

Communication systems for meters - Wireless mesh
networking for meter data exchange - Part 2:
Networking layer and stack specification

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16836-2:2016 sisaldab Euroopa standardi EN 16836-2:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 16836-2:2016 consists of the English text of the European standard EN 16836-2:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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ICS 33.200, 35.100.10, 35.100.30

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English Version

Communication systems for meters - Wireless mesh
networking for meter data exchange - Part 2: Networking
layer and stack specification

Systèmes de communication des compteurs - Réseau
maillé sans fil pour l'échange de données de compteurs
- Partie 2 : Spécifications des couches réseau et de la
pile de protocoles

Kommunikationssysteme für Zähler - Drahtloses Mesh-
Netzwerk für den Zählerdatenaustausch - Teil 2:
Vermittlungsschicht und Stapel-Spezifikation

This European Standard was approved by CEN on 3 September 2016.

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European foreword

This document (EN 16836-2:2016) has been prepared by Technical Committee CEN/TC 294 “Communication systems for meters”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

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

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The EN 16836 series of standards details requirements for gas meters, water meters and heat meters that can interoperate with products in a mesh network that conform to this standard through a smart energy profile application layer. This standard refers to documents made freely available by the ZigBee Alliance, an organization that manages a mesh network specification (see www.zigbee.org/about/centc294).

This series of standards specifies how a mesh networking radio specification applies within the scope of European standards at the application layer, networking layer and also medium access control/physical layer (MAC/PHY).

EN 16836 consists of the following parts:

- EN 16836-1, *Communication systems for meters – Wireless mesh networking for meter data exchange – Part 1: Introduction and standardization framework*
- EN 16836-2, *Communication systems for meters – Wireless mesh networking for meter data exchange – Part 2: Networking layer and stack specification*
- EN 16836-3, *Communication systems for meters – Wireless mesh networking for meter data exchange – Part 3: Energy profile specification dedicated application layer*

This standard series is created in compliance with the terms of a memorandum of understanding (MOU) between CEN/CELELEC and the ZigBee Alliance. The principles underpinning the relationship between CEN/CENELEC and the ZigBee Alliance are described in the Consortium Bridge procedure. A copy of the MOU and the Consortium Bridge can be obtained from CEN/CENELEC.

NOTE The term 'ZigBee' and the ZigBee Logo are registered trademarks of the ZigBee Alliance and their use is subject to the conditions of membership.

1 Scope

This European Standard specifies the requirements for the medium access control/physical layer (MAC/PHY) and networking layer of a communication protocol for the exchange of data from metering devices to other devices within a mesh network. This standard makes reference to a number of documents whereby core requirements are specified. This referencing is in compliance with the Bridge Consortium and additionally the Memorandum of Understanding between the ZigBee Alliance and CEN/CENELEC.

2 Normative references

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.

EN 16836-1:2016, *Communication systems for meters and remote reading of meters – Wireless mesh networking for meter data exchange — Part 1: Introduction and standardization framework*

ZigBee Specification – 05-3474 Rev 20, September 7, 2012

ZigBee Pro Stack Profile – 07-4855 Rev 05, January 2008

NOTE The above ZigBee documents can be obtained from www.zigbee.org/about/centc294.

3 Terms, definitions, acronyms and abbreviations

For the purposes of this document, the terms, definitions, acronyms and abbreviations given in ZigBee Specification – 05-3474 Rev 20 and ZigBee Pro Stack Profile – 07-4855 Rev 05 apply.

4 Requirements

The MAC/PHY and networking layer of the communication protocol for the exchange of data from metering devices to other devices within a mesh network shall conform to the requirements given in the following:

EN 16836-1:2016, *Communication systems for meters and remote reading of meters – Wireless mesh networking for meter data exchange — Part 1: Introduction and standardization framework*

ZigBee Specification – 05-3474 Rev 20, September 7, 2012

ZigBee Pro Stack Profile – 07-4855 Rev 05, January 2008