

Maritime navigation and radiocommunication
equipment and systems - Digital interfaces - Part 450:
Multiple talkers and multiple listeners - Ethernet
interconnection

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61162-450:2018 sisaldab Euroopa standardi EN IEC 61162-450:2018 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61162-450:2018 consists of the English text of the European standard EN IEC 61162-450:2018.
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English Version

**Maritime navigation and radiocommunication equipment and
systems - Digital interfaces - Part 450: Multiple talkers and
multiple listeners - Ethernet interconnection
(IEC 61162-450:2018)**

Matériels et systèmes de navigation et de
radiocommunication maritimes - Interfaces numériques -
Partie 450: Émetteurs multiples et récepteurs multiples -
Interconnexion Ethernet
(IEC 61162-450:2018)

Navigations- und Funkkommunikationsgeräte und -systeme
für die Seeschifffahrt - Digitale Schnittstellen -
Teil 450: Mehrere Datensender und mehrere
Datenempfänger - Ethernet-Verbund
(IEC 61162-450:2018)

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European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

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

European foreword

The text of document 80/880/FDIS, future edition 2 of IEC 61162-450, 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 61162-450:2018.

The following dates are fixed:

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document have to be withdrawn

This document supersedes EN 61162-450:2011.

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Endorsement notice

The text of the International Standard IEC 61162-450:2018 was approved by CENELEC as a European Standard without any modification.

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

IEC 60603-7	NOTE	Harmonized as EN 60603-7.
IEC 60603-7-3	NOTE	Harmonized as EN 60603-7-3.
IEC 60603-7-7	NOTE	Harmonized as EN 60603-7-7.
IEC 61076-2-101	NOTE	Harmonized as EN 61076-2-101.
IEC 61162-2	NOTE	Harmonized as EN 61162-2.
IEC 61162-450:2011	NOTE	Harmonized as EN 61162-450:2011 (not modified).
IEC 61162-460	NOTE	Harmonized as EN 61162-460.
IEC 61174	NOTE	Harmonized as EN 61174.
IEC 61754-20	NOTE	Harmonized as EN 61754-20.
IEC 61996-1	NOTE	Harmonized as EN 61996-1.
IEC 62388:2007	NOTE	Harmonized as EN 62388:2008 ¹ (not modified).

¹ Superseded by EN 62388:2013 (IEC 62388:2013).

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60825-2	-	Safety of laser products - Part 2: Safety of optical fibre communication systems (OFCS)	EN 60825-2	-
IEC 60945	-	Maritime navigation and radiocommunication equipment and systems - General requirements - Methods of testing and required test results	EN 60945	-
IEC 61162-1	2016	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 1: Single talker and multiple listeners	EN 61162-1	2016
IEC 61162-3	2008	Maritime navigation and radiocommunication equipment and systems - Digital interfaces - Part 3: Serial data instrument network	EN 61162-3	2008
IEEE Std 802.3	2015	IEEE Standard for Ethernet	-	-
IETF RFC 768	-	User Datagram Protocol	-	-
IETF RFC 791	-	Internet Protocol (IP) - DARPA Internet Program Protocol Specification	-	-
IETF RFC 792	-	Internet Control Message Protocol (ICMP)	-	-
IETF RFC 793	1981	Transmission Control Protocol (TCP)	-	-
IETF RFC 826	-	An Ethernet Address Resolution Protocol	-	-
IETF RFC 1112	-	Host Extensions for IP multicasting	-	-
IETF RFC 1918	-	Address Allocation for Private Internets	-	-
IETF RFC 2236	-	Internet Group Management Protocol, Version 2	-	-
IETF RFC 2474	-	Definition of the Differentiated Services Field (DS Field) in the IPv4 and IPv6 Headers	-	-
IETF RFC 3376	-	Internet Group Management Protocol, Version 3	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IETF RFC 5000	-	Internet Official Protocol Standards	-	-
IETF RFC 5227	-	IPv4 Address Conflict Detection	-	-
IETF RFC 5424	-	The Syslog Protocol	-	-
NMEA 0183	2008	Standard for interfacing marine electronic devices, Version 4.00	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MARITIME NAVIGATION AND RADIOCOMMUNICATION
EQUIPMENT AND SYSTEMS –
DIGITAL INTERFACES –****Part 450: Multiple talkers and multiple listeners –
Ethernet interconnection**

FOREWORD

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International Standard IEC 61162-450 has been prepared by IEC technical committee 80: Maritime navigation and radiocommunication equipment and systems.

This second edition of IEC 61162-450 cancels and replaces the first edition published in 2011 and Amendment 1:2016. This edition constitutes a technical revision.

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

- a) network traffic filtering based on IGMP snooping added;
- b) network traffic balancing added;
- c) new encapsulation of IEC 61162-3 PGNs added;

- d) new alternative for binary file transfer added: TCP/IP based on Annex H of IEC 62388:2007 on radars;
- e) general authentication tag "a:" added to support managing of cyber security risk.

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

FDIS	Report on voting
80/880/FDIS	80/885/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.

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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