
**Information technology — Control
network protocol —**

**Part 4:
IP communication**

*Technologies de l'information — Protocole de réseau de contrôle —
Partie 4: Communication IP*



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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 14908-4 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 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

The ISO and IEC take no position concerning the evidence, validity and scope of this patent right. The holder of this putative patent right has assured the ISO and IEC that they are willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of the putative patent rights is registered with the ISO and IEC. Information may be obtained from:

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Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights other than those identified above. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

INFORMATION TECHNOLOGY – CONTROL NETWORK PROTOCOL –

Part 4: IP communication

1 Scope

This International Standard specifies the transporting of the Control Network Protocol (CNP) packets for commercial local area control networks over Internet Protocol (IP) networks using a tunnelling mechanism wherein the CNP packets are encapsulated within IP packets. It applies to both CNP nodes and CNP routers.

The purpose of this International Standard is to insure interoperability between various CNP devices that wish to use IP networks to communicate using the CNP protocol.

The main body of this International Standard is independent of the CNP protocol being transported over the IP network. The reader is directed to Annex A and Annex B for the normative and informative, respectively, aspects of this specification that are specific to ISO/IEC 14908-1.

Figure 1 shows a possible configuration of such CNP devices and networks connected to an IP network.

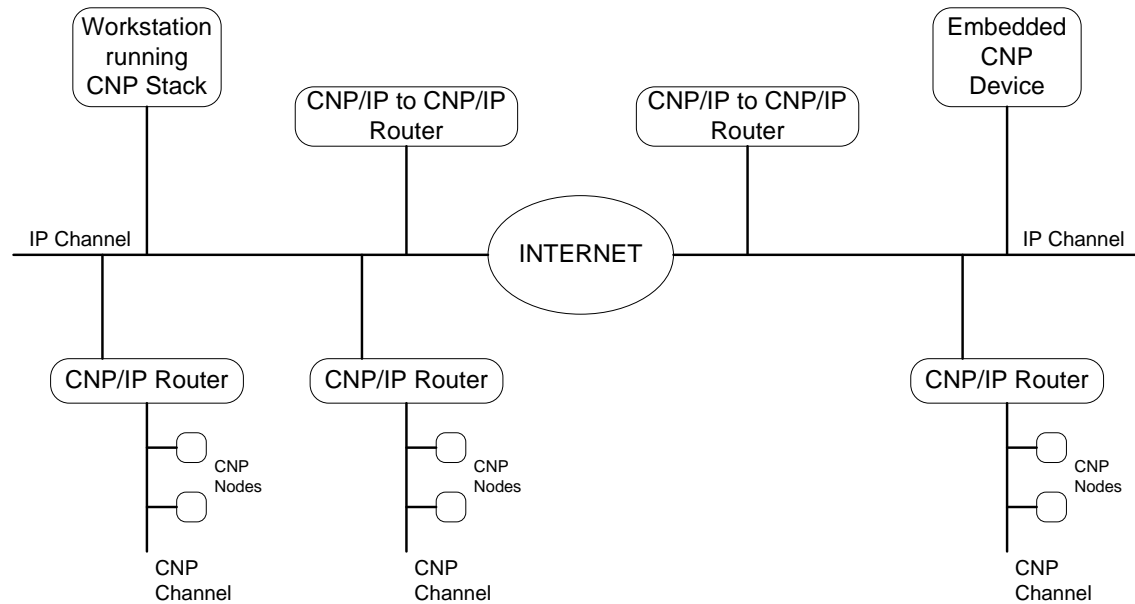


Figure 1 — Typical CNP/IP application

Figure 1 depicts two types of CNP devices: CNP nodes and CNP routers. It should be noted that the routers shown can route packets between typical CNP channels (such as twisted pair or power line) and an IP channel or it can route CNP packets between two IP channels. In this International Standard the IP channel will be defined in such a way to allow it to be used like any other CNP channel.

In the above diagram the IP network can be considered to be one or more IP channels. This International Standard covers only how CNP packets are transported over IP channels. It does not cover how CNP packets are routed between standard CNP channels and IP channels. This specification is not intended to cover the lower layers (physical, MAC and link layers) of either standard CNP or IP channels.

2 Normative references

None.