

UHD-Play

Uncompressed Baseband Ultra HD Video File Player for Broadcast and Tests

UHD-Play is the market leading, easy to use and affordable Ultra HD video playback server for professional Broadcast applications such as for satellite, terrestrial, cable networks, telco operators, lab tests and various field experimentations.

UHD-Play supports the largest variety of video files formats and converts all ingested files to uncompressed baseband domain. High bit rate RAW data are played back through a professional video interface featuring four 3G-SDI outputs. Audio layout goes up to 64 channels.

Secured by multiple HDD and SSD drives in RAID configuration, redundant power supplies and carrier-grade built quality, the UHD-Play can be used in any conditions either for UHD migration validation, or long run tests and continuously looping field trial / channel.

BBright's advanced technology and know-how enable the UHD-Play video server to deliver unmatched video and audio performance for the most demanding 4K / Ultra HD / Full-HD workflows including HDR and HFR.

ProRes, XAVC, H.264, H.265, AV1, YUV/RAW files
Full-HD 1080p HFR; 100/120 fps

Advanced Audio Support and HDR Signalization
SDR to HDR up-conversion [HDR10/PQ - HLG]

FEATURES

Video Output

- Ultra HD (3840 x 2160p) playback, with 4K cropping to UHD
- Four 3G-SDI baseband outputs: QFHD Level A and Level B, and 2-Sample interleaved pixel (SMPTE 425-5)
- 1080p, 1080i, 1080psf, 720p playback on SDI link #1
- Frame rates : 23.98, 24, 25, 29.97, 30, 50, 59.94, 60fps
- **1080p HFR** (100, 119.88, 120 fps) output **on dual 3G-SDI links**
- 4:2:2 chroma sampling, 10-bit color depth
- Time code and CEA 608 into 708 Closed Caption support
- Built-in upscaler from 720p or 1080p file to UHD playback
- SMPTE-2108 custom data into 3G-SDI / HDR signalization
- **SDR to HDR up-conversion** [option]

Audio Output

- 3G-SDI embedded audio, up to 64 channels 24-bit/48KHz
- Dolby™ AC-3, EAC-3, **AC-4** and **Dolby E** audio pass-through

File Ingest through GbE port (FTP, NAS) or USB drive

- Compressed video Codec:
 - **XAVC**
 - **MPEG-4 AVC / H.264, HEVC / H.265**
 - AVS and **AV1**
 - **ProRes** (up to 4:4:4:4) and **other post-prod./NLE Codec**
- Uncompressed video:
 - **YUV / RAW** files and **DPX, TIFF** or **EXR** file sequences
- Audio Codec:
 - AAC, HE-AAC (v1 or v2), AAC-LC / MPEG-1 Layer II / PCM
 - **MPEG-H with metadata** display in GUI [option]
- Containers: .mov, .ts, .avi, .y4m, .v210, .yuv, .mkv, .m2v, .h.265, .h.264, .mp4

CHASSIS

- 1RU chassis with front loading 2.5in HDD / SSD slots
- Carrier-grade built quality and reliability for broadcast
- Redundant power supplies (hot swappable), 100 - 240 VAC, 50 - 60Hz, 400W max. [150W typical]
- Two USB 3.0 and two USB 2.0 interfaces
- Two, IP-bonded, Gb Ethernet ports
- Genlock input (bi-level, tri-level)
- Front-to-rear airflow
- Dimensions, W: 437 mm, D: 520 mm, H: 43 mm / weight: 10 kg

CONTROL and AUTOMATION

- Intuitive Web-based G.U.I.
 - Playlist creation and multiple playlists pre-loaded on SSD
 - Video thumbnails and audio tracks level monitoring
 - Automatic playback after boot and seamless playback loop
 - Alarms and logs
 - firmware and license updates
- Documented REST API for tests automation
- UID, RESET and POWER front buttons with five status LED's

FRONT and REAR PANEL LAYOUT



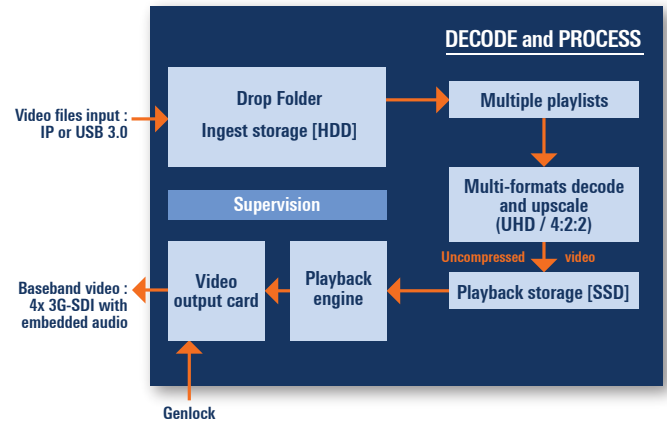
INTERNAL ARCHITECTURE

File ingest is typically performed on the storage drives [HDD] via an IP port (FTP or NAS), or alternatively via an USB interface.

The multiple supported file formats are first verified at ingest, then decoded at playlist creation, with aspect ratio, upscaling and/or SDR to HDR (HDR10/PQ or HLG) up-conversions, if required, and uncompressed raw data moved to the SSD drives.

Playback is actually processed from the SSD storage in uncompressed mode. The four quadrants SMPTE 425-5 10-bit, 4:2:2, 3G-SDI outputs also supports 2-Sample Interleaved modes with Level A and Level B. Native HFR files can be played too, over two 3G-SDI links (for odd and even frames).

Dolby™ AC-3, EAC-3, AC-4 and Dolby E audio stream pass-through with embedded audio in SDI is a standard feature. Multiple PCM tracks (up to 64 audio channels in 24-bit / 48KHz) and MPEG-H audio can also be supported with individual level monitoring on GUI.



UHD-PLAY BLOCK DIAGRAM

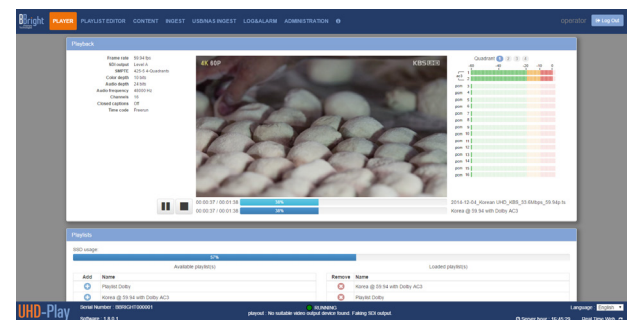
UHD baseband player allows several possible uses cases:

QUALITY CHECKS	R&D LABS	SHOWS / EVENTS / DEMOS	UHD TRIALS
[specific uses-cases] ■ Content: 4K - UHD footage quality controls ■ Displays: UHD TV / Monitor / Projector quality controls	[specific use-cases] ■ UHD source to test other video broadcast equipment (recorder, converter, encoder, display / monitor / TV ...)	[specific use cases] ■ Uncompressed 4K - UHD playback source	[specific use cases] ■ Feed on-air 4K - UHD workflow with a baseband source ■ Looped file source when no live event is available
→ CUSTOMER ADVANTAGES ■ Flexible and multiple format video file ingest ■ Affordable 4K - UHD file player	→ CUSTOMER ADVANTAGES ■ Reliable and always available UHD quad 3G-SDI reference source ■ Ensures frame-accurate UHD playback	→ CUSTOMER ADVANTAGES ■ Absolute best and pristine video quality demos ■ Flexible and multiple format video file ingest	→ CUSTOMER ADVANTAGES ■ Back-up source for short linear content ■ Reliable and affordable UHD quad 3G-SDI source

PLAYBACK TIME

Playback time	25fps	30fps	50fps	60fps
Ultra HD / 3 TB SSD 10-bit, 4:2:2	84 min.	72 min.	42 min.	36 min.
Ultra-HD / 6 TB SSD [option] 10-bit, 4:2:2	168 min.	144 min.	84 min.	72 min.

WEB G.U.I. SCREENSHOT



HARDWARE CONFIGURATION

■ HDD / SSD Drives and System

- LINUX based
- Factory pre-installed appliance configuration:
 - Two 2 TB HDD drives for operating system and content ingest in [1+1] RAID 1 configuration
 - Standard: Six 500 GB SSD drives in RAID 0 configuration
 - Extended playback: Six 1 TB SSD drives in RAID 0 configuration

ORDERING INFORMATION and AVAILABILITY

■ Part number: UHD-Play

■ Part number:

- **SDR to HDR (HDR10/PQ and HLG) up-conversion [option]**
- **MPEG-H [option]**
- **6 TB SSD version [option]**

Playback server is available for shipment

Please contact sales for ordering details relative to product configurations or other requested option

March 2019, rev. 0.998. Product specifications are subject to changes without notice and are not contractual