



Flexible Codec Support

- Dalet Brio supports a very wide range of software codecs. In order to ensure broad interoperability, industry-standard wrappers such as QuickTime & MXF are supported, allowing seamless workflow integration with third-party NLEs and Dalet production tools. Dalet Brio can play any supported files, including a mix of SD and HD, on the same timeline, back-to-back with dynamic cross-, up- and down-conversion of the video signal, as well as the video signal, aspect ratio modifications.

Rich Feature Set

- Dalet Brio is designed to run as a standalone video server, or to seamlessly integrate with other applications to meet the needs of Sports, News, Production, Program Management and Archive workflows. Dalet Brio can also be controlled using VDCP, BVW, FIMS Capture or its RESTful API protocol making it simple to integrate with 3rd party control or automation.

Proven Reliability

- With more than 1000 deployments news, channel automation, MAM & QC and Sports production, Dalet Brio has a successful track record that spans just about every broadcast server workflow scenario. More than its versatility, Brio has proven its load tolerance and scalability capabilities, supporting large content producers and broadcasters.

Dalet Brio

Dalet Brio is an innovative and cost-effective platform for broadcast customers looking for non-proprietary hardware to digitize and playback their content, either as a complement or replacement of their existing video servers.

Built on an IT-based input and output video platform, it seamlessly integrates with Dalet Solutions to provide a highly flexible and scalable end-to-end solution.

Dalet Brio units are designed to ingest and playout broadcast quality video in Proxy, SD, HD and UHD formats. They come in a variety of input / output or local / central storage combinations. Each unit is built on robust IT equipment with built-in redundancy.

New in this version: V3.12

- Support for DNxHR
- Licensing information in WebPortal
- Diagnose tool
- Network aliases in web portal
- GRPC communication support
- Growing files support with Avid
- FIMS transfer support

New in previous versions:

V3.11:

- Support software only IP channels
- User Management in Dalet Brio Portal
- New license control mechanism (software only)
- Apple ProRes 444 support (HD and UHD)
- Support for a set of Microsoft Windows updates (Win2012R2 only)

V3.9 & 3.10:

- Software based SMPTE-2022-2 support
- Software based Newtek NDI support
- Simulcast of SDI and IP streams
- NMOS flow management implementation
- Dalet Media Navigator connection to Dalet Sports logger
- Dalet Web Portal - Control of audio volume for ingest and playout

Dalet Brio Configurations

Reconfigurable models with frame synchronisers on inputs and UHD support

Brio 4 Basic – 4 reconfigurable i/o multi-rate SD / HD / 3G SDI (no AES/EBU, no hardware processing)
Brio 4 – 4 reconfigurable i/o multi-rate SD/HD/3G SDI
Brio 6 – 6 reconfigurable i/o multi-rate SD/HD/3G SDI (software upgrade to 8 and 12)
Brio 8 – 8 reconfigurable i/o multi-rate SD/HD/3G SDI (software upgrade to 12)
Brio 12 – 12 reconfigurable i/o multi-rate SD/HD/3G SDI

IP support

4in/4out IP only with SMPTE-2022-6/2110 connectivity
Brio IP Flex – Flexible and multi-rate SD/HD/3G with SMPTE-2022-2 connectivity

On-board Storage Configurations

3.3TB - 133 hours @50Mb/s
6.6TB - 267 hours @50Mb/s
9.8TB - 400 hours @50Mb/s
13TB - 530 hours @50Mb/s
22TB - 850 hours @50Mb/s

Additional local/shared storage available upon request.

Codec/Wrapper Support

Wrappers (codec dependent)

MXF Op1a, MXF Op Atom
QuickTime Reference, QuickTime Self-Contained
MP4, AVI, MPG, WMV

Proxy

MP4 H264/AAC - Configurable profile/level/GOP size/bitrates/resolution
WMV
DALET MPEG-2 Proxy

SD (PAL, NTSC)

DV25, DV50, DVCPro25, DVCPro50
D10 IMX 30-40-50
MPEG-2@ML - 4:2:0 I-Frame 2-15 Mb/s - 4:2:2 Long GOP 10-50 Mb/s

HD (720p50/59.94, 1080i50/59.94, 1080psf23,98, 1080p23,98, 1080p50/59.94)

DVCProHD
XDCAM HD - 4:2:0 (18-25-35 Mb/s) - 4:2:2 (50 Mb/s)
Avid DNxHD® 120/145 (8-bit), 185/220 (8-bit), 185x/220x (10-bit)
Apple ProRes 422LT-422-422HQ-444
AVC-Intra Class 50/100
Sony XAVC Intra and Long GOP
Panasonic AVC-LongG (playback only)
MPEG-4 SStP SQ/Lite
MPEG-2@HL - 4:2:0 I-Frame 5-80 Mb/s - 4:2:2 Long GOP 5-300 Mb/s
JPEG-2000 (playback only, optional)
Uncompressed

UHD-1 (up to 60p)

Apple ProRes 422LT-422-422HQ-444
Sony XAVC 4K Intra Class 300 and 480 (CBG and VBR)
Avid DNxHR® (HQX, HQ, SQ, LB)

General Specifications

Video specifications

SD SDI: SMPTE 259M, ITU-R601, 525/625 line component, 10-bit
HD-SDI: SMPTE 292M, 10-bit
75 Ohms BNC
ITU-R BT.601 (data and electrical)

Dynamic conversions

Output: PAL <-> 1080i50, PAL <-> 720p50
Output: NTSC <-> 1080i59.94, NTSC <-> 720p59.94, 720p59.94 -> 1080p59.94
Input: PAL -> 1080i50, NTSC -> 1080i59.94
Aspect ratio: AFD and WSS support for aspect ratio conversion (per channel)

Special modes

Instant Replay and slow motion
Video + key
2D Graphics engine on each output channel
Loop recording with extraction and time delay
Ingest Once Write Many

Video playback

Any supported format can be played seamlessly back-to-back

Embedded audio tracks

16 tracks embedded per channel SDI (8AES-EBU)
Supports SDI embedded audio compliant with SMPTE 272M (SD) and SMPTE 299M (HD).

Discrete AES/EBU audio tracks

Brio 4/6/8/12: Pool of 32 tracks (16 for inputs, 16 for outputs)

Video Preview

Customizable text overlay per channel
Streaming multiviewer for remote preview in a web browser

Video over IP specifications

SMPTE 2022-2
SMPTE 2022-6
SMPTE 2022-7
SMPTE 2110
NEWTEK NDI

Audio specifications

Input: 48 kHz, 16-bit, 20-bit or 24-bits digital audio PCM
Audio clock genlocked to video reference in accordance with SMPTE 272M and AES11-1997
Any video clip with supported audio format can be played seamlessly back-to-back
Dolby-E pass-through.

Closed Caption specifications

Preservation of Captions in ingest and playout (CEA-608-708, WST and Op-47)

Reference Genlock

Analog blackburst reference (tri-level or bi-level), SDI input as reference or free running mode.
External termination with LOOP connector
Sub-pixel adjustment at 0.9 ns/step with respect to genlock in SD
Sub-pixel adjustment at 0.7 ns/step with respect to genlock in HD
Flywheel on genlock.
Connector: BNC, 75 Ohms with loop through

Timecode

LTC SMPTE 12M for external "house" timecode (BNC Connector)
LTC and VITC reader/writer per channel (ANC-TC)

Control

BVW, VDCP over serial /IP
FIMS Capture V1.1 - RESTful implementation
Administration API – RESTful
Ingest Scheduler API – RESTful
Players API – RESTful
FIMS transfer, RESTful

Redundancy

Dual hot swappable power supplies
RAID1 for system drives, RAID50 or RAID6 for data drives
Hot spare drives
Dual 10Gb or Quad 1 Gb Eth network attachment
Dual FC attachment

Monitoring

SNMP, WMI
Brio Administration API (RESTful)

Connectivity

Four 100/1000Base-T Ethernet ports and Two 10Gb Ethernet (opt.)
One USB 3.0 front, two USB 3.0 rear
One 15-pin SVGA
Multi-serial ports board (optional)

File transfer protocols

CIFS, FTP

Dimensions

Width: 44.55 cm (17.54 in.)
Height: 2 RU 8.9 cm (3.5 in.)
Depth: 74.93 cm (29.5 in.)
Weight: 28 kg (60 lbs) maximum

Power requirements

Dual redundant Power supply, 750W hot-swap
50-60 Hz, 100-240 VAC

Environmental characteristics

Operating temperature: +10°C to +35°C
Non-operating temperature (not in use): -30°C to +60°C

Want to know more?

Dalet Digital Media Systems software solutions are used by Content Owners, Broadcasters, Sports Organizations and Post Production Facilities worldwide.

To find out more, contact your local Dalet channel partner, or contact Dalet:

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