Video codec description K2 Summit/Solo

K2 Summit Production Client and K2 Solo Media Server specifications are shown in the following tables. Licenses and/or hardware options are required to enable the full range of specifications.

DV formats

Format	Sampling	Frame Rate	Data Rate	Other
DVCAM (720x480/576)	4:1:1/ 4:2:0	29.97, 25	28.8 Mbps	Conforms to IEC 61834
DVCPRO25 (720x480/576)	4:1:1	29.97, 25	28.8 Mbps	Conforms to SMPTE 314M
DVCPRO50 (720x487.5/585)	4:2:2	29.97, 25	57.6 Mbps	Conforms to SMPTE 314M
DVCPRO HD (960x720p, 1280x1080i59.94, 1440x1080i50)	4:2:2	29.97, 25	100 Mbps	Conforms to SMPTE 370M

MPEG-2 formats

Format	Sampling	Frame Rate	Data Rate (Mbps)	Other
720x480	4:2:0	29.97	2-15	I-frame and long GoP
720x480	4:2:2	29.97	4-50	I-frame and long GoP
720x512	4:2:2	29.97	4-50	I-frame and long GoP
720x576	4:2:0	25	2-15	I-frame and long GoP
720x576	4:2:2	25	4-50	I-frame and long GoP
720x608	4:2:2	25	4-50	I-frame and long GoP
D10/IMX (720x512)	4:2:2	29.97	30, 40, 50 CBR	I-frame only
D10/IMX (720x608)	4:2:2	25	30, 40, 50 CBR	I-frame only
1920x1080	4:2:0	29.97, 25	20-80	I-frame and long GoP[a]
1920x1080	4:2:2	29.97, 25	20-100	I-frame and long GoP
1280x720	4:2:0	29.97, 25	12-80	I-frame and long GoP
1280x720[b]	4:2:2	29.97, 25	20-100	I-frame and long GoP
XDCAM-HD (1440x1080)	4:2:0	29.97, 25	18 VBR, 25 CBR, 35 VBR	Long GoP
XDCAM-HD422 (1920x1080)	4:2:2	29.97, 25	50 CBR	Long GoP
XDCAM-HD422 (1280x720)	4:2:2	59.94	50 CBR	Long GoP

Format	Sampling	Frame Rate	Data Rate (Mbps)	Other
XDCAM-EX (1920x1080)	4:2:0	29.97, 25	35 VBR	Long GoP
XDCAM-EX (1280x720)	4:2:0	59.94, 50	25 CBR, 35 VBR	Long GoP

a. Decode of lower bit rate is possible

b. Includes playout of HDV, which is available only via transfer to the K2 system.

K2 systems record closed GoP structure. If an open GoP clip is imported, it is fully supported, including trimming the clip, playout of the clip, using the clip in playlists, and exporting the clip.

AVC-Intra formats

Format	Sampling	Frame Rate	Data Rate	Other
AVC-Intra 50 (1440x1080)	4:2:0	29.97, 25	50 Mbps	
AVC-Intra 50 (960x720)	4:2:0	29.97, 25	50 Mbps	
AVC-Intra 100 (1920 x 1080)	4:2:2	29.97, 25	100 Mbps	
AVC-Intra 100 (1280 x 720)	4:2:2	29.97, 25	100 Mbps	

Playout of multiple formats

The K2 client automatically handles material of various types and formats as specified in the following sections:

Playout on K2 Summit/Solo

For a given frame rate, you can play SD clips of any format back-to-back on the same timeline. Both 16:9 and 4:3 SD aspect ratio formats can be played on the same timeline. Refer to video codec description earlier in this section for a list of the supported formats.

On channels with the XDP (HD) license, for similar frame rates (25/50 fps or 29.97/ 59.95 fps), SD material transferred or recorded into the K2 system along with its audio is up-converted when played on a HD output channel. Likewise, HD material is down-converted along with its audio when played on an SD output channel. HD and SD clips can be played back-to-back on the same timeline, and aspect ratio conversion is user configurable. Refer to .

The K2 Summit Production Client and K2 Solo Media Server supports mixed clips with uncompressed and compressed (PCM, AC3, and Dolby) audio on the same timeline.