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Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 460: Multiple talkers and multiple listeners - Ethernet interconnection - Safety and security

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 12/18

Obsahuje: EN IEC 61162-460:2018, IEC 61162-460:2018

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**EN IEC 61162-460**

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English Version

**Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 460: Multiple talkers and multiple listeners - Ethernet interconnection - Safety and security (IEC 61162-460:2018)**

Matériels et systèmes de navigation et de radiocommunication maritimes - Interfaces numériques - Partie 460: Émetteurs multiples et récepteurs multiples - Interconnexion Ethernet - Sûreté et sécurité (IEC 61162-460:2018)

Navigations- und Funkkommunikationsgeräte und -systeme für die Seeschifffahrt - Digitale Schnittstellen - Teil 460: Mehrere Datensender und mehrere Datenempfänger - Ethernet-Verbund - Funktionale und Informationssicherheit (IEC 61162-460:2018)

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**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN IEC 61162-460:2018****European foreword**

The text of document 80/879/FDIS, future edition 2 of IEC 61162-460, prepared by IEC/TC 80 "Maritime navigation and radiocommunication equipment and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61162-460:2018.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2019-03-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-06-08

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60812	NOTE	Harmonized as EN 60812.
IEC 61162 Series	NOTE	Harmonized as EN 61162 Series.
IEC 61162-1	NOTE	Harmonized as EN 61162-1.
IEC 61162-2	NOTE	Harmonized as EN 61162-2.
IEC 62388	NOTE	Harmonized as EN 62388.
IEC 62439 Series	NOTE	Harmonized as EN 62439 Series.
IEC 62439-1	NOTE	Harmonized as EN 62439-1.
IEC 62439-2	NOTE	Harmonized as EN 62439-2.
IEC 62439-3	NOTE	Harmonized as EN 62439-3.
IEC 62439-4	NOTE	Harmonized as EN 62439-4.
IEC 62439-5	NOTE	Harmonized as EN 62439-5.
IEC 62439-6	NOTE	Harmonized as EN 62439-6.
IEC 62940	NOTE	Harmonized as EN 62940.
ISO 9241-12	NOTE	Harmonized as EN ISO 9241-12 <sup>1</sup> .

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<sup>1</sup> Superseded by EN ISO 9241-112 (ISO 9241-112) and EN ISO 9241-125 (ISO 9241-125).

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60945	-	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	-
IEC 61162-450	2018	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 450: Multiple talkers and multiple listeners - Ethernet interconnection	EN IEC 61162-450	2018
IEC 61924-2	2012	Maritime navigation and radiocommunication equipment and systems - Integrated navigation systems - Part 2: Modular structure for INS - Operational and performance requirements, methods of testing and required test results	EN 61924-2	2013
IEC 62288	2014	Maritime navigation and radiocommunication equipment and systems - Presentation of navigation-related information on shipborne navigational displays - General requirements, methods of testing and required test results	EN 62288	2014
IEEE 802.1D	2004	IEEE Standard for local and metropolitan area networks - Media Access Control (MAC) Bridges	-	-
IEEE 802.1Q	-	IEEE Standard for Local and metropolitan area networks - Media Access Control (MAC) Bridges and Virtual Bridges	-	-
IETF RFC 792	1981	Internet Control Message Protocol (ICMP)	-	-
IETF RFC 1112	1989	Host Extensions for IP Multicasting (SNMP)	-	-
IETF RFC 1157	1990	Simple Network Management Protocol (SNMP)	-	-
IETF RFC 2021	1997	Remote Network Monitoring Management Information Base	-	-

**EN IEC 61162-460:2018**

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IETF RFC 2236	1997	Internet Group Management Protocol, Version 2	-	-
IETF RFC 2819	2000	Remote Network Monitoring Management Information Base	-	-
IETF RFC 3411	2002	An Architecture for Describing Simple Network Management Protocol (SNMP) Management Frameworks	-	-
IETF RFC 3577	2003	Introduction to the RMON family of MIB modules	-	-
IETF RFC 4604	2006	Using Internet Group Management Protocol Version 3 (IGMPv3) and Multicast Listener Discovery Protocol Version 2 (MLDv2) for Source-Specific Multicast	-	-
IETF RFC 5424	2009	The Syslog Protocol	-	-



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Edition 2.0 2018-05

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Maritime navigation and radiocommunication equipment and systems – Digital interfaces –  
Part 460: Multiple talkers and multiple listeners – Ethernet interconnection –  
Safety and security**

**Matériels et systèmes de navigation et de radiocommunication maritimes –  
Interfaces numériques –  
Partie 460: Émetteurs multiples et récepteurs multiples – Interconnexion  
Ethernet – Sûreté et sécurité**



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IEC Central Office  
 3, rue de Varembe  
 CH-1211 Geneva 20  
 Switzerland

Tel.: +41 22 919 02 11  
[info@iec.ch](mailto:info@iec.ch)  
[www.iec.ch](http://www.iec.ch)

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IEC 61162-460

Edition 2.0 2018-05

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE



**Maritime navigation and radiocommunication equipment and systems – Digital interfaces –  
Part 460: Multiple talkers and multiple listeners – Ethernet interconnection –  
Safety and security**

**Matériels et systèmes de navigation et de radiocommunication maritimes –  
Interfaces numériques –  
Partie 460: Émetteurs multiples et récepteurs multiples – Interconnexion  
Ethernet – Sûreté et sécurité**

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

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## MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – DIGITAL INTERFACES –

### Part 460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security

#### FOREWORD

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International Standard IEC 61162-460 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

This second edition of IEC 61162-460 cancels and replaces the first edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) 460-Switches and 460-Forwarders are required to implement IGMP snooping;
- b) connection between secure and non-secure areas requires a 460-Forwarder as an isolation element;

- c) SFI collision detection added as function of network monitoring;
- d) 460-Gateway and 460-Wireless gateway are no longer required to report to the network monitoring;
- e) all alerts from network monitoring have standardized alert identifiers.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
80/879/FDIS	80/884/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

This International Standard is to be used in conjunction with IEC 61162-450:2018.

A list of all parts in the IEC 61162 series, published under the general title *Maritime navigation and radiocommunication equipment and systems – Digital interfaces*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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# MARITIME NAVIGATION AND RADIOCOMMUNICATION EQUIPMENT AND SYSTEMS – DIGITAL INTERFACES –

## Part 460: Multiple talkers and multiple listeners – Ethernet interconnection – Safety and security

### 1 Scope

This part of IEC 61162 is an add-on to IEC 61162-450 where higher safety and security standards are needed, for example due to higher exposure to external threats or to improve network integrity. This document provides requirements and test methods for equipment to be used in an IEC 61162-460 compliant network as well as requirements for the network itself and requirements for interconnection from the network to other networks. This document also contains requirements for a redundant IEC 61162-460 compliant network.

This document does not introduce new application level protocol requirements to those that are defined in IEC 61162-450.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**