SLOVENSKI STANDARD
SIST EN 62516-3:2013

01-julij-2013

Sprejemniki za prizemno digitalno večpredstavnostno radiodifuzijo (T-DMB) - 3. del: Skupni API (IEC 62516-3:2013)

Terrestrial digital multimedia broadcasting (T-DMB) receivers -- Part 3: Common API (IEC 62516-3:2013)

Empfänger für terrestrischen Multimediadigitalrundfunk (T-DMB) - Teil 3: Allgemeine API (IEC 62516-3:2013)

Récepteurs pour diffusion multimédia numérique terrestre (T-DMB) - Partie 3: API commune (CEI 62516-3:2013)

Ta slovenski standard je istoveten z: **EN 62516-3:2013**

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33.160.25	Televizijski sprejemniki	Television receivers
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EUROPEAN STANDARD
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Terrestrial digital multimedia broadcasting (T-DMB) receivers - Part 3: Common API (IEC 62516-3:2013)

Récepteurs pour diffusion multimédia numérique terrestre (T-DMB) - Partie 3: API commune (CEI 62516-3:2013)

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

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Foreword

The text of document 100/2020/CDV, future edition 1 of IEC 62516-3, prepared by Technical Area 1 “Terminals for audio, video and data services and contents” of IEC/TC 100 “Audio, video and multimedia systems and equipment” was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62516-3:2013.

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)	2014-01-15
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-04-15

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The text of the International Standard IEC 62516-3:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 62104:2003	NOTE	Harmonised as EN 62104:2007 (not modified).

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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 62516-1	2009	Terrestrial digital multimedia broadcasting (T-DMB) receivers - Part 1: Basic requirement	EN 62516-1	2009
IEC 62516-2	2011	Terrestrial digital multimedia broadcasting (T-DMB) receivers - Part 2: Interactive data services using BIFS	EN 62516-2	2011
ETSI EN 300 401 V1.3.3	-	Radio Broadcasting Systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers	-	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

Terrestrial digital multimedia broadcasting (T-DMB) receivers – Part 3: Common API

Récepteurs pour diffusion multimédia numérique terrestre (T-DMB) – Partie 3: API commune

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

TERRESTRIAL DIGITAL MULTIMEDIA BROADCASTING (T-DMB) RECEIVERS –

Part 3: Common API

FOREWORD

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International Standard IEC 62516-3 has been prepared by technical area 1: Terminals for audio, video and data services and contents, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

CDV	Report on voting
100/2020/CDV	100/2110/RVC

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.

A list of all parts in the IEC 62516 series, published under the general title *Terrestrial digital multimedia broadcasting (T-DMB) receivers*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability 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.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

TERRESTRIAL DIGITAL MULTIMEDIA BROADCASTING (T-DMB) RECEIVERS –

Part 3: Common API

1 Scope

This part of IEC 62516 describes the T-DMB common application program interface (API). It provides a software platform that, when combined with the T-DMB O/S, forms a universal interface for application programs. This interface allows application programs to be written in such a way that they run on any T-DMB receiver unit, as described in IEC 62516-1:2009 and IEC 62516-2:2011 regardless of its manufacturer.

This part of IEC 62516 also defines a software environment that allows multiple application programs to be interoperable on a single receiver unit by sharing the fixed resources of the receiver, and it provides a set of interfaces that the T-DMB middleware and the ASIC specific software use.

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.

IEC 62516-1:2009, *Terrestrial digital multimedia broadcasting (T-DMB) receivers – Part 1: Basic requirements*

IEC 62516-2:2011, *Terrestrial digital multimedia broadcasting (T-DMB) receivers – Part 2: Interactive data services using BIFS*

ETSI EN 300 401 v1.3.3, *Radio Broadcasting Systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers*

3 Abbreviations

ADC	Analog to Digital Converter
API	Application Programming Interface
ASIC	Application Specific Integrated Circuit
FIC	Fast Information Channel
HAL	Hardware Abstraction Layer
ISR	Interrupt Service Routine
MAC	Media Access Control
PAD	Program Associated Data
RF	Radio Frequency
R-S	Reed Solomon
SDIO	Secure Digital Input/Output
SI	Service Identifier
T-DMB	Terrestrial-Digital Multimedia Broadcasting

O/S Operating System

4 T-DMB common API overview

4.1 T-DMB receiver overview

A T-DMB receiver provides the device functionality specified in the T-DMB receivers (see IEC 62516-1:2009 and IEC 62516-2:2011). Figure 1 shows the block diagram of a typical T-DMB receiver. For the T-DMB receiver depicted in Figure 1, only those blocks that conform to the scope of this standard are shown.

Figure 1 also shows the T-DMB common API with respect to the T-DMB receiver block diagram.

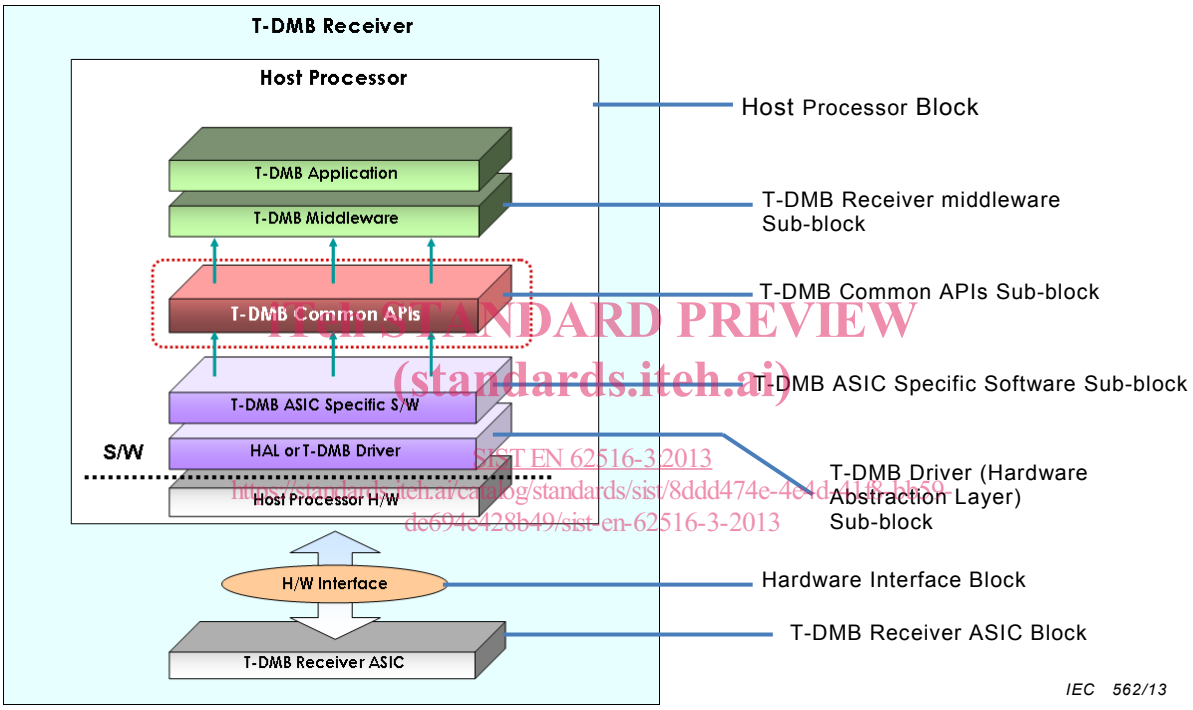

Figure 1 – Block diagram of a typical T-DMB receiver

4.2 T-DMB receiver ASIC block

The T-DMB receiver ASIC block represents the semiconductor hardware that provides the functionality of demodulating a T-DMB signal and retrieving data carried by the T-DMB physical layer. This block provides functionality like RF front-end, ADC, timing and frequency estimation, channel estimation, viterbi decoding, etc. In short this block provides the complete physical layer implementation of ETSI EN 300 401 v1.3.3. Depending upon the implementation, this block can also provide outer decoding functionality (e.g. R-S decoding and/or convolutional de-interleaving).

4.3 Host processor block

4.3.1 General

The host processor block represents the T-DMB functionality provided by the host processor in a T-DMB based device. In other words, this represents the host processor hardware and the software implementation residing in the host processor. The host processor block retrieves and processes the T-DMB information obtained from the T-DMB receiver ASIC block. The T-DMB information retrieved consists of multiplex configuration information received on fast