DPP Compliance Programme
AMWA / UK DPP -- AS-11 UK DPP HD Shim v1.1
File Reader Tests

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CONTENTS	
	1. DOCUMENT OVERVIEW
	2. SCOPE OF DEVICES TO BE TESTED
	3. OVERALL PROCEDURE (OEM Testing to Certification)
	4. DOWNLOAD OF READER TEST FILES
	5. TESTING INSTRUCTIONS
	6. OEM to complete the RESULTS SHEET
	7. DECLARATION
	8. SUBMISSION TO THE DPP LAB
	9. Appendix - EXAMPLE RESULTS SHEET

| **1   DOCUMENT OVERVIEW** | This document is concerned with **File Reader Tests** for products that have the ability to read AS-11 DPP HD files and then either **play** the contents of the file to a video and audio monitor, and/or otherwise render the contents to a different format in devices which have **transcode** functionality as part of their operation.

It is the intention that these **Reader** functions are tested as part of the DPP Compliance Programme testing of a product to Certification Level, as detailed in this document.

If the device also writes AS-11 DPP HD files then you must also complete **Writer Tests** in order to qualify for Certification. Writer tests are carried out separately by the Compliance Programme and instructions for Writer testing are available elsewhere. If the device includes both reader and writer functions then both **Reader** and **Writer** tests must 'Pass' or 'Pass with Conditions' in order for a device to be Certified.

The following test procedure may be carried out by the OEM at any time by following these instructions. It principally involves downloading the set of AS-11 UK DPP HD Reader test files (download details below) and asking the product to read each one. These can be used by an **OEM to perform testing on their product**.

The ability to do this is to be assessed using criteria set out below, which includes checks for player functionality, and transcode functionality if present. (This is subject to change as new files and tests are included). This form is to be completed and returned to the DPP Compliance programme. Certification Level testing of reader functionality is then verified and endorsed by the DPP Compliance Programme. The overall procedure is listed below. |
|---|---|

2 SCOPE OF DEVICES TO BE TESTED (Currently)		Example
HD FILE READERS: INCLUDES	File reader devices with **Player functionality**: Devices that render the essence to an output suitable for display on a screen and loudspeakers, or baseband.	Software player
	File reader devices with **Transcode functionality**: Devices that render the essence to a format suitable for manipulation within the device and create something as an output, such as a file format in a different codec.	Transcoder; transcode functionality of an editor
DOES NOT INCLUDE	File reader devices with the primary functionality of format analyser or content analyser, where separate certification criteria are defined elsewhere.	AQC device; Loudness monitoring device

3 OVERALL PROCEDURE **(OEM Testing to Certification)**	1. OEM to follow the **DOWNLOAD OF READER TEST FILES** instructions as below 2. OEM to follow **TESTING INSTRUCTIONS** below 3. OEM to complete the **DECLARATION** below 4. OEM to email completed Form to the DPP: complianceprogramme@digitalproductionpartnership.co.uk 5. Validation of this File Reader Test form as a 'Pass' is carried out by the DPP Lab 6. If the device also includes Writer functionality then this will also require a 'Pass' or 'Pass with Conditions', in order for the **Product Test Report** to be issued. 7. DPP prepare a **Product Test Report**, and email this to the OEM 8. OEM applies to AMWA for Certification and sends the **Product Test Report**. The test results will appear on the AMWA Certification Authority web page where the Product Test Report will be viewable and may be downloaded.

4 DOWNLOAD OF READER TEST FILES	Go to the following URL: ftp://apmmdrop:47pokwyz@ftp.kw.bbc.co.uk/dpp_reader_test_files/ The AS-11 UK DPP HD test files are listed on this page. There are 11 test files, as of Aug 2015, but this number will likely grow. Checksums (md5 and sha1) are also provided. Select the required download link to download each file. Download all files, as we require the device being tested to access all files and specific results are to be noted.

5 TESTING INSTRUCTIONS
 	
(OEM to complete)
	1. Complete the general information tables below (with the blue headers):
	    6a Table 1 - GENERAL DETAILS
	    6b Table 2 - PRODUCT DESCRIPTION and CAPABILITIES
	
	2. For **Player** functionality testing please follow the instructions given with each table and record results in:
	    6c Tables 3 & 4 - PLAYER FUNCTIONALITY - TESTS RESULTS
	
	3. For **Transcode** functionality testing, if this functionality is included in the product, please follow the instructions given with each table and record results in:
	    6d Tables 5 & 6 - TRANSCODE FUNCTIONALITY - TESTS RESULTS
	
	4. Complete any other relevant details relating to AS-11 DPP file reading in:
	    6e NOTES
	
	5. If the product does not include specific functions which are requested in the results tables then write N/A ('Not Applicable') or cross-through those columns in the tables (Also see the instructions and notes with each table in sections 6c and 6d)

6a Table 1 - GENERAL DETAILS (OEM to complete)	
OEM name	Sony Corporation
Product name	Catalyst Edit
Product version	2016.3 Versions tested: Mac Edit: 2016.3.0.40 Win Edit: 2016.3.0.41
Date of tests	January 30, 2017
Name & contact details of person carrying out tests	Jim Kuch, james.kuch@sony.com

6b Table 2 - PRODUCT DESCRIPTION and CAPABILITIES (OEM to complete)	
Brief description of product / product type	Standalone software media editor application for Windows and Macintosh computers. Has ability to edit, assemble, apply effect, colour correct/grade sequences and layers of video and audio. It can render resultant timeline to other formats, and upload to cloud based services.
What are its primary functions in relation to AS-11 UK DPP Reader tests? Please list the main ones.	Plays and displays image and sound and transcoding
Does the device render both video and audio from the AS-11 DPP file for use by the device?	Yes
Player functionality: Does the device render to video on to a display? If so how is this presented to the display?	Renders to computer monitor via integrated or discrete graphics card. Display is either shown in inset window within application and/or in secondary window. Scale is selectable. Video can also be sent out external SDI card if present.
Player functionality: Is audio decoded to outputs suitable for monitoring purposes?	Yes, via L/R (stereo) output on computer's audio device with selectable channel routing/muting. Meters are visible for all channels.
Transcode functionality: Does the device render the AS-11 DPP video to a different file format as part of its	Yes, transcode (*Render* within application) operation can re-encode and re-wrap media to other

operation?	compression and file formats. Audio is currently limited to at most 8 channels in transcoded files but has full routing and mixing control of all tracks
Does the device perform a partial file read of video and/or audio?	Yes, sub clips are possible
Is there a display of media Timecode?	No, source TC is not displayed in Edit
Does the device read AS-11 DM (descriptive metadata) and/or UK DPP DM? If so how is this used and displayed?	No
Is there any display of programme segmentation / programme parting?	No
Does the product have the capability to jog, shuttle and jump to a new T/C?	Yes, timeline based TC not source's

Notes
- Not all products have all functionality. For compliance testing we need to identify the functions which are covered by a product when it is certified. Please show clearly which features are supported by the product being tested (Enter N/A for those which do not apply, and describe if necessary in the Notes section, 6e).
- Any resulting 'Product test Report' will be hosted and visible on the AMWA site and may include this detail.

Instructions for Player functionality
- Open each file in the product being tested
- Play each file checking the start, the end, and various random points throughout
- Be sure to actually watch the video and listen to the audio to check that it is playing correctly
- Check the player's ability to jog, shuttle, jump to a new T/C if this is an expected capability of the product

6c Table 3 - PLAYER FUNCTIONALITY - TESTS RESULTS - Each file in the set (OEM to complete)				
Filename	Video Plays OK? *(Also jog, shuttle, jump, if relevant?)*	Audio Plays OK?	Number of audio channels or tracks or the audio layout that is reported or displayed	Media duration value that is reported by the player
AS11_DPP_REF_HD_EXAMPLE_1	Yes	Yes	16	00:13:42:11
AS11_DPP_REF_HD_EXAMPLE_2	Yes	Yes	16	00:13:42:11
AS11_DPP_REF_HD_EXAMPLE_3	Yes	Yes	16	00:13:42:11
AS11_DPP_REF_HD_EXAMPLE_405	Yes	Yes ch3,4,13,14, 15,16 mute	16	00:02:15:11
AS11_DPP_HD_OEM_SAMPLE_136_B	Yes	Yes	16	00:01:05:00
AS11_DPP_HD_OEM_SAMPLE_155	Yes	Yes ch3,4 mute	4	00:03:45:21
AS11_DPP_HD_OEM_SAMPLE_166	Yes	Yes	16	00:07:04:16
AS11_DPP_HD_OEM_SAMPLE_179	Yes	Yes	16	00:08:01:14
AS11_DPP_HD_OEM_SAMPLE_185	Yes	Yes	16	00:07:51:15
AS11_DPP_HD_OEM_SAMPLE_198	Yes	Yes	16	00:07:45:04
AS11_DPP_HD_OEM_SAMPLE_514	Yes	Yes	16	00:07:50:05
Filename	A&V synchronised & seem to be of the	Descriptive Metadata Shown? *(Provide a*	Value of file start timecode that is reported	Programme parting (segmentation) shown? *(Provide a list of SOM timecodes and*

	same length?	*screenshot, etc.)*		*durations, or EOM timecodes, per part)*
AS11_DPP_REF_HD_EXAMPLE_1	Yes	n/a	n/a	n/a
AS11_DPP_REF_HD_EXAMPLE_2	Yes	n/a	n/a	n/a
AS11_DPP_REF_HD_EXAMPLE_3	Yes	n/a	n/a	n/a
AS11_DPP_REF_HD_EXAMPLE_405	Yes	n/a	n/a	n/a
AS11_DPP_HD_OEM_SAMPLE_136_B	Yes	n/a	n/a	n/a
AS11_DPP_HD_OEM_SAMPLE_155	Yes	n/a	n/a	n/a
AS11_DPP_HD_OEM_SAMPLE_166	Yes	n/a	n/a	n/a
AS11_DPP_HD_OEM_SAMPLE_179	Yes	n/a	n/a	n/a
AS11_DPP_HD_OEM_SAMPLE_185	Yes	n/a	n/a	n/a
AS11_DPP_HD_OEM_SAMPLE_198	Yes	n/a	n/a	n/a
AS11_DPP_HD_OEM_SAMPLE_514	Yes	n/a	n/a	n/a

Instructions for Player functionality, continued
- Carry out the following specific tests on the required test files

6c	Table 4 - PLAYER FUNCTIONALITY - TESTS RESULTS - Specific Tests (OEM to complete)	
Filename	Specific Test	Result
AS11_DPP_REF_HD_EXAMPLE_1	1a) What do you hear while listening to the audio for channel 1 at exactly 10:11:32:10?	n/a (can't access source TC in timeline)
	1b) Is this the same for channels 2, 3 and 4?	n/a
	1c) Looking at the displayed video, is the Video and audio exactly in-sync, or is video late or audio late?	Audio is in-sync and waveforms also indicate sync points are correct
AS11_DPP_ REF_HD_EXAMPLE_2	2a) At around 10:12:15:00 what is the duration of the monochrome ramp in seconds and frames?	n/a
	2b) Which audio channels do not have audio recorded on them during the line-up bars?	3, 4, 11-16
AS11_DPP_ REF_HD_EXAMPLE_3	3a) What is the T/C of the first frame of programme material at the start of the clip?	n/a
AS11_DPP_HD_OEM_SAMPLE_136_B	4a) What is the T/C of the last frame of countdown clock following Bars at the start of the clip?	n/a
	4b) During the programme, are all audio channels identified with the correct channel number, from 1 to 16?	Ch1 reports: mix down of other channels Ch2 reports: a mix down, ch2, mix down, mix down, mix down, mix down Ch 3 reports: ch3, ch2, ch3, ch3, ch3 All others identify only that channel
AS11_DPP_HD_OEM_SAMPLE_155	5a) What is the T/C of the first frame of programme video following the ident clock?	n/a

	5b) How many audio channels are there in the file?	4 channels, 3&4 are silence
AS11_DPP_HD_OEM_SAMPLE_179	6c) What is the T/C for the last frame of programme video before it cuts to black at the end of the clip?	n/a

Instructions for Transcode functionality

- Use the product to transcode the DPP Reader Test files to a **NEW SET OF FILES** in a different codec.
- Choose a codec for this with as close a capability to the original files as you can. For example, ideally with the same number of audio channels, and similar quality, and original source timecode carried through.
- Open each new file in a suitable player. Say what player was used for this in the **Notes section, 6e**.
- Play each file (as for the player tests in 6c and 6d) checking the start, the end, and various random points throughout.
- Be sure to actually watch the video and listen to the audio to check that it is playing correctly

6d Table 5 - TRANSCODE FUNCTIONALITY - TESTS RESULTS - Each NEW file in the set (OEM to complete)				
Filename	Video Plays OK? *(Also jog, shuttle, jump, if relevant?)*	Audio Plays OK?	Number of audio channels or tracks or the audio layout that is reported or displayed	Media duration value that is reported by the player
New file created from AS11_DPP_REF_HD_EXAMPLE_1	Yes	Yes	8 (see notes)	00:13:42:11
New file created from AS11_DPP_ AS11_DPP_REF_HD_EXAMPLE_2	Yes	Yes	8	00:13:42:11
New file created from AS11_DPP_ AS11_DPP_REF_HD_EXAMPLE_3	Yes	Yes	8	00:13:42:11
New file created from AS11_DPP_REF_HD_EXAMPLE_405	Yes	Yes	8	00:02:15:11
New file created from AS11_DPP_HD_OEM_SAMPLE_136_B	Yes	Yes	8	00:01:05:00
New file created from AS11_DPP_HD_OEM_SAMPLE_155	Yes	Yes	8 (see notes)	00:03:45:21
New file created from AS11_DPP_HD_OEM_SAMPLE_166	Yes	Yes	8	00:07:04:16
New file created from AS11_DPP_HD_OEM_SAMPLE_179	Yes	Yes	8	00:08:01:14
New file created from AS11_DPP_HD_OEM_SAMPLE_185	Yes	Yes	8	00:07:51:15
New file created from AS11_DPP_HD_OEM_SAMPLE_198	Yes	Yes	8	00:07:45:04
New file created from AS11_DPP_HD_OEM_SAMPLE_514	Yes	Yes	8	00:07:50:05
Filename	A&V synchronised & seem to be of the same	Descriptive Metadata Shown? *(Provide a*	Value of file start timecode that is reported	Programme parting (segmentation) shown? *(Provide a list of SOM timecodes and*

	length?	*screenshot, etc.)*		*durations, or EOM timecodes, per part)*
New file created from AS11_DPP_REF_HD_EXAMPLE_1	Yes	n/a	n/a	n/a
New file created from AS11_DPP_ AS11_DPP_REF_HD_EXAMPLE_2	Yes	n/a	n/a	n/a
New file created from AS11_DPP_ AS11_DPP_REF_HD_EXAMPLE_3	Yes	n/a	n/a	n/a
New file created from AS11_DPP_REF_HD_EXAMPLE_405	Yes	n/a	n/a	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_136_B	Yes	n/a	n/a	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_155	Yes	n/a	n/a	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_166	Yes	n/a	n/a	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_179	Yes	n/a	n/a	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_185	Yes	n/a	n/a	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_198	Yes	n/a	n/a	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_514	Yes	n/a	n/a	n/a

Instructions for Transcode functionality, continued
- Create a **NEW SUB-CLIP FILE** from the test material supplied, as detailed in the table below
- Carry out the following specific tests on the required test files

6d Table 6 - TRANSCODE FUNCTIONALITY - TESTS RESULTS - Specific Tests (OEM to complete)		
Filename	Specific Test	Result
New file created from AS11_DPP_REF_HD_EXAMPLE_1	1a) What is the T/C of the first frame of zone-plate at around 11 minutes and 20 seconds into the programme?	n/a
New file created from AS11_DPP_ AS11_DPP_REF_HD_EXAMPLE_2	2a) What is the T/C of the last frame of countdown clock following Bars at the start of the clip?	n/a
	2b) Do all audio channels have audio recorded on them during the programme?	Yes (each transcode contains 8 tracks – two transcodes were performed, one with ch1-8 and one with ch9-16)
New file created from AS11_DPP_ AS11_DPP_REF_HD_EXAMPLE_3	3a) What is the T/C of the last frame of countdown clock following Bars at the start of the clip?	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_136_B	4c) What is the T/C for the last frame of programme before it cuts to black/silence at the end of the clip?	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_155	5c) Which audio channels do not have audio recorded on them during the line-up bars and	3-8 (see notes, transcode has 8 channels)

	programme?	
New Sub-clip file created from AS11_DPP_REF_HD_EXAMPLE_3, as follows: In point: 10:01:40:00 Out point: 10:02:01:11 Include video and all audio channels	6a) Describe the video content, and audio content on tracks 1 and 2, during this clip	n/a
	6b) Describe the audio content on tracks 5 to 10 during this clip	n/a
New file created from AS11_DPP_HD_OEM_SAMPLE_179	7c) What is the T/C for the last frame of part one of the programme before it cuts to black and silence at the end of the Part 1?	n/a

6e NOTES (OEM to complete if there are any other relevant details)
Catalyst Edit Preview window and Timeline feature do not preserve source TC so affected tests were left **n/a** since all clips start with zero TC. Clips were added to an empty timeline and timeline's frame rate was set to 25.000 (opposed to default 50.00 which showed TC 50 field base). Audio attributes, clip duration and sync responses were based on the clip in this timeline setting. Catalyst Edit also requires clips to be added to a timeline to transcode (render). For transcode testing we added one source clip to an empty timeline and rendered it to XDCAM MPEG 422HD 1920x1080-50i 50 Mbps with 8ch audio. For each clip we did two renders with the first containing audio ch 1-8 and the second ch 9-16 (except source clip AS11_DPP_HD_OEM_SAMPLE_155 which has only 4 channels – only one render of 8 channels was created in this case). Audio was verified for all renders/transcodes. Catalyst Browse 2016.3 was the player used to confirm transcode results.

7 DECLARATION (OEM to complete)	**Please sign the declaration below, confirming that you agree to the following statement:** "I confirm that the information in this report has been completed honestly and is an accurate representation of the results obtained. Also, that these results provide a fair assessment of the product's ability to read and work with AS-11 DPP files in a way reasonably expected for a product of this type and functionality, and that these results were achieved when using the product in a configuration which would reasonably be regarded as normal operational use."
	<table><tr><td colspan="3">DECLARATION</td></tr><tr><td>Name</td><td>Date</td><td>Contact email</td></tr><tr><td>Jim Kuch</td><td>Jan 30, 2017</td><td>james.kuch@sony.com</td></tr></table>

8 SUBMISSION TO THE DPP LAB	Please advise the results of testing, and any other queries regarding this document, to: complianceprogramme@digitalproductionpartnership.co.uk

9 APPENDIX - EXAMPLE RESULTS SHEET

The following is provided as a guide to the level of detail required. The example is for a fictitious Reader device with some transcoder capability, with SDI and monitoring outputs.

6a GENERAL DETAILS (OEM to complete)	
OEM name	Company Ltd
Product name	Sprocket
Product version	V5.1
Date of tests	18-08-14
Name & contact details of person carrying out tests	an.other@email.com

6b PRODUCT DESCRIPTION (OEM to complete)	
Brief description of product / product type	Hardware transcoder; HD/SD SDI and File inputs; HD/SD SDI and File outputs; monitor outputs
What are its primary functions in relation to AS-11 UK DPP Reader tests? Please list the main ones.	i) AS-11 DPP HD file input decode to baseband (SDI/analogue audio) outputs; ii) AS-11 DPP HD file input to new file format outputs (eg: MPEG 50 Long GOP); iii) AS-11 DPP HD file input decoded to monitor outputs.
Does the device render both video and audio from the AS-11 DPP file for use by the device?	Yes, including 16 channels of audio
Player functionality: Does the device render to video on to a display? If so how is this presented to the display?	Yes, HDMI monitoring output
Player functionality: Is audio decoded to outputs suitable for monitoring purposes?	Yes, Audio L and R monitoring output, with selectable routing of input channels from I/P file
Transcode functionality: Does the device render the AS-11 DPP video to a different file format as part of its operation?	Yes, a range of output file formats and file wrappers are supported. Some allow for multichannel audio.
Does the device perform a partial file read of video and/or audio?	Yes, sub-clips may be produced
Is there a display of media Timecode?	Yes, on the monitor output
Does the device read AS-11 DM (descriptive metadata) and/or UK DPP DM? If so how is this used and displayed?	No
Is there any display of programme segmentation / programme parting?	Yes, as In/Out Timecodes on the monitoring output
Does the product have the capability to jog, shuttle and jump to a new T/C?	Yes

*The following is table is also provided as an **example** to the level of detail required, in this case for Player testing. Please note that the **details are made up**, and not correct for these files.*

6c PLAYER FUNCTIONALITY - TESTS RESULTS - Each file in the set (OEM to complete)				
Filename	Video Plays OK? *(Also jog, shuttle, jump, if relevant?)*	Audio Plays OK?	Number of audio channels or tracks or the audio layout that is reported or displayed	Media duration value that is reported by the player
AS11_DPP_REF_HD_EXAMPLE_1	Yes	Yes	16	00:00:10:00
AS11_DPP_ REF_HD_EXAMPLE_2	Yes	Yes	4	00:10:30:00
AS11_DPP_ REF_HD_EXAMPLE_3	Yes	Yes	16	00:13:42:08
AS11_DPP_HD_OEM_SAMPLE_136	No. Plays with a judder	Yes on ch 1 and 2, but mute on ch 3 to 16 during programme	16	00:01:05:00
AS11_DPP_HD_OEM_SAMPLE_155	Yes	Yes, but only on ch 3 and 4	4	00:03:45:00
Filename	A&V synchronised & seem to be of the same length?	Descriptive Metadata Shown? *(Provide a screenshot, etc.)*	Value of file start timecode that is reported	Programme parting (segmentation) shown? *(Provide a list of SOM timecodes and durations, or EOM timecodes, per part)*
AS11_DPP_REF_HD_EXAMPLE_1	Yes	N/A	09:59:30:00	In: 10:00:00:00 Dur: 00:13:24:00
AS11_DPP_ REF_HD_EXAMPLE_2	Yes	N/A	09:59:30:00	In: 10:00:00:00 Dur: 00:13:14:00
AS11_DPP_ REF_HD_EXAMPLE_3	Yes	N/A	01:58:00:00	In: 02:00:00:00 Dur: 00:13:28:00
AS11_DPP_HD_OEM_SAMPLE_136	Yes	N/A	09:59:30:00	Pt 1 In: 10:00:00:00 Pt 1 Dur: 00:00:50:00 Pt 2 In: 10:01:00:00 Pt 2 Dur: 00:01:55:00 Pt 3 In: 10:03:00:00 Pt 3 Dur: 00:02:00:00
AS11_DPP_HD_OEM_SAMPLE_155	Yes	N/A	09:58:00:00	In: 10:00:00:00 Dur: 00:05:10:00