

UHD-Channel is the first product issued from the newest BBright's B-Media software-based video processing architecture. Based on BBright's legacy of ease of operation, intuitive GUI design, cost effective Ultra HD solution, B-Media video architecture will change the perception typically associated to UHD complexity.

UHD-Channel adds workflow flexibility for interfacing with an external automation, logo insertion, various HDR video format payout and signalization, advert replacement. Playout server clearly indicates the missing content and deliver the necessary As Run Logs.

UHD-Channel secured solution delivers the expected reliability and availability in any conditions for 24-7 continuous Ultra HD payout operation.

BBright's advanced software-based processing enables the daily delivery of pristine video and audio quality for the most demanding Ultra HD workflows and channels.

UHD-Channel

Evolutionary Ultra HD - HDR Payout
For High Bit Rate Pivot files

XAVC - AVC Files
Uncompressed SDI Outputs; quad 3G or 12G

Multiple Logo Insertions
Legacy VDCP / REST API Controls

FEATURES

■ Ultra HD Pivot Format Source

- **Video Codec:**
 - **XAVC-I** (up to class 480), **.mxf** container
 - **AVC/H.264** Intra only, **.mp4** container
- **Audio Codec:**
 - PCM / AAC-LC, HE-AAC (v1 or v2) / MPEG-1 Layer II
 - Dolby™ Digital AC-3 / Digital+ EAC-3
- **File ingest** through 10 GbE or direct payout from NAS

■ Media Engine - Video

- Ultra HD (3840 x 2160p) or full-HD (1920 x 1080p) processing
- 720p and 1080p resolutions up-scale to UHD
- Frame rates: 23.98 to 60fps (allowing Fps conversions)
- **Native HDR10 (PQ - SMPTE 2084) and HLG support**
- 4:2:2 chroma sampling, 10-bit color depth / WCG Rec. 2020

■ Media Engine - Audio

- Up to 16 PCM 24-bit/48KHz channels embedded on 3G/12G-SDI
- Dolby™ bitstream pass-through or AC-3/EAC-3 decode [option]

■ Media Engine - Ancillary Data and Metadata

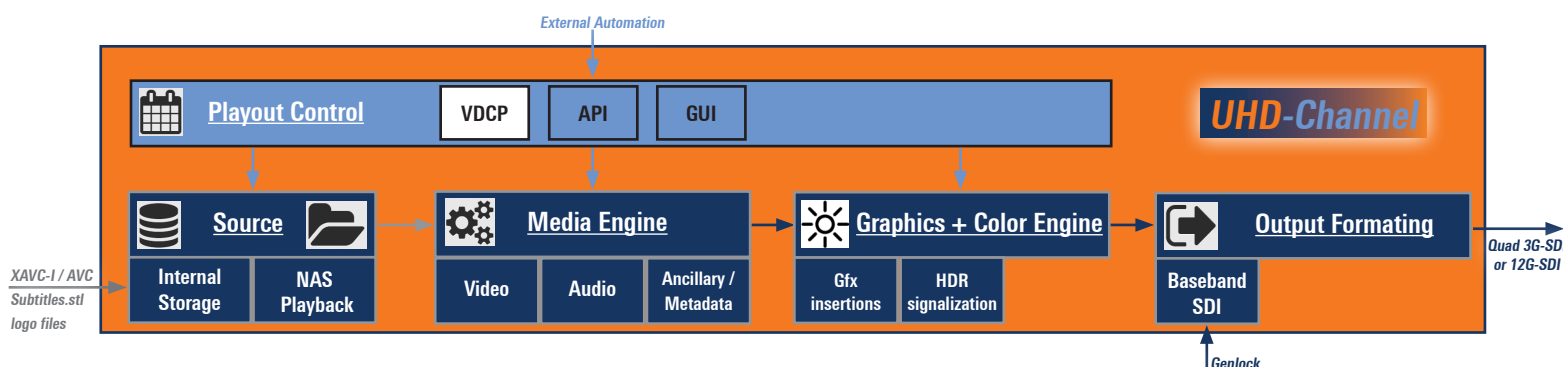
- Time Codes (server's time or file-based)
- CEA 608 / 708 Close Captions pass-through and burn-in
- External **.stl** and **.srt** subtitle file support
- **SCTE-104 marker** insertions

■ Graphics and Color Engine

- **Multiple still logos:** X / Y / Z positions with Alpha layers
- Insertion time offsets (from start / from end)
- **HDR signalization:** SMPTE-352 and SMPTE-2108
- Rec. 709 source encapsulation in Rec. 2020 output

■ Output Formatting

- Baseband quad 3G-SDI outputs as standard / 12G-SDI [option]
- Dual quad 3G-SDI outputs on request
- *Compressed HEVC/H.265 encoded TSolP output (On Roadmap)*
- *SMPTE-2110 baseband over IP output (On Roadmap)*



UHD-Channel / B-Media playout solution

INTERNAL ARCHITECTURE

Content ingest on the eight storage drives is typically performed via the 10 GbE port / FTP transfert, mounted NAS folder or, alternatively, playout can be processed directly from mounted NAS.

Large UHD video files are ingested faster than real-time and then can be played-out as a simple, GUI defined, looped content.

Playout can also be controled by VDCP (IP / RS422) or a BBright REST API to be compatible with any external automation software vendor.

Upscaling to UHD resolution is applied in real-time to any HD (720p) or full-HD (1080p) media.

Quad 10-bit, 4:2:2, 3G-SDI links output 4-quadrant Level A / Level B or 2-Sample Interleaved modes. Multiple PCM tracks output (up to 16 channels over SDI) is a standard feature. Dolby™ AC-3, EAC-3 bit streams are sent as passed-through into SDI [or optionally decoded back to PCM].

CHASSIS

- 1RU chassis with 10x front loading 2.5in HDD slots
- Redundant power supplies (hot swappable), 100 - 240 VAC, 50 - 60Hz, 500W
- Separate 10 Gb Ethernet ports for content Ingest [with optional dual SFP modules] and unit / GUI Control
- USB3.0 interfaces on front-panel and rear-panel
- Front-to-rear airflow
- Dimensions, W: 437mm, D: 610mm, H: 43mm (1RU)
- Weight, 13 kg

STORAGE CAPACITY

Playout time (6 TB storage)	960Mbps	600Mbps	500Mbps	400Mbps
XAVC-I Ultra HD 10-bit, 4:2:2	14 hrs	22 hrs	27 hrs	33 hrs

Exemples of playback durations associated to a given bit rate & compression Codec's. Other combinations of bit rates and supported Codec's can exist

HARDWARE CONFIGURATION

- **HDD Content and System Drives**
 - Factory pre-installed appliance configuration:
 - Two 1 TB HDD drives for operating system, firmware and licenses, in RAID 1 [1+1]
 - Eight 1 TB HDD drives for video content, in RAID 5 [7 + 1]
 - LINUX based

UHD-Channel USE-CASES

- **Externally controled (VDCP / REST API) video server**
- **Linear UHD channel, with or without still logo insertions**
- **SDR or HDR playout, with appropriate SDI signalization**
- **UHD / 2160p channel using up-scaled content**
- **Origin playout, with SCTE-104 SDI markers used for down-stream ads insertions**

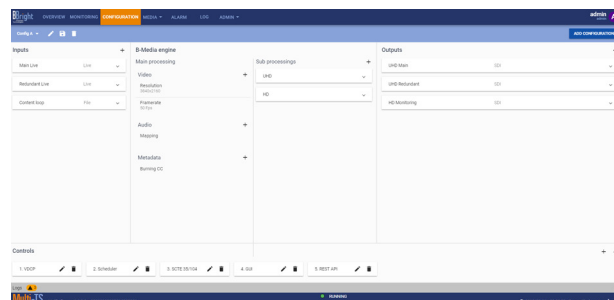
EASE of OPERATION

- Intuitive Web-based G.U.I.
 - Manually generated looping playlists
 - Comprehensive and easy to understand alarms and logs
 - Firmware and license updates
- Automatic content redundancy in a 1+1 server configuration
- SNMP v2
- **Genlock** (bi-level / tri-level) reference signal input

PLAYOUT CONTROL and AUTOMATION

- **VDCP** (IP-based and RS422) as standard and BBright **REST API**; compliant with external automation software
- As Run Log xml reports
- *Internal playout event scheduler with embedded automation (On Roadmap)*

NEW WEB G.U.I.



ORDERING INFORMATION and AVAILABILITY

- Part number: **UHD-Channel**
- Option: **12G-SDI output card**
- Option: **VDCP - RS422 control card**
- Option: **Dual SFP/Fiber 10GbE ports card**

Playout server release: May 2019

Please contact BBright sales for ordering details, configurations or other requested options

Feb. 2019, rev. 0.50. Product specifications are subject to changes without notice and are not contractual