



**ATSC**

ADVANCED TELEVISION  
SYSTEMS COMMITTEE

# Approved Changes to A/322, Physical Layer Protocol

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**Advanced Television Systems Committee**  
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The Advanced Television Systems Committee, Inc., is an international, non-profit organization developing voluntary standards and recommended practices for digital television. ATSC member organizations represent the broadcast, broadcast equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries. ATSC also develops digital television implementation strategies and supports educational activities on ATSC standards. ATSC was formed in 1983 by the member organizations of the Joint Committee on Inter-society Coordination (JCIC): the Electronic Industries Association (EIA), the Institute of Electrical and Electronic Engineers (IEEE), the National Association of Broadcasters (NAB), the National Cable Telecommunications Association (NCTA), and the Society of Motion Picture and Television Engineers (SMPTE). For more information visit [www.atsc.org](http://www.atsc.org).

### Revision History

| Version   | Date            |
|-----------|-----------------|
| Release 1 | 24 March 2020   |
| Release 2 | 20 January 2021 |
| Release 3 | 29 July 2022    |

## Approved Changes to A/322, Physical Layer Protocol

### 1. SCOPE

This document describes changes made to A/322, “Physical Layer Protocol,” since the 2017 version (dated 6 June 2017) was approved and adopted by reference in the FCC rules 47 CFR § 73.682. The summarized changes that were provided to the ATSC membership with the ballot of each revision are copied below. Note that these summaries are not intended to describe all of the details and ramifications incorporated in the changes. They are intended to provide a general overview of the nature of the changes of each given revision.

### 2. LIST OF CHANGES

#### 2.1 Revision of A/322:2017 with Amendment No. 1

Approved 26 December 2018

TG3/S32 had been collecting editorial changes against the June 2017 version of A/322 for over one year. All of the changes are clarifications, notes, typos, and small corrections. All of the changes were felt to be minor by the originating TG3/S32 Specialist Group.

#### 2.2 Revision of A/322:2018

Approved 23 January 2020

Since A/322:2018 was published, errata, and request for further clarifications were reported by TG3/S32 committee members and vendors. There were eight errata items reported and agreed to. In summary, the errata items were:

- Typo in Figure 4.1.
- Clarification of available cells in the last Preamble symbol (Section 7.2.5.2).
- Clarification of dummy modulation values (Section 7.2.6.5).
- Correction of concatenated code term (Section 3.4).
- Missing bracket in Annex G.1.
- Correction of BICM term.
- Clarification of `L1D_plp_fec_block_start`
- Correction of NoC value in Section 7.2.3.

#### 2.3 Revision of A/322:2020

Approved 20 January 2021.

Since A/322:2020 was published, errata, and request for further clarifications were reported by TG3/S32 committee members and vendors. There were five errata items reported and agreed to. In summary, the errata items were:

- Clarification of Type A LDPC Encoding (Section 6.1.3.1).
- Correction of Group-Wise Interleaver (Section 6.2.2).
- Correction and Clarification of Type B Block Interleaver (Section 6.2.3.2)
- Editorial fixes (missing underbar, small letter fix) in Section 7.2.3
- Correction of Frequency Interleaver (Section 7.3).

#### 2.4 Administrative Update A/322:2022-03

Normative and informative references to other ATSC standards and recommended practices updated to reference current version documents. No other changes.

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