

# Intel® Stress Bitstreams and Encoder (Intel® SBE) 2017 – AVS2 Release Notes (Version 2.3)

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## Overview

The **Intel® Stress Bitstreams and Encoder (Intel® SBE) 2017 – AVS2** is designed to ensure decoder compliance with AVS2\* format. Streams cover the feature sets and profiles of AVS2 format.

The Intel® SBE 2017 – AVS2 includes two types of streams: Syntax and Stress. Syntax streams are designed to test a certain subset of features. Stress streams include all the features covered by the bucket.

Compliant streams contain only allowed combinations of syntax elements and their levels to test decoder for unusual cases or boundary stress cases.

**Random Encoder**, a highly configurable and flexible syntax encoder tool. Unlike regular encoders, it is not intended to achieve compression but only designed to create a valid specification-compliant stream.

As an input, Random Encoder accepts a *YUV file* and a *PAR file* describing test settings: features to utilize, fixed values, random values. As an output, Random Encoder produces encoded bitstream and optionally writes a *YUV file* with internal reconstruction data. This file is used to validate that Random Encoder generated a proper compressed file and that the resulting bitstream is valid.

The package also includes the **AVS2 reference decoder**, with all SIMD optimizations disabled. This decoder is used to test all the provided bitstreams.

This document provides system requirements, installation instructions, the list of issues and limitations, and legal information.

To learn more about this product, visit the product webpage:

<https://software.intel.com/en-us/intel-stress-bitstreams-and-encoder>

## Changes History

### Version 2.3

Stress Bitstreams were updated for compatibility with AVS2 RD 15.0.  
AVS2 Random Encoder released.

### Version 2.2.3

Added visually clean streams.

### Version 2.2.2

Reference picture management was updated in Stress Bitstreams to avoid overflow of decoded picture buffer.

### Version 2.2.1

Stress Bitstreams were updated for compatibility with AVS2 RD 14.0.

### Version 2.2

Initial version of Stress Bitstreams and Random Encoder for AVS2. Stress Bitstreams are fully compliant with AVS2 RD 12.0.1.

## Installation

- Extract files from archive to the target hard drive.

## Package Contents

**Note:** <install-folder> - folder where **Intel® SBE 2017 – AVS2** is installed.

<install-folder>\	Contains <b>Intel® SBE 2017 - AVS2</b> Release Notes (this file), End User License Agreement (EULA), spreadsheet with detailed description of every bitstream, history document for each bitstream, Getting started document, Using Branch and Syntax Coverage Static View document, Syntax Coverage Report and User Guide document.
<install-folder>\Branch and Syntax Coverage Static View\	Contains "Branch and Syntax Coverage Static View" report (basecov.html) for the decoder.
<install-folder>\<profile>\streams	Contains compliance <b>AVS2 bitstreams</b> , their MD5 check sums and MD5 check sums for decoding results of each encoded file.

<install-folder>\encoder	Contains AVS2 Random Encoder for Windows*, Linux* and OS X*.
<install-folder>\encoder\parfiles	Contains parfiles for Intel® Stress Bitstreams and Encoder 2017 – AVS2 Encoder.
<install-folder>\decoder	Contains AVS2 Decoder (Reference) for Windows*, Linux* and OS X* and readme file.

## Known Limitations

1. Only one sequential B-frame is allowed.
2. Only one sequence header per stream is allowed.
3. Bitstream extensions are not supported in this version.
4. Scene picture functionality isn't fully covered.
5. Adaptive loop filter (ALF) is turned off when there is more than one slice per picture.
6. Encoder may produce invalid stream while encoding 1280x720 video using Main/106\_inter\_qp.json parfile and seed 787397556. As a workarund you can use another seed for this parfile.

## Attributions

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