IEC 14908 consists of the following parts, under the general title *Information technology — Control network protocol*:

— *Part 1: Protocol stack*

— *Part 2: Twisted pair communication*

— *Part 3: Power line channel specification*

— *Part 4: IP communication*

Introduction

This International Standard has been prepared to provide mechanisms through which various vendors of local area control networks may exchange information in a standardised way. It defines communication capabilities.

This International Standard is to be used by all involved in design, manufacture, engineering, installation and commissioning activities.

The International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) draw attention to the fact that it is claimed that compliance with this International Standard may involve the use of patents held by Echelon Corporation.

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INFORMATION TECHNOLOGY – CONTROL NETWORK PROTOCOL –

Part 2: Twisted pair communication

1 Scope

This International Standard specifies the control network protocol (CNP) free-topology twisted-pair channel for networked control systems in local area control networks and is used in conjunction with ISO/IEC 14908-1. The channel supports communication at 78,125 kbit/s between multiple nodes, each of which consists of a transceiver, a protocol processor, an application processor, a power supply and application electronics.

This International Standard covers the complete physical layer (OSI Layer 1), including the interface to the Media Access Control (MAC) sub-layer and the interface to the medium. Parameters that are controlled by other layers but control the operation of the physical layer are also specified.

2 Normative references

The following referenced documents are indispensable for the application of this International Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 14908-1:2012, *Information technology – Control network protocol – Part 1: Protocol stack.*

ISO/IEC 15018, *Information technology - Generic cabling for homes.*