

Edition 2.1 2019-01

FINAL VERSION

Digital audio – Interface for non-linear PCM encoded audio bitstreams applying IEC 60958 – Part 5: Non-linear PCM bitstreams according to the DTS (Digital Theater

Systems) format(s)



CONTENTS

1	Scope5			
2	Normative references			5
3	Terms, definitions, abbreviations and presentation convention			5
	3.1	Definitions		
	3.2	Abbre	viations	5
	3.3 Presentation convention			6
4	Mapping of the audio bitstream on to IEC 61937-1			6
	4.1 DTS burst-info			6
5	Format of DTS data-bursts			6
	5.1	.1 General		
	5.2	Pause data-burst		6
	5.3	Audio	data-bursts	7
		5.3.1	DTS type I	7
		5.3.2		8
		5.3.3		9
		535	DTS type IV profile definitions	13
Anr	nex A	ex A (informative) Effect of repetition period of data burst and Es on frame period		13
and	l maxi	imum d	ata rate in DTS type IV	16
Fig	ure 1	– DTS	type I data-burst	7
Figure 2 – Latency of DTS type II decoding				8
Figure 3 – DTS type II data-burst				8
Figure 4 – Latency of DTS type II decoding				9
Figure 5 – DTS type III data-burst				10
Figure 6 – Latency of DTS type III decoding				11
Figure 7 – DTS type IV single burst mode				13
Figure 8 – Decoder latency of DTS type IV single burst mode				13
Figure 9 – DTS type IV multi-burst mode				14
Figure 10 – Decoder latency for DTS type IV multi-burst mode				
Tab	ole 1 -	- Fields	of burst-info	6
Table 2 – Repetition period of the pause data-bursts				7
Table 3 – Data-type-dependent when DTS type I				7
Table 4 – Data-type-dependent when DTS type II				9
Table 5 – Data-type-dependent when DTS type III				10
Table 6 – Data-type-dependent information for DTS type IV				12
Table 7 – Bits of multi-burst control byte				14
Tab	Table A.1 – DTS type IV payload and frame repetition: some examples			

IEC 61937-5:2006+AMD1:2019 CSV © IEC 2019 - 3 -

INTERNATIONAL ELECTROTECHNICAL COMMISSION

DIGITAL AUDIO – INTERFACE FOR NON-LINEAR PCM ENCODED AUDIO BITSTREAMS APPLYING IEC 60958 –

Part 5: Non-linear PCM bitstreams according to the DTS (Digital Theater Systems) format(s)

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committee; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

DISCLAIMER

This Consolidated version is not an official IEC Standard and has been prepared for user convenience. Only the current versions of the standard and its amendment(s) are to be considered the official documents.

This Consolidated version of IEC 61937-5 bears the edition number 2.1. It consists of the second edition (2006-01) [documents 100/974/CDV and 100/1055/RVC] and its amendment 1 (2019-01) [documents 100/3101/CDV and 100/3163/RVC]. The technical content is identical to the base edition and its amendment.

This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.