

**Audio Interoperability Results**

Vendor	Encoder Vendor has submitted a transport stream that meets the requirements.
x	Encoder Vendor did not submit a Transport Stream that will meet the requirement for the test.
Vendor	Decoder Vendor
	No measurement performed or stream submitted
TS#	Transport Stream as defined in the accompanying documents.
#	Indicates a note related to the test is available at the bottom of table.
OK	Indicates there was no interoperability issues noted.
OK #	Indicates there was no interoperability issues noted for the video test but a note is available at the bottom of the table.
	Expected Failure due to lack of decoder support for audio format.
	Potential Interoperability Issue
	TS chosen to maximize vendor participation per audio type, requiring the minimal amount of listening tests.

**How to Interpret Results**

Explanation of Results: TS2 refers to the Transport Stream 2. The parameters of TS2 may be found in the accompanying documents. TS2 was generated by the HD MPEG-4 encoders listed in the top row. The test results show the audio interoperability result when the specified TS was received by the HD MPEG-4 decoders in the first column. The grey shaded boxes indicate that the encoder did not support the parameters of the TS to be tested and that no TS was supplied. The yellow shaded boxes indicate that the decoder did not support the audio format of the submitted TS tested. The number in a box refers to a note at the bottom of the test results to explain the results where necessary. The notation "OK" means that the TS generated by the encoder specified in the top row was fully interoperable with the decoder specified in the first column."

**TS Streams Available to vendors on FTP server (Pre-submitted and recorded live on site)**

Encoder Vendor	Decoder Vendor	Audio Type	TS	Encoder	Decoder	Encoder	Decoder	Encoder	Decoder
		Mpeg2 4Ch	TS1a	x	Ateme	Ericsson	x	x	x
		Mpeg2 4Ch	TS1b	Adtec	Ateme	Ericsson	x	x	NTT
Adtec	Adtec	Mpeg2 4Ch	TS2	Adtec	Ateme	Ericsson	Harris	IDC	NTT
Ateme	Ateme	PCM 8Ch	TS3	Adtec	Ateme	Ericsson	Harris	x	NTT
Ericsson	Ericsson	Mpeg2 4Ch	TS4	Adtec	Ateme	Ericsson	Harris	IDC	NTT
IDC	IDC	Mpeg2 4Ch	TS5	Adtec	Ateme	Ericsson	Harris	IDC	NTT
Harris	Harris	Mpeg2 4Ch	TS6	Adtec	Ateme	Ericsson	Harris	IDC	NTT
NTT	NTT	Mpeg2 4Ch	TS7	Adtec	Ateme	Ericsson	Harris	x	NTT
		Dolby-E 8Ch	TS8	Adtec	Ateme	Ericsson	Harris	x	NTT
		PCM 2Ch +	TS9	Adtec	Ateme	Ericsson	Harris	x	NTT
		AAC-LC 4Ch	TS10	x	Ateme	Ericsson	Harris	x	NTT
		Mpeg2 4Ch	TS11	Adtec	Ateme	Ericsson	Harris	IDC	NTT
		Mpeg2 4Ch	TS12	Adtec	Ateme	Ericsson	Harris	IDC	NTT
		Mpeg2 4Ch	TS13	Adtec	Ateme	Ericsson	Harris	IDC	NTT
		Mpeg2 4Ch	TS14	Adtec	Ateme	Ericsson	Harris	IDC	NTT
		Mpeg2 4Ch	TS15	Adtec	Ateme	Ericsson	Harris	IDC	NTT
		Mpeg2 4Ch	TS16	Adtec	Ateme	Ericsson	Harris	IDC	NTT
		Mpeg2 4Ch	TS17	Adtec	Ateme	Ericsson	Harris	IDC	NTT
		Dolby-E 8Ch	TS18	Adtec	Ateme	Ericsson	Harris	x	NTT
		PCM 2Ch +	TS19	Adtec	Ateme	Ericsson	Harris	x	NTT
		AAC-LC 4Ch	TS20	x	Ateme	Ericsson	Harris	x	NTT
		Mpeg2 4Ch	TS21	Adtec	Ateme	Ericsson	Harris	IDC	NTT
		Mpeg2 4Ch	TS22	Adtec	Ateme	Ericsson	Harris	IDC	NTT
	File Count			20	23	23	21	13	22

AUDIO MPEG2	Adtec	Ateme	Ericsson	Harris	IDC	NTT
TS2 Transport Stream Tested	TS2	TS2	TS2 Live	TS2	TS2 Live	TS2
Adtec	OK	OK	OK	2	OK	OK
Ateme	OK	OK	OK	OK	OK	OK
Ericsson	OK	OK	OK	OK	OK	OK
Harris	OK	OK	OK	OK	OK	OK
IDC	1	OK	OK	OK	OK	OK
NTT	OK	OK	OK	OK	OK	OK

Notes

- 1) Some occasional blocking in video decode resulted in audio hits. Otherwise audio ok.
- 2) Audio stuttering present on submitted file and live tests.

AUDIO DOLBY	Adtec	Ateme	Ericsson	Harris	IDC	NTT
TS18 Transport Stream Tested	TS18	TS18 Live	TS18 Live	TS18	x	TS18 Live
Adtec	OK	OK	2	OK		OK
Ateme	OK	OK	OK	OK		OK
Ericsson	OK	OK	OK	OK		OK
Harris	OK	OK	OK	OK		OK
IDC (1)	OK	OK	OK	OK		OK
NTT	OK	OK	OK	OK		OK

Notes

- 1) IDC - HDSDI audio embedding caused Dolby-E CRC errors, using rear connector AES out to Dolby decoder no errors.
- 2) Adtec decoder shows PCM out, no audio.  
Adtec advises this issue has been corrected since the test event as of firmware version 1.05.06

AUDIO PCM	Adtec	Ateme	Ericsson	Harris	IDC	NTT
TS19 Transport Stream Tested	TS19	TS19	TS19 Live	TS19	x	TS19 New (2)
Adtec	1	1	1	1		1
Ateme	OK	OK	OK	OK		OK
Ericsson	OK	OK	OK	OK		OK
Harris	OK	OK	3	OK		OK
IDC	OK	OK	OK	OK		OK (4)
NTT	OK	OK	OK (2)	OK		OK

Notes

- 1) no audio
- 2) Encoder and Decoder process 16bit or 20bit audio, 24bit is not supported.
- 3) Some occasional blocking in video decode resulted in audio hits. Otherwise audio ok.
- 4) Decoder reported audio as Dolby, but Dolby decoder reports PCM stream and audio ok.

AUDIO AAC	Adtec	Ateme	Ericsson	Harris	IDC	NTT
TS20 Transport Stream Tested	x	TS20 Live	TS20	TS20	x	TS20
Adtec		1	1	1		1
Ateme		OK	OK	OK		OK
Ericsson		OK	OK	OK		OK
Harris		OK	OK	OK		OK
IDC		1	1	1		1
NTT		OK	OK	OK		OK

Notes

- 1) No decoder support for AAC audio format.