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Multimedia home network - Network interfaces for network adapter (IEC 62480:2008 (EQV))

I.S. EN 62480:2009

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**Multimedia home network -
Network interfaces for network adapter
(IEC 62480:2008)**

Réseaux résidentiels multimédia -
Interfaces de réseau
relatifs aux adaptateurs de réseaux
(CEI 62480:2008)

Multimedia-Heimnetzwerk -
Netzwerkschnittstellen
für Netzwerkadapter
(IEC 62480:2008)

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CENELEC

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I.S. EN 62480:2009

EN 62480:2009

- 2 -

Foreword

The text of document 100/1354/FDIS, future edition 1 of IEC 62480, prepared by technical area 9, Audio, video and multimedia applications for end-user network, of IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62480 on 2009-07-01.

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Endorsement notice

The text of the International Standard IEC 62480:2008 was approved by CENELEC as a European Standard without any modification.

CONTENTS

FOREWORD.....	6
INTRODUCTION.....	8
1 Scope.....	9
2 Normative references	9
3 Terms and definitions	10
4 Network Adapter communication interfaces and requirements	12
4.1 Overview	12
4.2 Requirement of functions.....	14
4.3 Mechanical and physical characteristics for a Network Adapter	15
4.3.1 Network Adapter.....	15
4.3.2 Network Adapter communication interface	16
4.4 Electrical characteristics.....	16
4.4.1 Network Adapter.....	16
4.4.2 Network Adapter communication interface	16
4.5 Logical requirements	18
4.5.1 Network Adapter.....	18
4.5.2 Network Adapter communication interface	18
4.6 Network Adapter communication software protocols	20
4.6.1 Equipment interface data recognition service software protocol	20
4.6.2 Communication software protocol for object generation type	29
4.6.3 Communication software protocol for peer-to-peer type	84
Annex A (informative) Application object.....	85
Annex B (informative) Access to the application object in the Node	89
Annex C (normative) Property map description format	94
Annex D (informative) Composite messages.....	95
Annex E (informative) Connector shape	96
Bibliography.....	103
Figure 1 – The specified portions	9
Figure 2 – Network Adapter communication software hierarchy.....	12
Figure 3 – Example of the equipment interface data recognition sequence	13
Figure 4 – Network Adapter functions	15
Figure 5 – Logic level.....	17
Figure 6 – Character composition	19
Figure 7 – Timing requirements	19
Figure 8 – Format of equipment interface data recognition service.....	21
Figure 9 – Format of request command.....	22
Figure 10 – Format of response command	24
Figure 11 – Format of request command.....	25
Figure 12 – Format of response command	25

Figure 13 – Sequence of equipment interface data recognition service	26
Figure 14 – Status change diagram	27
Figure 15 – Format of object generation type commands	31
Figure 16 – Operation of IASet (IASetM).....	33
Figure 17 – Operation of IASetup (IASetMup)	34
Figure 18 – Operation of IAGet (IAGetM)	35
Figure 19 – Operation of IAGetup (IAGetMup)	36
Figure 20 – Network Adapter status changes	37
Figure 21 – Format of request command.....	39
Figure 22 – Format of response command	40
Figure 23 – Format of request command.....	41
Figure 24 – Format of response command	42
Figure 25 – Format of request command.....	43
Figure 26 – Format of response command	43
Figure 27 – Format of request command.....	44
Figure 28 – Format of response command	44
Figure 29 – Format of object data	45
Figure 30 – Format of equipment inquiry data	47
Figure 31 – Format of request command.....	47
Figure 32 – Format of response command	48
Figure 33 – Format of request command.....	49
Figure 34 – Format of response command	49
Figure 35 – Format of request command.....	50
Figure 36 – Format of response command	51
Figure 37 – Format of Object Data	51
Figure 38 – Format of equipment inquiry data	53
Figure 39 – Format of request command.....	54
Figure 40 – Format of response command	55
Figure 41 – Format of request command.....	56
Figure 42 – Format of response command	57
Figure 43 – Format of request command.....	58
Figure 44 – Format of response command	59
Figure 45 – Format of request command.....	60
Figure 46 – Format of response command	61
Figure 47 – Format of request command.....	62
Figure 48 – Format of response command	63
Figure 49 – Format of request command.....	64
Figure 50 – Format of response command	65
Figure 51 – Format of request command.....	67
Figure 52– Format of Response Command	68
Figure 53 – Format of request command.....	70
Figure 54 – Format of response command	71
Figure 55 – Format of request command.....	72

Figure 56 – Format of response command	73
Figure 57 – Communication error notification command	74
Figure 58 – Equipment interface data confirmation sequence	75
Figure 59 – Initialization sequence	77
Figure 60 – Object construction sequence (1)	78
Figure 61 – Object construction sequence (2)	79
Figure 62 – Equipment status access request sequence	80
Figure 63 – Equipment status notification request sequence	80
Figure 64 – Element designation equipment status access request sequence	81
Figure 65 – Element designation equipment status notification request sequence	81
Figure 66 – Object access request sequence	82
Figure A.1 – Device object configuration example	86
Figure B.1 – Service primitive (obtain other node status: synchronous type)	89
Figure B.2 – Service primitive (obtain other node status: asynchronous type)	90
Figure B.3 – Example of object view	90
Figure B.4 – Service primitive (control other node functions)	91
Figure B.5 – Example of object view	91
Figure B.6 – Service primitive (notify other nodes of self-node status: synchronous type)	92
Figure B.7 – Service primitive (notify other nodes of self-node status: asynchronous type)	92
Figure B.8 – Example of object view	92
Figure B.9 – Example of AOJ configuration in a Node	93
Figure C.1 – Property map description format	94
Figure D.1 – Part of the non-composite messages type packet	95
Figure D.2 – Part of the composite messages type packet	95
Figure E.1 – Type B Socket (Network-ready equipment side)	99
Figure E.2 – Type B plug (Network Adapter side)	100
Figure E.3 – Mating of Type B connector	101
Figure E.4 – Type A connector pin arrangement for Network Adapter communication interfaces – Pin assignment 1	101
Figure E.5 – Type B connector pin arrangement for Network Adapter communication interfaces – Pin assignment 2	102
Table 1 – Acceptable combinations of types supported by Network Adapters and types supported by Network-ready equipment	13
Table 2 – Specifications for supplying power – Network-ready equipment (Class 1)	17
Table 3 – Specifications for supplying power – Network-ready equipment (Class 2)	17
Table 4 – Specifications for supplying power – Network-ready equipment (Class 3)	17
Table 5 – Specifications for Supplying Power – Network Adapter	17
Table 6 – Timing requirements	19
Table 7 – Definition of states	28
Table 8 – Object generation type interface command codes	32
Table 9 – Classification of internal services	33
Table 10 – Communication sequences (object generation type)	75

I.S. EN 62480:2009

62480 © IEC:2008(E)

– 5 –

Table 11 – Timeout values	84
Table A.1 – Format of the AOJ.....	85
Table A.2 – List of class codes by group code	87
Table A.3 – APC allocation table.....	88
Table E.1 – Physical specifications for Type B connector.....	97

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MULTIMEDIA HOME NETWORK –
NETWORK INTERFACES FOR NETWORK ADAPTER**

FOREWORD

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International Standard IEC 62480 has been prepared by technical area 9: Audio, video and multimedia applications for end-user network, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this standard is based on the following documents:

FDIS	Report on voting
100/1354/FDIS	100/1389/RVD

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

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

I.S. EN 62480:2009

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– 7 –

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

There are several obstacles to the spread of networked appliances that can be overcome by the concept of a Network Adapter described in this standard. As Home Networking technology is rapidly evolving, network functions which are pre-installed in home electrical appliances can easily become obsolete and may be difficult to upgrade. Many appliances strictly limit resources such as the CPU, power capacity, and memory to achieve cost savings. If all network functions are embedded in Home Networked appliances, this could result in a higher cost for new appliances and an additional barrier to wide adoption of such systems. In addition, when consumers want to add a new appliance to the network, they are forced to choose equipment with the same interconnecting systems as the existing network or add a router or gateway which can interconnect different systems.

To solve these problems, the network functions are divided into two parts. Since functions from OSI layer 1 to 7 (refer to ISO/IEC 7498 in Bibliography) are necessary to network home electrical appliances (including both multimedia equipment and household appliances such as televisions, computers, refrigerators, washing machines, and sensors), network functions from OSI layer 1 to 6 and most of layer 7 reside in an external Network Adapter and only a small part of layer 7 resides in the home appliances.

The advantages of applying this standard are:

- Users can upgrade a Home Network by simply changing the Network Adapters.

NOTE 1 For example, when an end-user wants to have higher QoS media.

- An electrical appliance without embedded network functions can be connected to an existing Home Network with a Network Adapter.

NOTE 2 For example, when an end-user wants to utilize some of the network application functions (i.e. energy conservation, etc) on an appliance which does not have all of the network function integrated.

- By selecting Network Adapters which use the same interconnecting system as the existing Home Network, routers or the gateways can be avoided.

NOTE 3 For example, when an end-user's network is a powerline network, but the appliance the user wants to connect to has only an RF network connection.

NOTE 4 For example, when an end-user's network is based on home networking standard "A" (layer 1-7), but the appliance the user wants to connect utilizes a home networking standard "B" (layer 1-7).

- Home appliance manufacturers can produce products that can be connected to Home Networks with minimal cost increases since most of the network functions are not required to be embedded in the appliance.

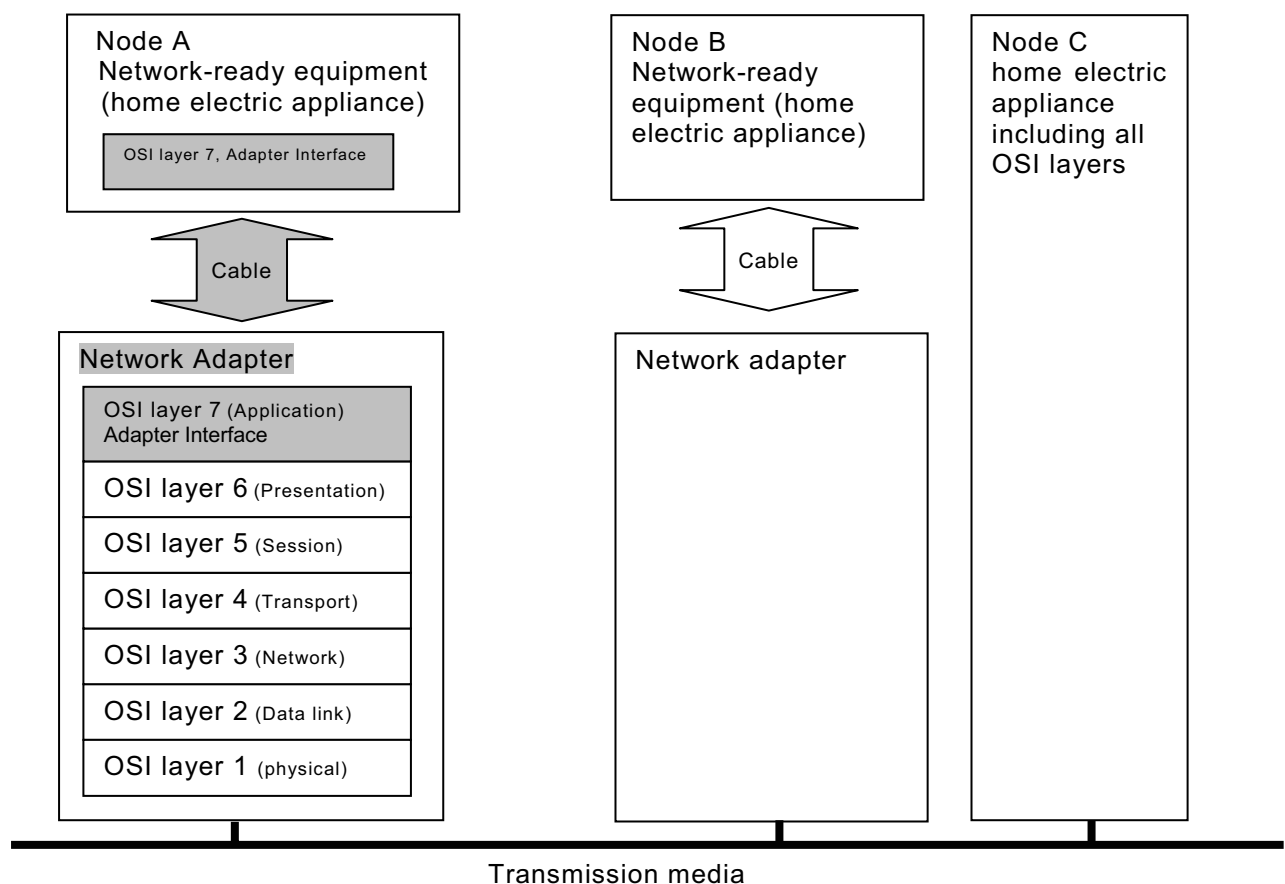
NOTE 5 This standard is helpful for standardizing the manufacturing process for including the network function in appliances- especially when the market has a low penetration of appliances that are network-ready.

- Device objects are based on the same object-oriented methodology used in almost all existing network protocols.

MULTIMEDIA HOME NETWORK – NETWORK INTERFACES FOR NETWORK ADAPTER

1 Scope

This International Standard specifies the requirements for the characteristics of the Network Adapter itself and the interface between the Network Adapter and Network-ready equipment as shown in Figure 1. Data exchanged between the Network Adapter and Network-ready equipment are basically for HES Class1. This standard does not specify the Home Networking Protocol by OSI layer 1-6 in the Network Adapter and any implementation of the software stack and hardware.



NOTE Gray colored portions are standardized.

Figure 1 – The specified portions

2 Normative references

The following referenced documents are indispensable for the application 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.

None.

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