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Digital Video Broadcasting (DVB);
Extensions to the CI Plus™ Specification

EBU DVB

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Foreword

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The Digital Video Broadcasting Project (DVB) is an industry-led consortium of broadcasters, manufacturers, network operators, software developers, regulatory bodies, content owners and others committed to designing global standards for the delivery of digital television and data services. DVB fosters market driven solutions that meet the needs and economic circumstances of broadcast industry stakeholders and consumers. DVB standards cover all aspects of digital television from transmission through interfacing, conditional access and interactivity for digital video, audio and data. The consortium came together in 1993 to provide global standardization, interoperability and future proof specifications.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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Introduction

The DVB Common Interface specifications CENELEC EN 50221 [1] and ETSI TS 101 699 [2] describe a system whereby a removable Conditional Access CICAM, given the appropriate rights, unscrambles protected content and routes it back to the Host over the same interface. The Common Interface connector is an industry standard PCMCIA slot. The DVB Common Interface specifications were extended by the CI Plus specification [3], developed by CI Plus LLP, which provides common methods (i.e. methods that are independent of the up-stream CA system) for mutual authentication of the CICAM and Host, and link encryption over the return interface from the CICAM to the Host.

1 Scope

The present document specifies extensions to the CI Plus V1.3 specification [3], which was produced and continues to be published by CI Plus LLP.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

[1] CENELEC EN 50221 (02-1997): "Common interface specification for conditional access and other digital video broadcasting decoder applications".

[2] ETSI TS 101 699 (V1.1.1) (11-1999): "Digital Video Broadcasting (DVB); Extensions to the Common Interface Specification".

[3] CI Plus specification (V1.3.1) (09-2011): "Content Security Extensions to the Common Interface".

NOTE: Available from: http://www.CI Plus.com/data/CI Plus_specification_V1.3.1.pdf.

[4] Recommendation ITU-T H.222.0 (2014)/ISO/IEC 13818-1:2015: "Information technology -- Generic coding of moving pictures and associated audio information: Systems".

[5] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".

NOTE: Available from: http://tools.ietf.org/html/rfc4122.

[6] ETSI ES 202 184 (V2.3.1) (03-2013): "MHEG-5 Broadcast Profile".

[7] ETSI TS 102 809 (V1.1.1): "Digital Video Broadcasting (DVB); Signalling and carriage of interactive applications and services in Hybrid broadcast/broadband environments".

[8] ISO/IEC 14496-12:2012: "Information technology -- Coding of audio-visual objects -- Part 12: ISO base media file format".

[9] ISO/IEC 14496-14:2003: "Information technology -- Coding of audio-visual objects -- Part 14: MP4 file format".

[10] ETSI EN 300 468: "Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems".

[11] ETSI TS 101 162: "Digital Video Broadcasting (DVB); Allocation of identifiers and codes for Digital Video Broadcasting (DVB) systems".

[12] Open IPTV Forum: "Release 1 Specification, Volume 5 - Declarative Application Environment", V1.2, September 2012.

NOTE: Available from: http://www.oipf.tv/specifications.

[13] Open IPTV Forum: "Release 1 Specification, Volume 3 - Content Metadata", V1.2, September 2012.

NOTE: Available from: http://www.oipf.tv/specifications.

[14] ISO/IEC 23001-7:2016: "Information technology -- MPEG systems technologies -- Part 7: Common encryption in ISO base media file format files".

[15] ISO/IEC 23009-1: "Information technology -- Dynamic adaptive streaming over HTTP (DASH) -- Part 1: Media presentation description and segment formats".

[16] ETSI TS 102 034 (V1.4.1) (08-2009): "Digital Video Broadcasting (DVB); Transport of MPEG-2 TS Based DVB Services over IP Based Networks".

[17] IETF RFC 768: "User Datagram Protocol".

[18] IETF RFC 791: "Internet Protocol".

[19] IETF RFC 793: "Transmission Control Protocol".

[20] IETF RFC 3376: "Internet Group Management Protocol, Version 3".

[21] IETF RFC 1112: "Host extensions for IP multicasting".

[22] IETF RFC 2460: "Internet Protocol, Version 6 (IPv6) Specification".

[23] IETF RFC 4443: "Internet Control Message Protocol (ICMPv6) for the Internet Protocol, Version 6 (IPv6) Specification".

[24] "High-bandwidth Digital Content Protection System, Interface Independent Adaptation", Revision 2.2.

NOTE: Available from: https://www.digital-cp.com/hdcp-specifications.

[25] "Digital Transmission Content Protection Specification Volume 1 (Informational Version)", Revision 1.71.

NOTE: Available from: http://www.dtcp.com/specifications.aspx.

[26] Void.

[27] "High-bandwidth Digital Content Protection System", Revision 1.4.

NOTE: Available from: https://www.digital-cp.com/hdcp-specifications.

[28] IETF RFC 4291: "IP Version 6 Addressing Architecture".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced document is not necessary for the application of the present document but it assists the user with regard to a particular subject area.

[i.1] ETSI TS 102 727 (01-2010): "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.2.2".

[i.2] A173-2: "Second Generation Common Interface (CI); Part 2: Extensions to the CI Plus Specification (CI Plus 2.0)", June 2015.

NOTE: Available from https://www.dvb.org/resources/public/standards/a173-2_ci_plus_2_-_part_2.pdf.