

BS EN 62608-1:2014



BSI Standards Publication

# Multimedia home network configuration — Basic Reference model

Part 1: System model

**bsi.**

...making excellence a habit.™

### **National foreword**

This British Standard is the UK implementation of EN 62608-1:2014. It is identical to IEC 62608-1:2014.

The UK participation in its preparation was entrusted to Technical Committee EPL/100, Audio, video and multimedia systems and equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2014.  
Published by BSI Standards Limited 2014

ISBN 978 0 580 79866 5  
ICS 33.160.60

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2014.

### **Amendments/corrigenda issued since publication**

<b>Date</b>	<b>Text affected</b>
-------------	----------------------

---

EUROPEAN STANDARD

**EN 62608-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2014

ICS 33.160.60

English Version

**Multimedia home network configuration - Basic Reference model  
- Part 1: System model  
(IEC 62608-1:2014)**

Configuration de réseau domestique multimédia - Modèle  
de référence de base - Partie 1: Modèle de système  
(CEI 62608-1:2014)

Multimedia-Systeme und -geräte - Multimedia-  
Heimnetzkonfiguration - Teil 1: Systemmodell  
(IEC 62608-1:2014)

This European Standard was approved by CENELEC on 2014-04-11. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

The text of document 100/2111/CDV, future edition 1 of IEC 62608-1, prepared by IEC/TC 100, "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62608-1:2014.

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) 2015-01-11
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-04-11

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

## Endorsement notice

The text of the International Standard IEC 62608-1:2014 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 62481-1	NOTE	Harmonised as EN 62481-1.
IEC 62481-2	NOTE	Harmonised as EN 62481-2.
IEC 62481-3	NOTE	Harmonised as EN 62481-3.
IEC 62514	NOTE	Harmonised as EN 62514.

## Annex ZA (normative)

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

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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>
ISO/IEC 7498-1	1994	Information technology - Open Systems Interconnection - Basic Reference Model: The Basic Model	-	-

## CONTENTS

INTRODUCTION.....	5
1 Scope.....	6
2 Normative reference .....	6
3 Terms and definitions .....	6
4 Model .....	7
4.1 General.....	7
4.2 Configurator .....	7
4.3 Configured agent .....	7
4.4 System model .....	7
4.5 Configuration model .....	8
5 Network configuration framework.....	9
5.1 Configuration protocol.....	9
5.2 Configuration data model and metadata .....	9
Bibliography.....	10
Figure 1 – Configurator system model.....	8
Figure 2 – Information and configuration request model of the configurator.....	8

## INTRODUCTION

As well as electronic power, network connectivity is necessary in order to use electronic devices at home. Some applications running on the devices do not work without an inside and outside network.

When a device connects to a home network, an appropriate network service needs to already be in place. Since network connections are a precondition of many applications, such as IEC 62481-1, IEC 62481-2 and IEC 6248-3, a digital living network alliance (DLNA) network management function is necessary.

Sometimes applications need to change the configuration of another device, gateway, and so on. Since it is too difficult to change the configuration of a device manually, an automatic configuration mechanism is needed for the home network. IEC 62514 defines the functions of a multimedia home gateway. This standard complements the multimedia home gateway by enabling to establish network connections automatically.

# MULTIMEDIA HOME NETWORK CONFIGURATION – BASIC REFERENCE MODEL –

## Part 1: System model

### 1 Scope

This part of IEC 62608 specifies the basic reference model to configure devices connected to a home network with a configuration framework for network applications running on such devices.

This part of IEC 62608 applies to devices that are connected via cables and switched on and that support the IP protocol. The reference model covers inside and outside network connectivity.

This standard specifies the system model and functions that each component should support.

### 2 Normative reference

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

#### 3.1

##### **home network**

network that connects equipment to be configured in the model

Note 1 to entry: The network is built mainly in a home.

#### 3.2

##### **home gateway**

equipment that relays a communication from target equipment to outside the home network

#### 3.3

##### **layer 2**

data link layer of the commonly referenced multilayered communication model, open systems interconnection

Note 1 to entry: A description of OSI-layers is given in ISO/IEC 7498-1:1994, Clause 6.

#### 3.4

##### **layer 3**

network layer of the commonly referenced multilayered communication model, open systems interconnection



Note 1 to entry: A description of OSI-layers is given in ISO/IEC 7498-1:1994, Clause 6.

### **3.5**

#### **configurator**

entity that configures equipment

### **3.6**

#### **configured agent**

entity that sends configuration information to the configurator

## **4 Model**

### **4.1 General**

This International Standard defines the configurator that manages configuration information of equipment connected to a home network and the configured agent that is managed by the configurator.

### **4.2 Configurator**

The configurator configures equipment as needed and runs on a home network.

The configurator assumes that all devices are set up on the layer 2 network, i.e. that all devices are cable connected with pieces of network equipment. Based on the environment, the configurator supports the creation of a layer 3 connection and application running on consumer equipment.

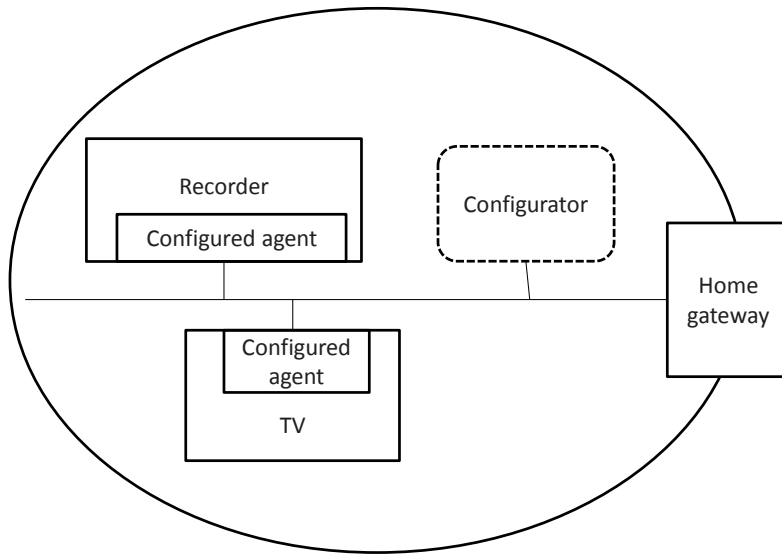
### **4.3 Configured agent**

The configured agent sends configuration information to the configurator and configures equipment requested by the configurator. The configured agent runs on the equipment managed by the configurator.

The configured agent specifies the procedure needed to establish the connection with the configurator on the layer 2 network. As soon as the connection is established, the configured agent operates as required by the configurator. The function of the configured agent consists of collecting information from the devices, changing the device configuration, and so on.

### **4.4 System model**

Figure 1 shows the system model of the configurator and configured agent.

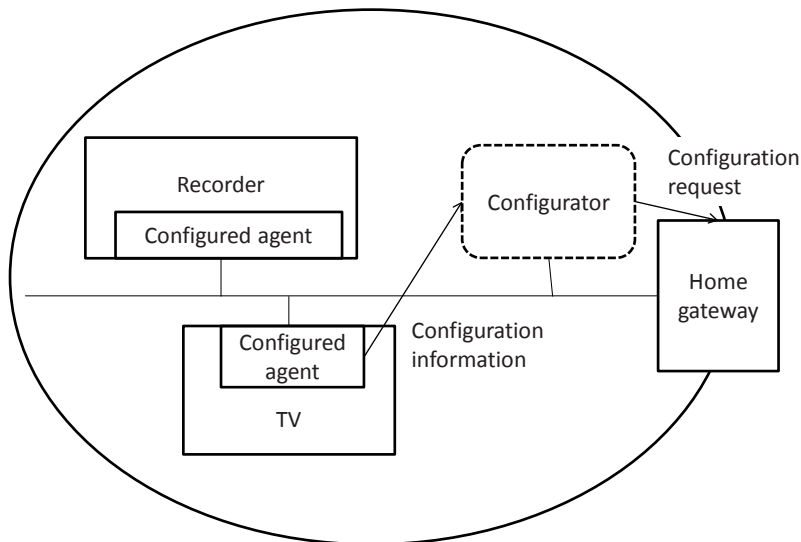


IEC 0914/14

Figure 1 – Configurator system model

4.5 Configuration model

The configurator obtains the configuration information from the configured agent running on each equipment and requests it to configure as needed. The configurator also requests configurations to the home gateway. Figure 2 shows how the configurator obtains information and the configuration request model.



IEC 0915/14

Figure 2 – Information and configuration request model of the configurator

## **5 Network configuration framework**

### **5.1 Configuration protocol**

A protocol is required in order to communicate between the configurator the configured agent and the home gateway. A protocol specification will be defined in IEC 62608-2<sup>1</sup>.

### **5.2 Configuration data model and metadata**

A data model and metadata are required in order to construct the configured agent by the configurator. The specification of data model and metadata will be described in IEC 62608-3<sup>1</sup>.

---

<sup>1</sup> Under consideration.

## Bibliography

IEC 62481-1, *Digital living network alliance (DLNA) home networked device interoperability guidelines – Part 1: Architecture and protocols*

IEC 62481-2, *Digital living network alliance (DLNA) home networked device interoperability guidelines – Part 2: DLNA media formats*

IEC 62481-3, *Digital living network alliance (DLNA) home networked devices interoperability guidelines – Part 3: Link protection*

IEC 62514, *Multimedia gateway in home networks – Guidelines*

IEC 62608-2, *Multimedia home network configuration – Basic reference model – Part 2: Protocol<sup>2</sup>*

IEC 62808-3, *Multimedia home network configuration – Basic reference model – Part 3: Data model<sup>2</sup>*

---

---

<sup>2</sup> Under consideration.



# British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

## About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards-based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

## Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at [bsigroup.com/standards](http://bsigroup.com/standards) or contacting our Customer Services team or Knowledge Centre.

## Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at [bsigroup.com/shop](http://bsigroup.com/shop), where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

## Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to [bsigroup.com/subscriptions](http://bsigroup.com/subscriptions).

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

**PLUS** is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit [bsigroup.com/shop](http://bsigroup.com/shop).

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email [bsmusales@bsigroup.com](mailto:bsmusales@bsigroup.com).

## BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

## Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

## Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

## Useful Contacts:

### Customer Services

**Tel:** +44 845 086 9001

**Email (orders):** [orders@bsigroup.com](mailto:orders@bsigroup.com)

**Email (enquiries):** [cservices@bsigroup.com](mailto:cservices@bsigroup.com)

### Subscriptions

**Tel:** +44 845 086 9001

**Email:** [subscriptions@bsigroup.com](mailto:subscriptions@bsigroup.com)

### Knowledge Centre

**Tel:** +44 20 8996 7004

**Email:** [knowledgecentre@bsigroup.com](mailto:knowledgecentre@bsigroup.com)

### Copyright & Licensing

**Tel:** +44 20 8996 7070

**Email:** [copyright@bsigroup.com](mailto:copyright@bsigroup.com)



...making excellence a habit.™