Berlinale Technical Requirements

This document provides combined technical information for both the film selection process and the Festival's and EFM's cinema screenings.

Changes for 2019

Blu-rays and DVDs are no longer accepted

We no longer accept Blu-ray or DVD discs. This applies to the film selection process as well as to the final materials for cinema presentation in the Festival or the EFM. For the film selection process, we recommend uploading your film to your My Account at www.berlinale.de.

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Deadlines

Please observe the deadlines below for the film selection process as well as for the screenings during the festival and the European Film Market. We do not guarantee screenings of material received after the deadlines.

Selection Process

The deadline for uploading or delivering feature-length films for the selection screenings is **October 31, 2018,** while short films must be uploaded or delivered to the festival's Film Office by **November 15, 2018**.

If you plan to submit an encrypted DCP for the selection process we ask you to issue a DKDM valid from the day the DCP arrives until **January 24, 2019**.

Festival and European Film Market Screenings

The delivery deadline for all cinema presentation material including DKDMs is **January 25, 2019**. This deadline applies to all participants and EFM clients. All material has to arrive at the Berlinale Film Office by that date.
Meeting this deadline is especially important since all media - for festival and EFM alike - must pass a comprehensive and time-consuming quality management process before their first screening.

Express Handling Fee
For European Film Market screenings only, we offer an Express Handling service for all materials delivered even after the deadline. An **Express Handling Fee applies**.
Please contact the Film Office in advance to arrange for Express Handling of your film at the EFM. In that case, the latest possible date for delivery is **5 days** before the first screening of the film.

Accepted Formats

Overview

Format	For selection process	For Festival / EFM presentation
H.264 Upload	**preferred**	not accepted
DCP	accepted	**preferred**
ProRes Quicktime	not accepted	accepted
Blu-ray / DVD	not accepted	not accepted
Film (70mm, 35mm, 16mm)	not accepted	Contact Film Office for details
Tapes (HDCAM, Betacam, etc.)	not accepted	not accepted

H.264 Uploads via MyAccount

File Format	
Size Aspect ratio	1920 x 1080 px 16:9 HD
Video codec	H.264 high profile
Audio codec min. bit rate	AAC / 320 Kbit/s sampling rate 48 kHz 10.000 Kbit/s
Subtitles	Subtitles (where necessary) must be "burned-in"

If your film is only available in a different file format or on Blu-ray/DVD, a conversion to H.264 is needed. File conversion is offered by the software HandBrake for example, which is open source (GPLv2) and available for all major operating systems.

DCP

Media	
Aspera Upload	Upload using our Aspera Servers. See Delivery for more details.
Hard Drive	USB 3.0 or CRU hard drive (SSD preferred) Linux formatted (ext2/ext3) as per ISDCF recommendation. See this PDF for details.

Naming	
DCP Naming	We can only accept DCPs that follow the latest ISDCF DCP Naming Convention (Version 9.5). Please see ISDCF website for details.

Image	
Image Size	HD, Full, Flat or Scope @ 2K or 4K
Encoding	JPEG 2000 (variable bitrate preferred)
Bitrate	<= 250 MBit/s
3D	Available in some venues. See "Venues" for details.
HFR	Available in most venues. See "Venues" for details.
EclairColor	Available in some venues. Contact Film Office for details.
DolbyVision	Not accepted

Please note: We can only guarantee the correct side-masking for DCPs that are using the entire area of **Full, Flat, Scope or HD containers**. For all other pillar- or letterboxed formats we will do our best to position the side-masking as accurately as possible.

Sound	
Audio Format	2.0* and 5.1 (7.1, Atmos and Auro in selected venues, see "Venues")
Channel Layout	As recommended by ISDCF. See PDF for details.

*****Please note:** All Stereo (2.0) DCPs will be **upmixed** to 5.1 during playback unless you explicitly request stereo playback. We do not recommend stereo playback in larger venues due to the missing center channel.

Subtitles	
Format	We prefer subtitles to be burned into the picture but XML and PNG subtitles are also accepted. See subtitles for more information. Please note that the image can be cropped by up to 3% during projection

KDMs / Encryption

Since 2012, we request **Distribution KDMs** (DKDMs) for all **encrypted DCPs**. The keys have to be uploaded to our servers via web upload and are automatically verified upon entry. We cannot accept DKDMs sent by e-mail. All DKDMs must be valid from the moment the DCP arrives in Berlin until the day the festival/EFM ends.

You will automatically receive an e-mail containing personalized login information to our DCP and KDM upload portal. Please do not pass this information on to any third parties (postproduction companies, labs, service providers), but instead contact us to have a separate account created for your contractors.

Using DKDMs is currently the only alternative for managing the vast number of DCP screenings during the Berlinale and the EFM. Without them, the festival/EFM would not be able to execute suitable quality assurance measures and to exercise its responsibility for the smooth functioning of all screenings.

All DKDMs should be SMPTE ST 430-1 compliant and in the "Modified Transitional 1" formulation as per ISDCF guidelines – see PDF for details.

All DKDMs should follow the KDM Naming Convention (see website).

ProRes

All ProRes files will be converted to DCP by the Festival, this process is free of charge.

Image	
Codec	ProRes, ProRes 444, ProRes HQ
Frame Dimensions	HD (1920 x 1080) or 2K (1998 x 1080)
Scanning Method	progressive
Colour Sampling	4:2:2 or 4:4:4
Frame rates	23.98 fps, 24 fps, 25 fps, 29,97 fps
Gamma	Apple ProRes codecs have a native gamma of 2.2

Sound	
Audio Format	2.0 Stereo* or 5.1 Linear PCM
Channel Layout	L-R or L-R-C-Sub-LS-RS

*Please note: All Stereo (2.0) files will be **upmixed** to 5.1 during playback unless you explicitly request stereo playback. We do not recommend stereo playback in larger venues due to the missing center channel.

Subtitles	
Format	Subtitles must be "burned-in" and positioned in the "active" picture area of the projected frame. See subtitles for more information. Please note that the image can be cropped by up to 3% during projection

Please note: We do not allow subtitles to be delivered as a separate file (.sub, .srt, .xml). All subtitles must be **"burned-in"**.

Film (70mm, 35mm, 16mm)

If you would like your film to be screened using an analog film print, please contact the Film Office as soon as possible to discuss details.

Delivery

Overview

We offer different methods to deliver films to the festival and EFM:

Delivery Method	For selection process	For Festival / EFM screening
H.264 Upload	**preferred**	not accepted
Aspera Upload (DCP ProRes)	accepted	**preferred**
Hard Drives (DCP / ProRes)	accepted	accepted
Film (70mm, 35mm, 16mm)	not accepted	[Contact](#) the Film Office

H.264 Upload

H.264 uploads are only accepted for selection screenings and the upload process is integrated into the online application.

The link for uploading your file will be provided on the confirmation page at the end of the application form for film submissions. Should you wish to upload your film at a later date, you can do so at any time via the link on the "[My Account](#) / My Film Entry" page which will be activated once you have successfully registered your film.

Once the upload is complete, your data will be processed and encrypted. The processing can take some time. You will receive an e-mail notification as soon as your file is ready to be released. In the next step you can check your processed file, change the thumbnail preview picture – or, if necessary, upload a new version of your selection screener.

In a last and important step you have to explicitly approve the finished file to enter the selection screenings. **Your film will only be released to the Berlinale selection boards with your final authorization. Therefore, please do not forget to click the "release" button.**

Please note:

- Audio, video and subtitles must be contained in a single file and the file size should not exceed 10 GB.
- Please submit HD material in the MP4 format (H.264, AAC, Stereo).
- Please encode your video at 24, 25 or 30 progressive frames per second.
- The file name must not include any special characters or blank spaces. Please do not, for example, use file names like "myfilm!@&%$§ *().mov".

Aspera Upload (DCP/ProRes)

Berlinale uses Aspera™ technology to securely and efficiently receive DCP or ProRes files via internet upload. The upload process is browser-based and integrated into our Digital Cinema portal which also provides the DKDM upload functionality.

Prerequisites

An internet connection with an upload speed of at least 50 Mbit/s is required to use the Aspera Upload. Uploading a 150 GB DCP will take about 8 hours at 50 Mbit/s. Please use the aspera performance calculator to get an estimate on your transfer time.

You can test your upload bandwidth by using our speedtest.

Supported Browsers and Aspera Connect Plugin

Our Digital Cinema portal at https://dcinema.berlinale.de/ requires a modern internet browser and the Aspera Connect Browser Plugin.

The supported platforms are:

Supported	
Platforms	Windows 7 Windows 10 macOS 10.12 or higher
Browsers	Chrome Version 66.0 or higher Firefox 60.0 or higher Safari Version 11.1 or higher.
Aspera Connect Plugin	Aspera Connect Plugin Version 3.8 or higher

Internet Explorer / Edge is not supported.

The Aspera Connect Plugin is required and can be downloaded from:
http://downloads.asperasoft.com/connect2/ Please install as instructed.

The correct installation of the Aspera Plugin can be tested by visiting https://test-connect.asperasoft.com/

Credentials

Upon request you will receive an e-mail containing personalized login information to our DCP and DKDM upload portal. Please do not pass this information on to any third parties (postproduction companies, labs, service providers), but instead contact us to have a separate account created for your contractors.

Adjusting Upload Speed

Click on the icon shown below to open the "Transfer Monitor" window
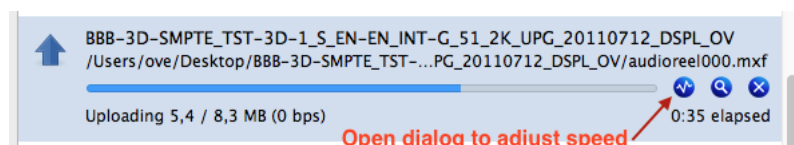
The "Transfer Monitor" shows the current upload rate and the maximum bandwidth to use for uploading. You can manually adjust the target upload speed by moving the arrow up and down. Important: **Do NOT select an upload rate that is higher than the upstream bandwidth of your internet access.** This will make Aspera send more data than your connection can handle and will result in package loss and retransmits.
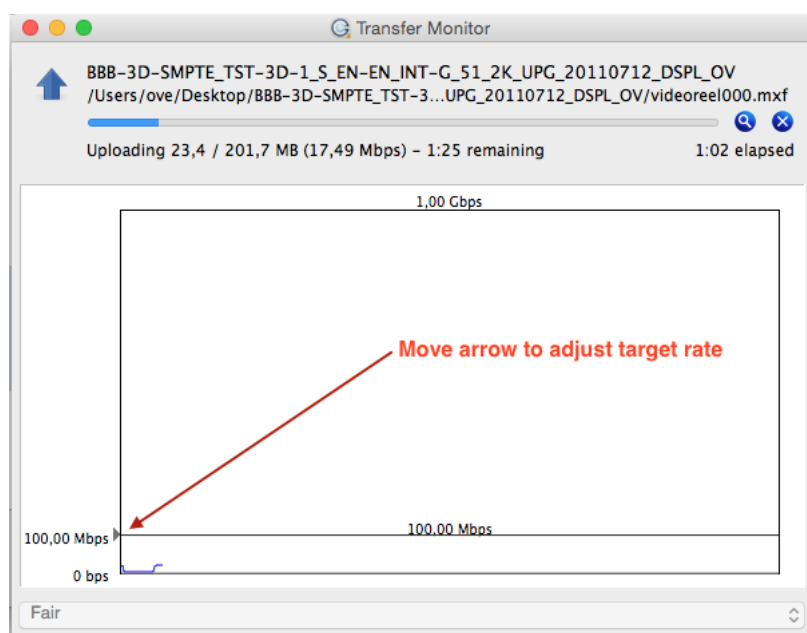
Quicksupport for Aspera Upload

Should you encounter problems uploading to our Aspera servers please contact us to have one of our tech-team members help you. If necessary, you can also give one of our team members access to your system by using our TeamViewer Quicksupport.

Hard drives

If, for some reason, you cannot use our Aspera Upload, you can still deliver DCP and ProRes files using hard drives. However, the full cost of transport including customs fees and insurance, as well as the return freight, must be borne by the sender.

- Hard drives have to be either USB 3.0 or CRU and have to be delivered with a 230 V power-supply, where applicable. SSDs are preferred.

- All shipments must be sent prepaid.

- Please use the proforma invoice template provided by your courier service and state a modest value for customs (20 USD) and please state as purpose of shipment "sample" (NOT "commercial").

- Please inform the Film Office about the airway bill number of your shipment and the estimated date of arrival.

Film prints (70mm, 35mm, 16mm)

If you would like your film to be screened using an analog film print, please contact the Film Office as soon as possible to discuss shipment details.

Subtitles

General

We prefer subtitles to be "burned" into the picture. Please see below for accepted file formats:

	DCP	ProRes
Subtitles "burned" into the picture	**preferred**	**preferred**
XML, PNG, MXF Subtitles	accepted	not accepted
Other formats (.sub, .srt, etc.)	not accepted	not accepted

All subtitles have to be positioned in the **"active area"** of the image and must **not be positioned on a black letterbox area**.

We highly recommend that you have your subtitles produced by a professional subtitling provider.

Positioning recommendations

The image can be cropped by up to 3% during projection, due to the position of the projector and the venue's architecture. We therefore recommend that you observe a safe area of at least 5%.

From experience we recommend subtitles to have:

- a font size between 38 and 40

- a VAlign "bottom" with a VPosition of the lowest line between 8.0 and 10.0

Bilingual subtitles

Bilingual subtitles are only used for films invited to the International Competition.

Spoken Language	International Competition	All other sections
English	German subtitles	No subtitles required
German	English subtitles	English subtitles
All other Languages	Bilingual subtitles: German / English	English subtitles

Berlinale offers assistance with **bilingual subtitles** through a professional subtitling company who provides a consulting service covering the editorial, aesthetic and technical aspects of creating bilingual subtitles for DCPs. These services are free of charge for the production companies. In case you need support regarding the creation of bilingual subtitle files, please get in touch with your Berlinale contact person.

Bilingual Subtitle appearance

- Subtitles should consist of no more than two lines, with one line per language.
- The first (upper) line should be English, the second line German.
- Both languages are to be included in one single subtitle file.
- The maximum number of characters per line should ideally be not more than 45, maximum 50 - space included (40 if the line consists of uppercase only).
- For optimal readability, the two lines should be formatted in different colours:
    - first line white (FFFFFFFF)
    - second line, for example, pale yellow (FFEFEFC5 as value in DCP subtitle XML; colour chart: red 239, green 239, blue 197 for PNG).

Venues

Cinema	Seats	Screensize (in meters)	Audio Formats	3D	HFR
Arsenal 1	234	9,0 x 4,0	5.1	no	no
Arsenal 2	73	4,8 x 2,0	5.1	no	no
Berlinale-Palast	1619	18,0 x 7,5	5.1, 7.1, Dolby Atmos	yes	yes
CinemaxX 1	292	12,9 x 5,5	5.1, 7.1	no	yes
CinemaxX 2	110	9,5 x 4,0	5.1, 7.1	no	yes
CinemaxX 3	483	18,8 x 8,0	5.1, 7.1	yes	yes
CinemaxX 4	290	12,9 x 5,5	5.1, 7.1	no	yes
CinemaxX 5	269	12,7 x 5,4	5.1, 7.1	no	yes
CinemaxX 6	269	12,7 x 5,9	5.1, 7.1	no	yes
CinemaxX 7	595	19,5 x 9,1	5.1, 7.1	yes	yes
CinemaxX 8	252	12,7 x 5,4	5.1, 7.1	no	yes
CinemaxX 9	254	12,7 x 5,4	5.1, 7.1	no	yes
CinemaxX 10	170	10,0 x 4,25	5.1, 7.1	no	yes
CinemaxX 11	50	6,2 x 2,65	5.1, 7.1	no	yes
CinemaxX 12	50	6,2 x 2,65	5.1, 7.1	no	yes
CinemaxX 13	50	6,2 x 2,65	5.1, 7.1	no	yes
CinemaxX 14	50	6,2 x 2,65	5.1, 7.1	no	yes
CinemaxX 15	50	6,2 x 2,65	5.1, 7.1	no	yes
CinemaxX 16	46	6,2 x 2,65	5.1, 7.1	no	yes
CinemaxX 17	46	6,2 x 2,65	5.1, 7.1	no	yes
CinemaxX 18	46	6,2 x 2,65	5.1, 7.1	no	yes
CinemaxX 19	46	6,2 x 2,65	5.1, 7.1	no	yes
CineStar 1	182	11,95 x 5,0	5.1, 7.1	yes	yes
CineStar 2	275	14,1 x 5,9	5.1, 7.1	no	yes
CineStar 3	365	17,45 x 7,3	5.1, 7.1, Barco Auro	yes	yes
CineStar 4	182	11,95 x 5,0	5.1, 7.1	yes	yes
CineStar 5	206	11,7 x 4,9	5.1, 7.1	yes	yes
CineStar 6	140	10,8 x 4,6	5.1, 7.1	yes	yes
CineStar 7	359	16,1 x 6,75	5.1, 7.1, Dolby Atmos	yes	yes
CineStar 8	515	17,7 x 7,4	5.1, 7.1	yes	yes
CineStar IMAX	322	23,5 x 12,7	5.1, 7.1,	no	yes
Colosseum 1	525	15,2 x 6,5	5.1	yes	no
CUBIX 7	322	15,9 x 6,7	5.1, 7.1	yes	yes
CUBIX 8	322	15,6 x 6,55	5.1, 7.1	yes	yes
CUBIX 9	724	23,5 x 9,55	5.1, 7.1	yes	yes
Delphi Filmpalast	661	15,0 x 6,4	5.1	no	no
delphi LUX 1	119	7,30 x 3,10	5.1, 7.1	no	no
delphi LUX 2	137	7,30 x 3,10	5.1, 7.1	no	no
delphi LUX 3	81	6,70 x 3,00	5.1, 7.1	no	no
dffb-Kino	65	5,2 x 2,2	5.1	no	no
EFM Cinemobile	80	3,85 x 1,60	5.1	no	no
FAF 1	323	13,0 x 5,5	5.1	yes	no

Friedrichstadtpalast	1635	22,0 x 9,2	5.1, 7.1	no	yes
Gropiusbau Cinema	200	7,2 x 3,2	5.1	no	no
HAU 1	1024	11,8 x 5,20	5.1	no	no
Haus der Berliner Festspiele	986	12,9 x 5,4	5.1, 7.1	no	yes
HKW: Auditorium	1025	13,5 x 5,7	5.1	no	no
International	551	18,0 x 7,5	5.1	no	no
Marriott	30	3,3 x 1,85	5.1	no	no
Parliament	62	5,0 x 2,1	5.1, 7.1	no	no
Silent Green	220	5,5 x 3,1	5.1, 7.1	no	no
Zeughauskino	160	6,0 x 3,0	5.1	no	no
Zoo Palast 1	850	21,0 x 8,79	5.1, 7.1, Dolby Atmos	yes	yes
Zoo Palast 2	275	14,8 x 6,19	5.1, 7.1	yes	no
Zoo Palast 3	159	11,8 x 4,94	5.1, 7.1	yes	no
Zoo Palast 4	161	14,0 x 5,86	5.1, 7.1	yes	no
Zoo Palast 5	157	12,0 x 5,04	5.1, 7.1	yes	no
Zoo Palast Club A	36	6,0 x 2,51	5.1	no	no
Zoo Palast Club B	39	6,0 x 2,51	5.1	no	no

FAQs for festival screenings

Can I get a copy of the DCP that Berlinale creates from my QuickTime file?
No. All DCPs created by the festival are encrypted and we will not be able to give you a copy of the DCP or of the keys that we use.

Should we prepare an Interop or an SMPTE DCP?
Currently all systems used by the festival and the EFM are capable of playing both Interop and SMPTE DCPs. We highly recommend that you prepare a SMPTE DCP as is has various advantages over the older Interop format, specifically they provide a wider range of frame rates and metadata, improved security and more robust subtitles.

Can I be present while you test my DCP?
No, due to security reasons we do not allow any visitors to be present during our internal QC process.

Can I schedule a test-screening or rehearsal for my DCP screening?
Due to the tight schedule of the festival and the EFM we generally do not offer test-screenings for DCPs. Your DCP has to be tested before it is submitted. The only exceptions to this rule apply to films in the International Competition and to EFM customers who have booked an additional test-screening.

Why and how is Berlinale testing my DCP?
Our experience has shown that quite a number of DCPs delivered to the festival have technical errors and would cause issues during presentation. As a precaution we have developed an automated testing routine that all DCPs pass through. It is, however, the participant's responsibility to properly test the DCP in a SMPTE compliant cinema from beginning to end before sending it to the festival. Our tests then focus on data-structure errors and interoperability issues that might arise during playback on a specific projection system.

Why does Berlinale need a DKDM (master key) for my screenings?
There are two reasons why we ask you to supply us with a DKDM:
1) A DKDM allows us to generate KDMs (keys) on very short notice for the theatres that we use during the festival and EFM. In case we need to reschedule a screening or swap projectors / servers we are able to generate new keys as they are needed.
2) It enables us to test your DCP in our secure environment in advance. Without a key we cannot perform a number of critical tests.

How does the Festival store my DCP and KDM?
Both DCPs and KDMs are stored in a secure environment. Special access-control applies to the DCP storage room, ingest-systems and the data-center where all data is centrally stored.

Contact

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