File Specifications

See below for additional Country Specifications

Files must be exact duration; first frame to last frame. No leader, clapper, clock, bars, black, or audio tone.

IMX30 Standard Definition

Video File	File:	*IMX30 OP1a MXF wrapped or QuickTime MOV*
	File Extension:	*.mov or .mxf*
	File Chroma Encoding:	*4:2:2*
	Encoding Bitrate:	*30Mbit/sec*
	Encoding GOP:	*I frame only*
	MPEG **Encoding** Type:	*Interlaced TFF*
	Video Standard:	*PAL or NTSC depending on broadcaster requirements*
	Levels:	*Standard Video Levels BT.601 (16-235. Not RGB 0-255)*
	Aspect Ratio:	*16/9 or 4/3 per destination requirements*
	Frame Size (H x V pixels):	*720 x 576 (PAL) or 720 x 486 (NTSC)*
	Frame Rate (fps):	*25.00 (PAL) or 29.97 (NTSC)*
	Picture **Scan** Type:	*Interlaced TFF or Progressive source material*
	Duration:	*As specified at upload time mm:ss:ff*
Audio	Encoding:	*WAV – contained within same .mov / .mxf wrapper*
	Audio Channels:	*Single Stereo Pair (Note 1)*
	Audio Streams	*1*
	Audio Sample Rate:	*48kHz*
	Audio Bit Depth:	*16bit or 24bit (16bit recommended)*
	Maximum Permitted Level:	*Refer to Country Specifications below*
	Loudness (if required):	*-24LKFS±1dB Measured to ITU-R BS1770-3 (EBU R128)*
	Silence (if required):	*Defined as below -60dBFS peak*

XDCamHD High Definition (broadcasters accepting HD, or IMD downconversion)

Video File	File:	*XDCamHD 422 QuickTime MOV or OP1a MXF wrapped*
	File Extension:	*.mov or .mxf*
	File Chroma Encoding*:*	*4:2:2*
	Encoding Bitrate:	*50Mbit/sec*
	Encoding GOP:	*12 (PAL), 15 (NTSC)*
	MPEG **Encoding** Type:	*Interlaced TFF*
	Video Standard:	*HDTV 1080/50I (PAL), 1080/59.94I (NTSC)*
	Levels:	*Standard Video Levels BT.709 (16-235. Not RGB 0-255)*
	Aspect Ratio:	*16/9 with 1:1 Pixel Aspect Ratio*
	Frame Size (H x V pixels):	*1920 x 1080*
	Frame Rate (fps):	*25.00 (PAL), 29.97 (NTSC)*
	Picture **Scan** Type:	*Interlaced TFF or Progressive source material*
	Duration:	*As specified at upload time mm:ss:ff*
Audio	Encoding:	*WAV/PCM – contained within same .mov / .mxf wrapper*
	Audio Channels:	*Minimum 2*
	Audio Sample Rate:	*48kHz*
	Audio Bit Depth:	*24bit or 16bit (24bit recommended)*
	Maximum Permitted Level:	*Refer to Country Specifications below*
	Loudness (if required):	*-24LKFS±1dB Measured to ITU-R BS1770-3 (EBU R128)*
	Silence (if required):	*Defined as below -60dBFS peak*

Notes

1. IMX.mxf files are accepted with 4 audio channels (e.g. Premiere generated), but only the first 2 channels will be used.
2. IMX files have black VBI at top of frame. Non-QT players, e.g. VLC, correctly show the full 720x608 (PAL) or 720x512 (NTSC) file size with the black bar. Active picture is still 720x576 (PAL) or 720x480 (NTSC)
3. IMD offers a high-quality downconversion for selected SD stations, so that only a single HD version need be uploaded
4. Audio measurements:
    i. –x dBFS means 'x' dB below full-scale, measured as instantaneous or sample peaks
    ii. –x dBTP means 'x' dB below full-scale, measured as true or reconstructed peaks per BS 1770-3

The encoding process and final quality remains the responsibility of the sender. IMD Cloud cannot accept liability for incorrect or low-quality encoding.

Country Specifications

IMD Cloud has special QCs for each Country. Contact us for more information.

Australia

- File Types: IMX30 PAL 16x9 & XDCamHD50. Note that select stations are moving to HD only
- Aspect Ratio: 16x9
- Max Audio Peaks: -2 dBTP
- Loudness: Commercial audio loudness must measure -24 LKFS. Allowable variance of +/-1 LKFS.
- Silence: First 12 frames and last 12 frames of video must be silent.
- Key Number: Must be capital letters and numbers only, not exceeding 13 characters e.g. IMDTEST00001

China

- File Types: IMX30 PAL
- Aspect Ratio: 4x3
- Max Audio Peaks: -9 dBFS

Hong Kong

- File Types: IMX30 PAL & XDCamHD50
- Aspect Ratio: 4x3 or 16x9
- Max Audio Peaks: -9 dBFS

India

- File Types: IMX30 PAL & XDCamHD50
- Aspect Ratio: 4x3 or 16x9
- Max Audio Peaks: -9 dBFS
- Loudness: Commercial audio loudness must measure -24 LKFS. Allowable variance of +/-1 LKFS.

Indonesia

- File Types: IMX30 PAL
- Aspect Ratio: 4x3
- Max Audio Peaks: -9 dBFS

Japan

- File Types: XDCamHD60
- Aspect Ratio: 16x9
- Max Audio Peaks: -1 dBTP - if dBTP measurement is not available then -3dBFS
- Loudness: Commercial audio loudness must measure -24 LKFS. Allowable variance of +/-1 LKFS.
- Silence: First 15 frames and last 15 frames of video must be silent.

Malaysia

- File Types: IMX30 PAL
- Aspect Ratio: 4x3
- Max Audio Peaks: -9 dBFS

Myanmar

- File Types: IMX30 NTSC
- Aspect Ratio: 4x3
- Max Audio Peaks: -9 dBFS

New Zealand

- File Types: IMX30 PAL 16x9 & XDCamHD50. Note that select stations are moving to HD only
- Aspect Ratio: 16x9
- Max Audio Peaks: -2 dBTP
- Key Number: www.commercialapprovals.co.nz/news_cab.php#key_numbers_2012
- Loudness: Commercial audio loudness must measure -24 LKFS. Allowable variance of +/-1 LKFS.
- Note: IMD Cloud will autocorrect over-loudness levels of up to -10 LKFS (14dB of correction)

Philippines

- File Types: IMX30 NTSC (Local Channels) & IMX30 PAL (Cable Channels)
- Aspect Ratio: 4x3
- Max Audio Peaks: -9 dBFS

Singapore

- File Types: IMX30 PAL & XDCamHD50
- Aspect Ratio: 4x3 or 16x9
- Max Audio Peaks: -9 dBFS
- Loudness: Commercial audio loudness must measure -24 LKFS. Allowable variance of +/-1 LKFS.

Thailand

- File Types: IMX30 PAL & XDCamHD50 (select stations are moving to only HD)
- Aspect Ratio: 4x3
- Max Audio Peaks: -9 dBFS

Vietnam

- File Types: IMX30 PAL & XDCamHD50 (select stations are moving to only HD)
- Aspect Ratio: 4x3 or 16x9
- Max Audio Peaks: -9 dBFS