Product Catalog

B6 Series Software
Software Platform of B6 Audio and Video Server

B6 Series Server
Uncompressed 2K/4K Video and Audio Servers

Show Controllers and I/Os
Solid State Show Controller and Network Connected Modules

Digital Signage
Create and Distribute Content to Screens
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Key Technologies of Media Based Attractions

Introducing Our Products and Their KEY Features

Perfect Media Playout: Playmaker on B6 Series Servers

The B6 Series is a complete range of audio and video servers with up to ten synchronous running HD/2K/4K+ video channels. All servers support uncompressed 4:4:4 video playback in RGB mode with up to 30 Bits color depth, perfect linear video playback in 2D, 3D, with up to 120 FPS and beyond 4K resolution per output. Up to 32K x 32K content resolution can be processed in the media workflow. The units are able to operate standalone or play synchronous to timecode – that way any number of playback channels can be perfectly synced. The GL option adds genlock inputs to the servers for pixel synchronous video outputs. All units support image warping and blending. They do up and down scaling to any resolution if needed. The complete range of audio options is available: Analog, ADAT, MADI, AES, Cobranet, AVB and Dante – with up to 256 channels 48KHz or 128/96KHz. All B6 Series Servers are running an embedded OS, which is write-protected to ensure safe operation over years. In addition, our PLUS series has redundant power supplies and fans for rock solid service.

Media Workflow with Media Manager

BRAINSALT covers the complete media workflow from simple single channel playback up to any multi-channel and/or multiple server system content distribution. Huge projects demand true flexibility during their content creation and loading phase. Our system allows content creators to load media on a “per frame” or “shot” basis. Furthermore, it is possible to provide shots in different resolutions, for example starting with low resolution and step by step exchange shots with high resolution content. Our Media Manager and server system is capable of handling such complex workflows. It allows creating playlists on a “per frame” basis: single frames can be replaced or the movie can be organized in shots. It also supports versioning and the quick switch from one to another version of a shot. It is perfectly prepared for truly demanding projects.
Everything under Control: Conductor with Show Controllers and I/O Modules

Most media based attractions require running effects synchronous to video playback. BRAINSALT created a truly incredible solution called Conductor. Interfacing through our ProCommander show controllers and Pro I/O Modules, nearly anything can be controlled in the real world. Conductor provides an easy to use interface and supports various different programming interfaces like, keyboard, mouse, joystick, midi faders with force feedback and game controllers. Any slider or button of the interfaces can be mapped to any recording channel and output and programming can be done in real-time. Conductor can also control a BRAINSALT video server cluster during programming. The server system will follow drags of the locator in Conductor, giving the designer and programmers the power to quickly seek, play and adjust motion or effects while seeing media playing on the screen.

Some media based attractions include a complex light shows usually created by light designers on their favorite tool: the light desk. BRAINSALT seamlessly integrates the light desk by timecode into the system. Light designers can concentrate on light programming, media will follow their timecode. Once light programming is done, the light show is recorded through Artnet in Conductor. Any number of Artnet universes can be processed at once. Those recorded shows can then be located in Conductor – parallel to motion and other effects - and will be sent out perfectly synchronous to video playback. Any limits? At the time this document was written, the most complex show that we know of included around 900 control channels and 16 recorded Artnet Universes – so close to 10000 channels in total. And that was far below Conductor’s performance limits.

Realtime or Standalone

All of our Show Controllers and I/O Modules can operate “live” - receiving updates over network from a video server or programmer’s laptop. Alternatively to this realtime operation mode, final shows can be exported to a flash storage to be used with our ProCommander show controllers in standalone mode. Those shows can either run in loop or can be triggered by external inputs or timecode. Multiple shows can run parallel, merged together through merge modes. Complete scenes of a dark ride or preshow elements can be realized with such standalone controllers. E.g. a preshow element with stereo audio and DMX light can be played from our ProCommander 2: just connect loudspeakers to the amplified outputs and your DMX cable.
Projections Calibrated at the Push of a Button: Calibrator

In projection systems with multiple projectors it is hard or sometimes even impossible to manually adjust warping and blending parameters to create a seamless looking image. Due to thermal drifts of projectors and structures, such systems have to be readjusted during operation to keep the image quality at a constant, perfect level. BRAINSALT provides an optional Calibration System for multi-channel projections that creates perfect image quality at the push of a button. Any complex screen and projector layout can be realized. The numbers of cameras is theoretically not limited. Unlike other vendors, our cameras can be installed anywhere "hidden" in the attraction - the only precondition is that all cameras in total "see" the entire screen surface. Also different to other vendors, our calibration system always guarantees mapping a specific pixel of the content to a defined position on the screen. So it is guaranteed to hit for example spezial-effect-nozzles and screen borders always perfectly. The calibration system seamless integrates in the media workflow if slicing of media is required.

Operation and Monitoring

BRAINSALT developed some unique tools for monitoring the correct operation of an attraction. One of the most popular is the "dual use" of cameras from our calibration system: during normal operation, cameras are used to stream a video to a monitoring server that presents those videos and additional health, quality of service and status information on a split screen. Network based observation cameras, a timecode display and other elements can be included on the overview. Events can be defined to send out email notifications, for example if contact to a video server is lost or if its status is faulty. That way, the operator always has insight of what is going on in the attraction.

Versatile Digital Signage: Presenter

Beside our video servers, that focus perfect video playback, BRAINSALT also provides a Digital Signage solution, which allows simple and easy content-creation for single screens or preshow elements. Videos, slideshows, tickers, clock, streams, capture inputs and other elements are placed in regions of the screen and content is scheduled by time. Push content can be triggered by a control system. Advertisement, show time information, show relevant messages: our Digital Signage products allow our clients to reach their clients via screens. A comfortable and easy handling allows to add custom announcements quickly.
B6 Series Software
Software Platform of B6 Audio and Video Server
B6 Series Software

The B6 Series Software is installed on every B6 Series Video Server. It consists of different modules, some of them are options. Dependent on the role of the server, different modules are installed and work together.

Role: Video Server
B6 Software modules and their roles on a video server

Playmaker
- Playmaker is used to play uncompressed audio and video
- Playmaker supports individual playlists with scripting and can be remote controlled
- Each playlist entry can be setup to chase a specific external timecode (requires timecode input)
- Each playlist entry can be setup to output a specific timecode (occupies one audio output)

Calibrator (Optional)
- Calibrator does camera based auto calibration of multi channel projections
- No need to have the camera at the audience position - multiple cameras are permanently installed “anywhere” to see the entire screen surface
- Calibration process can be triggered by a playlist entry in Playmaker or through remote control

Media Manager
- Media Manager is used to load and manage uncompressed media
- Media Manager can assemble movies down to single frames

System Tools for Embedded OS
- EDID Management and Emulation
- IP address and firewall configuration
- Set 4K output modes on startup (native, column or quadrant)

Conductor (Optional)
- Conductor is used to send out effects and commands frame
  Conductor is used to edit and send out light shows, effects and commands, time accurate to video playback
- Conductor locks to Playmakers timecode and vice versa
- Conductor can be detached from server and can run on a separate machine for “in theater” show editing
Role: Multi-Layer Video Server
B6 Software modules and their roles on video server with multiple video layers

Playmaker as Video Layer
- Playmaker is used to play uncompressed audio and video
- Instead of rendering directly to the outputs, a layer renders to the GPU only
- Multiple instances can run on one machine to generate multiple layers
- Each instance supports individual playlists with scripting and can be remote controlled
- One Playmaker instance can chase a specific external timecode (requires timecode input)
- Each Playmaker instance can be setup to output a specific timecode (occupies one audio output)

Playmaker as Video Mixer
- Playmaker Video Mixer is used to mix all video layers from the other instances together and place them on the video outputs

Media Manager
- Media Manager is used to load and manage uncompressed media
- Media Manager can assemble movies down to single frames

Conductor (Optional)
- Conductor is used to edit and send out light shows, effects and commands, time accurate to video playback
- Conductor locks to Playmakers timecode and vice versa
- Conductor can be detached from server and can run on a separate machine for “in theater” show editing

Calibrator (Optional)
- Calibrator does camera based auto calibration of multi channel projections
- No need to have the camera at the audience position - multiple cameras are permanently installed “anywhere” to see the entire screen surface
- Calibration process can be triggered by a playlist entry in Playmaker or through remote control

System Tools for Embedded OS
- EDID Management and Emulation
- IP address and firewall configuration
- Set 4K output modes on startup (native, column or quadrant)
Role: Multi-Server Video Cluster
B6 Software modules and their roles on video servers in a cluster

**Playmaker as Controller**
- Playmaker is used to play uncompressed audio and generates timecode for server cluster
- Our A16 is used for timecode distribution and generates genlock signal to have audio and video perfectly synced
- Playmaker supports individual playlists with scripting and can be remote controlled

**Conductor (Optional)**
- Conductor is used to edit and send out light shows, effects and commands, time accurate to video playback
- Conductor locks to Playmaker’s timecode and vice versa
- Conductor can be detached from server and can run on a separate machine for “in theater” show editing

**Playmaker as Controlled TC-Player**
- Playmaker is used to play uncompressed video
- Perfectly chases Controller’s timecode and genlock signal

**Calibrator (Optional)**
- Calibrator does camera based auto calibration of multi channel projections
- No need to have the camera at the audience position - multiple cameras are permanently installed “anywhere” to see the entire screen surface
- Calibration process can be triggered by a playlist entry in Playmaker or through remote control

**Media Manager on dedicated Align/Store server (Optional)**
- Media Manager is used to load and manage uncompressed media
- Media Manager can assemble movies for the cluster down to single frames
- Manages content for server cluster
- Access calibration data from Calibrator to prepare content for every playback channel
- Acts as overall content backup
- Can be used to load and prepare content while playback system is in use (reduces occupation time during content loading)

**System Tools for Embedded OS**
- EDID Management and Emulation
- IP address and firewall configuration
- Set 4K output modes on startup (native, column or quadrant)
Role: Audio Server
B6 Software modules and their roles on an audio server

Playmaker
- Playmaker is used to play uncompressed audio
- Multiple instances of Playmaker represent groups of synchronous playing audio channels
- Each Playmaker instance supports individual playlists with scripting and can be individually remote controlled
- One Playmaker instance can chase timecode input
- Each Playmaker instance can output specific timecode (occupies one audio output)

Conductor (Optional)
- Conductor is used to edit and send out light shows, effects and commands, time accurate to audio playback
- Conductor locks to Playmakers timecode and vice versa
- Conductor can be detached from server and can run on a separate machine for “in theater” show editing

System Tools for Embedded OS
- IP address and firewall configuration
PLAYMAKER

The heart of all BRAINSALT video servers. Either as Standalone instance, as Video Layer, as Video Mixer, as Controller or Timecode Player in a cluster, Playmaker makes sure your show is running and pixels are played perfectly to the screen. Support for most common movie and audio formats is integrated. BRAINSALT’s uncompressed formats guarantee pixel perfect playback.

Playmaker was developed for guaranteeing perfect, smooth linear playback of multiple, absolutely synchronous running video channels. To assure jerk free playback, Playmaker takes care of adjusting the video cards output refresh rate to fit to the movies framerate for every video in the playlist. It also takes care about pixel synchrony for perfect 3D playback. It supports a wide range of common video and audio codecs and its unique, uncompressed frames playlists. Its easy to use graphical user interface lets you manage playlists with 2D and 3D videos, audio files and effect files for each entry. Audio volume of each video can be adjusted in the playlist - individually for every audio channel with certain audio hardware. It supports different playback modes: all entries in a playlist are either played one after another or only one at a time with the option to loop playback. Scripting commands allow non sequential jumps within the playlist and other features.

Show and Effect Integration
When combined with BRAINSALT’s Conductor, an effect files can be assigned to each playlist entry and will be automatically loaded on start of video. During normal playback, Playmaker controls playback progress of Conductor to assure perfect synchronous playback of video and effects. During show programming, Conductor controls Playmakers playback position thus making it easy and comfortable to program effects synchronous to video: any drag on the locator in Conductor will automatically cause an update of playback position within the video.

Image Warping, Edge Blending, Image Enhancement
You can easily adjust warping by editing control points of a spline-based warping mesh or modify every single point of the warping grid manually. Lanczos filtering is used to assure best quality of warped images. The blending curve can be adjusted by gamma for each color – just bring your blending edges parallel with warping and apply the blend mask. In addition, Playmaker can do image enhancements like sharpening, saturation, brightness and contrast. As alternative to manual warping and blending you can...
optionally use BRAINSALT’s camera based auto alignment software Calibrator to generate warp and blend files – Playmaker will automatically load it and map video in the playlist correspondingly.

Standalone, Controller or TC Player

A single server will use Playmaker in standalone operation mode. When having multiple servers in a playback cluster, there is usually a central unit that manages operation, the Controller and a number of timecode synced players, the TC Players. The Controller is used to manage playlist and media. It synchronizes playlists and media on all TC players in the cluster by a click on a button. During playback the controller outputs audio and timecode to perfectly synchronize all TC player in the cluster. Furthermore the Controller provides detailed information about quality of service of each playback channel in the cluster.

Integration and Scheduler
Playmaker implements an UDP and RS232 based remote control. Direct integration into Crestron® based media control environment with the network based Crestron CNX interface is possible. With the built-in scheduler you can define playback dates and times for your playlists.

Movie Licensing System
Playmaker implements a proprietary licensing system for copy protected contents. It allows content creators to distribute their movies with a strong encryption and grant playback of the movies on specific servers for a certain durations. The licenses are transferred over the internet with one of the safest authentication and encryption methods currently available. A lot of well-known 3D and 4D movie creators are using our movie licensing system.
Load Audio and Video Media to BRAINSALT's pixel perfect uncompressed single frames formats. Compose playlists from frame sequences and audio files that can be played as movies with Playmaker. Supports content slicing for server clusters. Rapid deployment of single frames to a server cluster for real-time content review.

Media Manager accepts a wide range of video and numbered still image formats that can be loaded and composed to show playlists. It allows either to load a complete movie or just a range of frames. Multiple jobs can be setup and processed all at once. Playlist are setup on a “per frame” basis - single frames, shots or scenes can be easily replaced. With the help of an integrated version control system you can quickly jump between different versions of each section in your playlist. A “live” mode allows to quickly show 2D or 3D frames on a server or server cluster. An integrated “Frame Viewer” allows to take a close look on every loaded frame.

Multi Channel and Multi Server Workflow
In multi channel, multi server environments with media resolutions beyond 4K, the Media Manager - optionally in combination with BRAINSALT’s camera based Calibrator - is used to slice up the source media to parts that are suitable for each playback channel. The slicing is done without any decrease of image quality.

Supported Still Image Formats
List of Supported Formats: PNG, BMP, DDS, EXR, HDR, JPEG/JIF, JPEG-2000, JPEG-XR, KOALA, RAW, SGI, TARGA, TIFF

Since transfer of content is often done over internet and also transfer speed to a locally installed drive depends on file sizes, we suggest to use a lossless compression for each frame, for example PNGs.

Supported Audio Formats
Dependent on the system configuration, stereo or mono WAV files with for example 48 or 96KHz, 16 or 24 Bit can be loaded and managed through the Media Manager.
Conductor is a timeline based show programming software that visualizes every numeric output (any analog, digital or DMX output) through a curve. Commands can be placed along the timeline in commands channels. A numeric channel can have different interpolation modes: step, linear or curve. Just add control points by double clicking into to channel, edit value and time by dragging the point or enter accurate values through the quick edit command.

If you need to interface with hardware, you can use BRAINSALT’s network connected ProCommander or Pro I-O devices. Although ProCommanders can be used as solid state controllers, they are also capable to operate in real-time together with Conductor and they provide various output types from one device. Pro I-O devices with DMX, analog, digital, relay or servo outputs are available. Any number of Pro Commanders and Pro I-O devices can be used.

Keyframe Sliders
As an alternative to direct point manipulation, the keyframe sliders allow you to jump from point to point and adjust the value of the point with the slider.

Multi Channel Audio With Volume Control
Load and route audio to up to 16 audio channels. Volume Envelopes can be put to every audio file.

Artnet & DMX Recording
Record and monitor up to 16 Artnet universes at once or one universe through PRO-I-O DMX interface and assign the recorded data to any Artnet or PRO-I-O DMX output device. The recorded data can also be extracted for editing. Recording is synchronized either through BRAINSALT’s cluster timecode, Artnet timecode or can be triggered by the first changing DMX channel or by hitting a button.
Offline Editing
Import video and have a frame accurate preview for offline editing.

C# Scripts
Conductor allows to access channel values through C# and modify it programmatically. Any output channel can then refer to the result of the C# script. This allows to add mathematical calculations between programming curves and output values.

Editions:
Use our Conductor Full Edition for show creation and programming. If just playout of an existing show together with Playmaker on our video servers is needed, you can use the "Play" Edition.

Operation with BRAINSLALT Server or Cluster
For show operation, Conductor runs parallel to Playmaker on the video server or cluster controller. For show editing, Conductor can run on a separate laptop and can control the server or server cluster over network. Any drag of the locator in Conductor will let the video on the screen follow within milliseconds. The final show is then copied back on the BRAINSLALT server. Playmaker will manage Conductor to load the correct effect file for each entry in the video playlist.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Full</th>
<th>Play</th>
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</thead>
<tbody>
<tr>
<td>Max. ProCommander per Showfile</td>
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<td>unlimited</td>
</tr>
<tr>
<td>Max. Pro I/O Modules as ProCommander Slaves per Showfile</td>
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<td>unlimited</td>
</tr>
<tr>
<td>Max. Standalone Pro I/O Modules per Showfile</td>
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<td>unlimited</td>
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<td>DMX recording</td>
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<tr>
<td>DMX output</td>
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<td>unlimited</td>
</tr>
<tr>
<td>Artnet recording</td>
<td>√</td>
<td>×</td>
</tr>
<tr>
<td>Artnet devices in Conductor</td>
<td>√</td>
<td>×</td>
</tr>
<tr>
<td>Max. number of shows per export to flash card</td>
<td>unlimited</td>
<td>×</td>
</tr>
<tr>
<td>Input controller for programing</td>
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<td>×</td>
</tr>
<tr>
<td>C# script channels, Custom Plugins</td>
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<td>√</td>
</tr>
<tr>
<td>Import and Export CSV Files, Import Open-Hex Files</td>
<td>√</td>
<td>×</td>
</tr>
<tr>
<td>Sync to external timecode (Possible Inputs: Pro Commander, LTC Reader on Computer, Playmaker on Video Server)</td>
<td>√</td>
<td>Playmaker only</td>
</tr>
<tr>
<td>Remote control of Conductor through UDP commands</td>
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<td>Playmaker only</td>
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<tr>
<td>Saving enabled</td>
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<td>×</td>
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</table>
Camera Based Auto Alignment of Warping and Blending of Multi-Channel Projections

In projection systems with multiple projectors it is hard or sometimes even impossible to adjust warping and blending parameters to create a seamless looking image manually. Furthermore, this system has to be maintained during operation to keep the image quality good. This means your customer would need well-trained technicians and again, keeping this system aligned manually is sometimes impossible. Special projection scenarios like domes need content mapping and advanced parameters, like the head position of the visitors, which impact mapping and warping content on the screen surface. High-resolution content beyond 4K must be sliced into pieces and then correctly displayed on each projector.

**Warping, Blending, Masking, Slicing - Pixel Perfect**
The CALIBRATOR software takes care of all these tasks. The only additional hardware you need to install is a number of digital photo cameras that are able to “see” the entire screen surface. They can be located anywhere, either on top of the screen or integrated. There are no restrictions or limitations. For a typical dome shape screen you will need 3 cameras.

**Planar, Curved, Spherical, Dome or 3D Model - Any Screen Shape**
The projection system must be constructed in the software first. The 3D Model includes the screen (can be of any shape), projectors and cameras. If everything would have been built and placed in real as planned, you would have an aligned picture already after this construction phase – but this is theory. In fact, all buildings have tolerances and that’s where the camera based auto alignment starts its work: several test images are projected on each projector and the cameras take pictures of them. Our software analyses the offset and wrong warping of the projected images and perfectly adjusts warping and blending to have a seamless image on the screen shape.
System Tools

BRAINSALT video servers are running a write protected, embedded operating system. Tools for EDID Management and EDID Emulation, Genlock Watchdog and 4K Output Mode setup are installed. During boot these tools automatically set the correct display layout and system settings to guarantee proper operation.

Embedded OS
BRAINSALT Video Servers are using an embedded Operation System. This allows to write protect the system files and system settings to avoid unexpected modifications during operation. If 3rd party software must be installed, the write protection can be temporarily disabled during setup.

EDID Management
Our EDID Manager allows to read the currently connected EDIDs, modify them and override the outputs with emulated EDIDs. During system startup and even on video load (if change of output frequency is necessary to match to video’s framerate) the EDIDs are automatically loaded. Thus, regardless what happens on the servers output, it will always provide a signal with the timings specified in the emulated EDID.

KVM Output Emulation
All Briansalt Video Servers do have a control monitor output where BIOS messages and the OS primary outputs is shown. This ensures, that such system information does not appear on the video outputs. This output is usually connected to a Control Monitor or KVM switch. However, if there is no monitor connected to the servers control monitor output at startup, an EDID is automatically loaded to emulate a monitor. This allows remote connection through VNC without disturbing normal operation.

4K Output Mode
4K projectors usually are feed in quadrant or column mode. Both modes can be set and are automatically setup on startup.
B6 Series Server
Uncompressed 2K/4K Video and Audio Servers
B6 Series Server

Uncompressed 4:4:4, High Resolution, High Framerate, High Bitdepth - the key features of our B6 series video servers. Up to 32K media resolution, 30Bit color depth, 120FPS, 2D or 3D playback with one or multiple units, frame- and genlocked for perfect synchronous running video channels. Integrated image warping and edge blending allow perfect projection on any surface.

The BRAINSALT B6 Series, the successor of the BSM 2010 and 2013 series video servers, is a complete range of video servers with up to ten synchronous running HD/2K+ or two UHD/4K+ video channels. All servers support uncompressed video playback in RGB mode with up to 30 Bits color depth. Perfect linear video playback in 2D, 3D, with up to 120 FPS and beyond 4K resolution. Various audio options, our camera based calibration system for multi-channel projection and our show control software Conductor completes the B6 Series to one of the most versatile solution available from a single vendor in the market.

<table>
<thead>
<tr>
<th></th>
<th>UHD/4K Outputs</th>
<th>HD/2K Outputs</th>
<th>Hardware Redundancy</th>
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<tbody>
<tr>
<td>4K PLUS Type Models</td>
<td>up to 2</td>
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<td></td>
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<tr>
<td>HD PLUS Type Models</td>
<td>up to 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HD ECO Type Models</td>
<td>up to 4</td>
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</tr>
</tbody>
</table>

Naming Convention

B6 - 4K 2 - PLUS - 30 TC - GL

Typical output resolution per video channel. "HD" stands for resolutions up to 2K. All 4K servers support output in single, dual or quadrant mode.

Number of video channels of this server. 8 means: 8 videos can be loaded and played out synchronously to 8 separate video outputs.

PLUS or ECO model. PLUS has redundant fans and power supply. PLUS SERIES models can have more output channels than ECO. 4K is only available with PLUS SERIES.

Maximum supported framerate. All framerates below are also supported.

Timecode Input to synchronize to external LTC timecode. TC models can be synchronized to playback clusters. (Framelock).

Genlock Input, as addition to Timecode Input; to synchronize multiple units on a per pixel basis (Genlock).
B6 4K-PLUS Models
Hardware Redundant UHD/4K Video Server
Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VI included
- Video Channels: 1
- Output Connectors: Up to 4x DisplayPort 1.2, Optional Adapter to Dual Link DVI
- Outputs can be configured for quadrant output (4x 1920x1080) or 4x 2048x1080 or dual output (2x 1920x2160 or 2x 2048x2160) or native 4K through Display Port 1.2
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to UHD/4K and custom resolutions

Codecs
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

Media Manager
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

System Tools
- EDID Management and Emulation
- Control
  - Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional LTC timecode input
- Multiple units sync able (FrameLock)
- Optional Genlock input
- Multiple units sync able for 3D (Genlock)

Standard Audio processing
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 2.2 TB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 27 kg
**SPECSIFICATIONS**

**Outputs**
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Channels: 1
- Output Connectors: Up to 4x DisplayPort 1.2, Optional Adapter to Dual Link DVI
- Outputs can be configured for quadrant output (4x 1920x1080 or 4x 2048x1080) or dual output (2x 1920x2160 or 2x 2048x2160) or native 4K through Display Port 1.2
- Frame rates: 23.976, 24, 25, 29.97, 30, 48, 50, 59.94, 60
- Supports all standard output resolutions up to UHD/4K and custom resolutions

**Codecs**
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

**Playmaker**
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

**Media Manager**
- Load and manage audio and video content
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames.
- Analyze and rapid review media

**Conductor (Optional)**
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

**Camera Based Auto Alignment (Optional)**
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

**Sync Options**
- Optional LTC timecode input
- Multiple units sync able (FrameLock)
- Optional Genlock input
- Multiple units sync able for 3D (Genlock)

**Standard Audio processing**
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

**Optional Audio processing**
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

**Media Storage**
- 4.4 TB SSD

**Operating System**
- Microsoft Windows 7 Embedded Standard

**Hardware**
- 3U/19" chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 27 kg
B6 4KI-PLUS 120

**Outputs**
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Channels: 1
- Output Connectors: Up to 4x DisplayPort 1.2
- Outputs can be configured for quadrant output (4x 1920x1080 or 4x 2048x1080) or dual output (2x 1920x2160 or 2x 2048x2160)
- Framerates: 23.976, 24, 25, 29.97, 30, 48, 50, 59.94, 60, 95.904, 96, 100, 119.88, 120
- Supports all standard output resolutions up to UHD/4K and custom resolutions

**Codecs**
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

**Playmaker**
- Perfect Video Playback
- Manage Playlists
- Schedule for unattended operation
- Warping with Lanczos filtering
- Edge Blending

**Media Manager**
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

**Conductor (Optional)**
- Compose and Edit Effects and Shows synchronous to media playback
- Run Effects and Shows synchronous to media playback (PLAY ONLY License)

**Camera Based Auto Alignment (Optional)**
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

**Sync Options**
- Optional LTC timecode input
- Multiple units sync able (Framelock)
- Optional Genlock input
- Multiple units sync able for 3D (Benlock)

**System Tools**
- EDID Management and Emulation
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

**Standard Audio processing**
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

**Optional Audio processing**
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

**Media Storage**
- 12.2 TB SSD

**Operating System**
- Microsoft Windows 7 Standard Embedded

**Hardware**
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 27 kg
B6 4K2-PLUS 3O

**Outputs**
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Channels: 2
- Output Connectors: Up to 8x DisplayPort 1.2, Optional Adapter to Dual Link DVI
- Outputs can be configured for quadrant output (4x 1920x1080 or 4x 2048x1080) or dual output (2x 1920x1080 or 2x 2048x1080) or native 4K through Display Port 1.2
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to UHD/4K and custom resolutions
- 3D Capable (Passive, SideBySide, Whitteline, Blueline)

**Codecs**
- Uncompressed 4:4:4 30Bit
- H.264, AVC, HPE02, HPE01
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

**Playmaker**
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

**Media Manager**
- Load and manage audio and video content
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames.
- Analyze and rapid review media

**Conductor (Optional)**
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

**Camera Based Auto Alignment (Optional)**
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

**System Tools**
- EDID Management and Emulation
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

**Sync Options**
- Optional LTC timecode input
- Multiple units sync able (Framelock)
- Optional Genlock Input
- Multiple units sync able for 3D (Genlock)

**Standard Audio processing**
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

**Optional Audio processing**
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os
- Requires ADAT or MADI soundcard, MADI to AVB bridge requires MADI soundcard

**Media Storage**
- 4.4 TB SSD

**Operating System**
- Microsoft Windows 7 Embedded Standard

**Hardware**
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 48 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 27 kg
B6 4K2-PLUS 60

**Outputs**
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Channels: 2
- Output Connectors: Up to 8x DisplayPort 1.2, Optional Adapter to Dual Link DVI
- Outputs can be configured for quadrant output (4x 1920x1080 or 4x 2048x1080) or dual output (2x 1920x1080 or 2x 2048x1080) or native 4K through Display Port 1.2
- Frame rates: 23.976, 24, 25, 29.97, 30, 48, 50, 59.94, 60
- Supports all standard output resolutions up to UHD/4K and custom resolutions
- 3D capable (Passive)

**Codecs**
- Uncompressed 4:4:4 30Bit
- H.264, AVC, HPE02, HPE01
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

**Playmaker**
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

**Media Manager**
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

**Conductor (Optional)**
- Compose and Edit Effects and Shows synchronous to media playback
- Run Effects and Shows synchronous to media playback (PLAY ONLY License)

**Camera Based Auto Alignment (Optional)**
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

**System Tools**
- EDID Management and Emulation

**Control**
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

**Sync Options**
- Optional LTC timecode input
- Multiple units sync able (Framelock)
- Optional Genlock input
- Multiple units sync able for 3D (Genlock)

**Standard Audio processing**
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

**Optional Audio processing**
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

**Media Storage**
- 12.2 TB SSD

**Operating System**
- Microsoft Windows 7 Standard Embedded

**Hardware**
- 3U 19" chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 46 x 13.3 x 65 cm
- Shipping dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 28 kg
B6 HD-PLUS Models
Hardware Redundant HD/2K Video Server
**B6 HD1-PLUS 30**

### SPECIFICATIONS

**Outputs**
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 1x DVI-D
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions

**Codecs**
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG2
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

**Playmaker**
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

**Media Manager**
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

**Conductor (Optional)**
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

**Camera Based Auto Alignment (Optional)**
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

**System Tools**
- EDID Management and Emulation

**Control**
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

**Sync Options**
- Optional LTC timecode input
- Multiple units sync able (FrameLock)
- Optional GenLock input
- Multiple units sync able for 3D (Benlock)

**Standard Audio processing**
- 8 channel 48/96 KHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

**Optional Audio processing**
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

**Video Capture Input**
- Optional

**Media Storage**
- 275 GB SSD

**Operating System**
- Microsoft Windows 7 Standard Embedded

**Hardware**
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 26 kg

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**B6 HD-PLUS Models**
B6 HDI-PLUS 60

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 1x DVI-D
- Frame rates: 23.976, 24, 25, 29.97, 30, 48, 50, 59.94, 60
- Supports all standard output resolutions up to HD/2K and custom resolutions

Codecs
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

Media Manager
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

Media Tools
- EDID Management and Emulation

Control
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional LTC timecode input
- Multiple units sync able (FrameLock)
- Optional Genlock Input
- Multiple units sync able for 3D (Genlock)

Standard Audio processing
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 550 GB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19" chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 46 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 26 kg
# B6 HD2-PLUS 3O

## SPECIFICATIONS

### Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 2x DVI-D
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive, SideBySide, White, Blue)

### Codec
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

### Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

### Media Manager
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

### Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

### Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

### System Tools
- EDID Management and Emulation
- Control
  - Easy Integration with UDP and RS232 remote control Crestron® CNX protocol integrated
- Sync Options
  - Optional LTC timecode input
  - Multiple units sync able (Framelock)
  - Optional Genlock Input
  - Multiple units sync able for 3D (Genlock)
- Standard Audio processing
  - 8 channel 48/96 KHz Audio
  - Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
  - Volume control through UDP, RS232 and Crestron CNX remote control interface
- Optional Audio processing
  - Replaces Standard Audio
  - ADAT, MADL, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADL soundcard), MADL to AVB bridge (requires MADL soundcard)
- Video-Capture Input
  - Optional

### Media Storage
- 550 GB SSD

### Operating System
- Microsoft Windows 7 Standard Embedded

### Hardware
- 3U 19" chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 26 kg
B6 HD2-PLUS 60

SPECIFICATIONS

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 2x DVI-D
- Frame rates: 23.976, 24, 25, 29.97, 30, 48, 50, 59.94, 60
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive)

Codecs
- Uncompressed 4:4:4 30Bit
- H.264, AVI, MPEG2, MPEG4
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

Media Manager
- Load stop manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

System Tools
- EDID Management and Emulation
- Control
- Easy Integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional LTC timecode input
- Multiple units sync able (Framelock)
- Optional Genlock Input
- Multiple units sync able for 3D (Genlock)

Standard Audio processing
- 8 channel 48/96 KHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jaks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 1.1 TB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 26 kg
B6 HD4-PLUS 3O

SPECIFICATIONS

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 4x DisplayPort 1.2, Adapter to Single Link DVI included
- Framerates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive)

Codec
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

Media Manager
- Load an manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

System Tools
- EDID Management and Emulation
- Control
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional LTC timecode input
- Multiple units sync able (FrameLock)
- Optional Genlock input
- Multiple units sync able for 3D (Genlock)

Standard Audio processing
- 6 channel 48/96 KHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Ds (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 1.1 TB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19" chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 46 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 26 kg
B6 HD4-PLUS 60

SPECIFICATIONS

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 4x DisplayPort 1.2, Adapter to Single Link DVI included
- Frame rates: 23.976, 24, 25, 29.97, 30, 48, 50, 59.94, 60
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive)

Codec
- Uncompressed 4:4:4 30bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manager Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

Media Manager
- Load and manage audio and video content
- Media Resolution up to 30K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

System Tools
- EDID Management and Emulation
- Control
  - Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated
- Sync Options
  - Optional LTC timecode input
  - Multiple units sync able (Framelock)
- Optional Audio processing
  - Replaces Standard Audio
- ASI, MADL, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 2.1TB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 46 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 26 kg
B6 HD6-PLUS 3O

**Outputs**
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 6x DisplayPort 1.2, Adapter to Single Link DVI included
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive) with Genlock Option

**Codes**
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

**Playmaker**
- Perfect video playback
- Manage playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

**Media Manager**
- Load and manage audio and video content
- Media resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

**Conductor (Optional)**
- Compose and edit effects and shows synchronous to video playback
- Run Effects and shows synchronous to video playback (PLAY ONLY License)

**Camera Based Auto Alignment (Optional)**
- Adjust warping and blending automatically to always guarantee perfect image and image location on the screen over time

**System Tools**
- EDID management and simulation
- Control
  - Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated
- Sync Options
  - Optional LTC timecode input
  - Multiple units sync able (FrameLock)
  - Optional internal cards Genlock (Includes Genlock Input)
  - Multiple units sync able for 3D (Genlock)

**Standard Audio processing**
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

**Optional Audio processing**
- Replaces Standard Audio
- ADAT, MADI AES, CoBranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

**Video Capture Input**
- Optional

**Media Storage**
- 1.6 TB SSD

**Operating System**
- Microsoft Windows 7 Standard Embedded

**Hardware**
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 27 kg

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**Outputs**
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 6x DisplayPort 1.2, Adapter to Single Link DVI included
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive) with Genlock Option

**Codes**
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

**Playmaker**
- Perfect video playback
- Manage playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

**Media Manager**
- Load and manage audio and video content
- Media resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

**Conductor (Optional)**
- Compose and edit effects and shows synchronous to video playback
- Run Effects and shows synchronous to video playback (PLAY ONLY License)

**Camera Based Auto Alignment (Optional)**
- Adjust warping and blending automatically to always guarantee perfect image and image location on the screen over time

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**System Tools**
- EDID management and simulation
- Control
  - Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated
- Sync Options
  - Optional LTC timecode input
  - Multiple units sync able (FrameLock)
  - Optional internal cards Genlock (Includes Genlock Input)
  - Multiple units sync able for 3D (Genlock)

**Standard Audio processing**
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

**Optional Audio processing**
- Replaces Standard Audio
- ADAT, MADI AES, CoBranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

**Video Capture Input**
- Optional

**Media Storage**
- 1.6 TB SSD

**Operating System**
- Microsoft Windows 7 Standard Embedded

**Hardware**
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 27 kg
B6 HD8-PLUS 3O

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 8x DisplayPort 1.2, Adapter to Single Link DVI included
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive) with Genlock Option

Codecs
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

Media Manager
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

System Tools
- EDID Management and Emulation
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional LTC timecode input
- Multiple units sync able (FrameLock)
- Optional internal cards Genlock (includes Genlock Input)
- Multiple units sync able for 3D (FrameLock)

Standard Audio processing
- 8 channel 48/96 KHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 2.2 TB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 27 kg
B6 HDIO-PLUS 30

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 10x DisplayPort 1.2, Adapter to Single Link DVI included
- Framerates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive) with Genlock Option

Codes
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

Media Manager
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

System Tools
- EDID Management and Emulation
- Control
  - Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated
- Sync Options
  - Optional LTC timecode input
  - Multiple units sync able (FrameLock)
  - Optional internal cards Genlock (includes Genlock Input)
  - Multiple units sync able for 3D (Genlock)

Standard Audio processing
- 6 channel 48/96 KHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 2.7 TB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U/19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 46 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 30 kg
B6 PLUS Controller

Controller for Cluster of TC Players, can also act as centralized Storage and Alignment Server

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Subs/PDIF MIC IN OUT
- Rear Subs/PDIF MIC IN OUT

PLUS Controler for GL BACK VIEW WITH ADAT AUDIO

PLUS Controler for CF BACK VIEW WITH ADAT AUDIO

Specifications

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Subs/PDIF
- MIC IN OUT Rear

PLUS Controler for GL BACK VIEW WITH ADAT AUDIO

PLUS Controler for CF BACK VIEW WITH ADAT AUDIO

Playmaker
- Controller for TC Player Cluster
- Manage Playlists
- Scheduler for unattended operation

Media Manager
- Manage audio content
- Act as Media Storage and Media Manager of TC Servers, if no separate Align/Store/Encode server is present in the cluster
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to media playback
- Run Effects andShows synchronous to media playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time
- When acting as Media Storage for TC Cluster, Auto Alignment of a TC Cluster is controlled and processed on the Controller

Control
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional Genlock Input
- Multiple units sync able for 3D (Genlock)

Required Audio Option for Timecode Distribution
- 16 channel 48/96 kHz AD/DA with balanced outputs for LTC Timecode Distribution, multiple units possible. One output per TC Player. Unused outputs can be used for Show Audio.
- A16 is used as Genlock Generator for genlocked TC Server Clusters
- ADAT or MADI Soundcard to feed A16

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Media Storage
- 275 GB SSD
- When acting as Media Storage of TC Players, Storage must be adopted to the sum of storage of all TC Players in the cluster

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 25 kg
B6 PLUS Align/Store

Centralized Media Storage, detached from Controller

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included

Playmaker
- Optional Alignment Controller for TC Player Cluster
- Manage Playlists
- Scheduler for unattended operation

Media Manager
- Load and manage audio and video content for TC Players
- Allows to prepare media without influencing TC Players playback
- Storage for Online/Offline media. Online media is transferred to TC Players. Offline media is just stored. Allows to keep storage requirements on TC Players low
- Media Backup Server
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time
- Controls and processes Auto Alignment of TC Players

Control
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Media Storage
- 8 - 72 TB RAID
- Storage must be adopted to the sum of storage of all TC Players in the cluster

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 48 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 25-32 kg

SPECIFICATIONS
B6 ECO Models

Cost Effective HD/2K Video Server
B6 HDI-ECO 30

SPECIFICATIONS

Outputs
- Control Monitor: 1x VGA
- Video Outputs: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions

Codecs
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering

Media Manager
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

System Tools
- EDID Management and Emulation

Control
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional LTC timecode input
- Multiple units sync able (Framelock)

Standard Audio processing
- 8 channel 48/96 KHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio processing
- Replaces Standard Audio
- MADI, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 275 GB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 2U 19'' chassis
- Power supply: 300W, 100V - 240V
- Dimensions (Weight): 48.3 x 8.9 x 59 cm
- Shipping Dimensions (Weight): 57 x 21 x 70 cm
- Weight: 11.5 kg
B6 HD2-ECO 30

SPECIFICATIONS

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Video Outputs: 2x DVI-D
- Frame rates: 23.976, 24, 25, 29.97, 30
- Supports all standard output resolutions up to HD/2K and custom resolutions
- 3D Capable (Passive, SideBySide, WhiteLine, BlueLine)

Codecs
- Uncompressed 4:4:4 30Bit
- H.264, AVC, MPEG2, MPEG1
- Display of various still image formats
- Most other popular video formats can be imported through Media Manager

Playmaker
- Perfect Video Playback
- Manage Playlists
- Scheduler for unattended operation
- Warping with Lanczos filtering
- Edge Blending

Media Manager
- Load and manage audio and video content
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to video playback
- Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

System Tools
- EDID Management and Emulation
- Control
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional LTC timecode input
- Multiple units syncable (FrameLock)

Standard Audio processing
- 8 channel 48/96 kHz Audio
- Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
- Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Video Capture Input
- Optional

Media Storage
- 550 GB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19" chassis
- Power supply: 400W, 100V - 240V
- Dimensions (WxHxD): 48.3 x 13.3 x 56 cm
- Shipping Dimensions (WxHxD): 57 x 25 x 70 cm
- Weight: 15 kg
B6 HD4-ECO 30

Outputs
• Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
• Video Outputs: 4x DisplayPort 1.2, Adapter to Single Link DVI included
• Framerates: 23.976, 24, 25, 29.97, 30
• Supports all standard output resolutions up to HD/2K and custom resolutions
• 3D Capable (Passive)

Codecs
• Uncompressed 4:4:4 30Bit
• H.264, AVC, MPEG2, MPEG1
• Display of various still image formats
• Most other popular video formats can be imported through Media Manager

Playmaker
• Perfect Video Playback
• Manage Playlists
• Scheduler for unattended operation
• Warping with Lanczos filtering
• Edge Blending

Media Manager
• Load and manage audio and video content
• Media Resolution up to 32K x 32K
• Supports single frame sequences and most popular video and audio formats
• Allows composing of videos from frame sequences or even single frames
• Analyze and rapid review media

Conductor (Optional)
• Compose and Edit Effects and Shows synchronous to video playback
• Run Effects and Shows synchronous to video playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
• Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time

System Tools
• EDID Management and Emulation

Control
• Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
• Optional LTC timecode input
• Multiple units sync able (Framelock)
• Optional Genlock Input
• Multiple units sync able for 3D (Genlock)

Standard Audio Processing
• 6 channel 48/96 Khz Audio
• Either 4x unbalanced outputs through Mini Stereo Jacks or Optical SPDIF
• Volume control through UDP, RS232 and Crestron CNX remote control interface

Optional Audio Processing
• Replaces Standard Audio
• ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard). MADI to AVB bridge (requires MADI soundcard)

Video-Capture Input
• Optional

Media Storage
• 1.1 TB SSD

Operating System
• Microsoft Windows 7 Standard Embedded

Hardware
• 3U 19” chassis
• Power supply: 400W, 100V - 240V
• Dimensions (WxDxH): 48.3 x 13.3 x 56 cm
• Shipping Dimensions (WxDxH): 57 x 25 x 70 cm
• Weight: 16 kg
B6 ECO Controller

Controller for Cluster of TC Players, can also act as centralized Storage and Alignment Server

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included

Playmaker
- Controller for TC Player Cluster
- Manage Playlists
- Scheduler for unattended operation

Media Manager
- Manage audio content
- Act as Media Storage and Media Manager of TC Servers, if no separate Align/Store/Encode server is present in the cluster
- Media Resolution up to 32K x 32K
- Supports single frame sequences and most popular video and audio formats
- Allows composing of videos from frame sequences or even single frames
- Analyze and rapid review media

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to media playback
- Run Effects and Shows synchronous to media playback (PLAY ONLY License)

Camera Based Auto Alignment (Optional)
- Adjust Warping and Blending automatically to always guarantee perfect image and image location on the screen over time
- When acting as Media Storage for TC Cluster, Auto Alignment of a TC Cluster is controlled and processed on the Controller

Control
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional Genlock Input
- Multiple units syncable for 3D (Genlock)

Required Audio Option for Timecode Distribution
- 16-channel 48/96 kHz AD/DA with balanced outputs for LTC Timecode Distribution, multiple units possible. One output per TC Player. Unused outputs can be used for Show Audio.
- A16 is used as Genlock Generator for genlocked TC Server Clusters
- ADAT or MADI Soundcard to feed A16

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Media Storage
- 275 GB SSD
- When acting as Media Storage of TC Players, Storage must be adopted to the sum of storage of all TC Players in the cluster

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19” chassis
- Power supply: 400W, 100V - 240V
- Dimensions (WxD): 48.3 x 13.3 x 56 cm
- Shipping Dimensions (WxD): 57 x 25 x 70 cm
- Weight: 14 kg

Sync Options
- Optional Genlock Input
- Multiple units syncable for 3D (Genlock)

Required Audio Option for Timecode Distribution
- 16-channel 48/96 kHz AD/DA with balanced outputs for LTC Timecode Distribution, multiple units possible. One output per TC Player. Unused outputs can be used for Show Audio.
- A16 is used as Genlock Generator for genlocked TC Server Clusters
- ADAT or MADI Soundcard to feed A16

Optional Audio processing
- Replaces Standard Audio
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Media Storage
- 275 GB SSD
- When acting as Media Storage of TC Players, Storage must be adopted to the sum of storage of all TC Players in the cluster

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19” chassis
- Power supply: 400W, 100V - 240V
- Dimensions (WxD): 48.3 x 13.3 x 56 cm
- Shipping Dimensions (WxD): 57 x 25 x 70 cm
- Weight: 14 kg
B6 Audio Models
Multichannel Audio Server
B6 Audio ECO

SPECIFICATIONS

Outputs
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Up to 32 individual groups of audio playback
- Each group can consist of 1-32 synchronous running audio channels
- Up to 128 total audio channels with up to 4 sound cards

Codecs
- Mono, Stereo and Multichannel WAV, AAC, MPEG Audio

Playmaker
- Perfect Audio Playback
- Manage Playlists
- Scheduler for unattended operation

Media Manager
- Load and manage audio content
- Upload audio content through FTP

Conductor (Optional)
- Compose and Edit Effects and Shows synchronous to media playback
- Run Effects and Shows synchronous to media playback (PLAY ONLY License)

Control
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

Sync Options
- Optional LTC timecode input
- Optional Wordclock I/O

Audio processing, up to 4 cards
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

Media Storage
- 600 GB SSD

Operating System
- Microsoft Windows 7 Standard Embedded

Hardware
- 3U 19" chassis
- Power supply: 400W redundant, 100V - 240V
- Dimensions (WxHxD): 46.3 x 13.3 x 56 cm
- Shipping Dimensions (WxHxD): 57 x 25 x 70 cm
- Weight: 13 kg
**Outputs**
- Control Monitor: 1x DMS 59 for Video, Adapter to DVI/VGA included
- Up to 32 individual groups of audio playback
- Each group can consist of 1-32 synchronous running audio channels
- Up to 128 total audio channels with up to 4 sound cards

**Codecs**
- Mono, Stereo and Multichannel WAV, AAC, MPEG Audio

**Playmaker**
- Perfect Audio Playback
- Manage Playlists
- Scheduler for unattended operation

**Media Manager**
- Load and manage audio content
- Upload audio content through FTP

**Conductor (Optional)**
- Compose and Edit Effects and Shows synchronous to media playback
- Run Effects and Shows synchronous to media playback (PLAY ONLY License)

**Control**
- Easy integration with UDP and RS232 remote control Crestron® CNX protocol integrated

**Sync Options**
- Optional LTC timecode input
- Optional Wordclock I/O

**Audio processing, up to 4 cards**
- ADAT, MADI, AES, Cobranet, Dante Virtual, Balanced Analog I/Os (requires ADAT or MADI soundcard), MADI to AVB bridge (requires MADI soundcard)

**Media Storage**
- 600 GB SSD

**Operating System**
- Microsoft Windows 7 Standard Embedded

**Hardware**
- 3U 19” chassis
- Power supply: 2 x 800W redundant, 100V - 240V
- Dimensions (WxHxD): 46 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 33 x 87 cm
- Weight: 24 kg
B6 Series Audio and Video I/O Options
Soundcards

Multiple cards can be used, if they have Wordclock I/O. Up to 4 physical cards in one server (depends on availability of free slots). Certain combination of cards possible, please contact us for details.

<table>
<thead>
<tr>
<th></th>
<th>48Khz Channels</th>
<th>96Khz Channels</th>
<th>Wordclock I/O</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADAT 32</td>
<td>32</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>MADI 64</td>
<td>64</td>
<td>32</td>
<td>✓</td>
</tr>
<tr>
<td>MADI 192</td>
<td>192</td>
<td>96</td>
<td>✓</td>
</tr>
<tr>
<td>AES 16</td>
<td>16</td>
<td>8</td>
<td>✓</td>
</tr>
<tr>
<td>AES 32</td>
<td>32</td>
<td>16</td>
<td>✓</td>
</tr>
<tr>
<td>Cobranet 8 *)</td>
<td>8</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Cobranet 16 *)</td>
<td>16</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Dante Virtual *)</td>
<td>64</td>
<td>64</td>
<td></td>
</tr>
</tbody>
</table>

*) Can be used in 2U chassis. All other cards are only available for servers with 3U chassis.

MADI to AVB Bridge

Bi-directional 64-channel MADI to Ethernet AVB Bridge. Requires installed MADI soundcard.

- 48KHz or 96KHz Operation
- 64x 48KHz Channels, 32x 96KHz Channels
- Audio Data Format: 24Bit
- MADI Optical: SC Multimode Fiber
- MADI BNC / coax
- Rugged extruded aluminum chassis with black anodized finish, Rackmounts available
- Power from external 48VDC supply or PoE (802.3af)
- Connectors: RJ45 Network, MADI: 1x SC Multi-Mode Optical, 2x BNC
Video Input

Overlay or Pass-Through external Video Sources to video outputs. Audio is not routed. Warping and Blending is applied. All channels can be used at once. Please note: NOT HDCP compliant - copy protected signals will not display. Video input is limited to current or max. framerate of Video Server.

<table>
<thead>
<tr>
<th>Input</th>
<th>FPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SINGLE CHANNEL DVI-SL</td>
<td>1x DVI-I (Analogue and Digital) up to 165MHz (1920x1200)</td>
</tr>
<tr>
<td>DUAL CHANNEL DVI-SL</td>
<td>2x DVI-I (Analogue and Digital) up to 165MHz (1920x1200)</td>
</tr>
<tr>
<td>QUAD CHANNEL DVI-SL</td>
<td>4x DVI-I (Analogue and Digital) up to 165MHz (1920x1200)</td>
</tr>
<tr>
<td>SINGLE CHANNEL DVI-DL</td>
<td>1x DVI-D up to 330MHz (2560x1600)</td>
</tr>
<tr>
<td>DUAL CHANNEL DP 1.2</td>
<td>2x DP1.2 up to 4K</td>
</tr>
</tbody>
</table>
A16 AD/DA Converter

Professional 16 channel audio AD/DA converter, 16 balanced inputs, 16 balanced outputs, 2x optical MADI and 4x ADAT interfaces, input and output level displays, routing, level and gain adjustment. Requires installed ADAT or MADI sound card.

Audio Converter
The A16 is a 16 x 16 channel AD/DA converter with high quality, professional analog and digital I/O's, and outstanding user interface. Using two TFT displays makes configuration and control of this interface a breeze. ADAT and MADI interfaces allow to connect the A16 to your professional equipment. Flexible routing possibilities and individual control over gain/levels of each channel allows integration in an easy way.

Timecode Distributor and Genlock Signal Generator
In BRAINSALT systems with multiple video servers, the A16 is typically used as timecode distributor and Genlock Signal Generator. The balanced outputs assure an error-free timecode distribution. The audio channels not needed for timecode distribution can be used for conventional audio playback. During final on-site audio editing, A16 can interface to the audio production desk. It can also be used to receive and route timecode from an external source (like audio or light desk) to a BRAINSALT server cluster. With optical or coaxial MADI, up to 4 units can be daisy chained to output up to 64 audio channels.

Specifications

Analogue Interface
- 16 x in, 16 x out, balanced phone plugs
- 24 bit AKM converters, 32kHz - 192kHz
- input-gain and output-levels individually adjustable for each channel

Digital Interface
- optical MADI interface (incl. MIDI over MADI)
- two ADAT interfaces for 16 channels

System Interfaces
- BNC wordclock input
- BNC wordclock output
- Genlock Signal Generator (24 - 120 Hz)
- MADI over MIDI
- Physical MIDI connectors for remote

Frontpanel
- two TFT displays show the high resolution level meters of all inputs and outputs
- preset management
- keyboard lock
- detailed status display for monitoring all inputs
- graphical adjustment of levels and gains
- routing Editor
- SMUX control

Technical Specifications

MADI I/O optical interface
- 64 channels @32kHz, 44.1kHz, 48kHz
- 32 channels @96kHz
- 16 channels @192kHz
- delay: 3 samples
- embedded MIDI

ADAT output 2x optical interfaces
- 16 channels @32kHz, 44.1kHz, 48kHz
- 8 channels @96kHz
- 4 channels @192kHz
- delay: 3 samples

Wordclock
- BNC 1x input, 1x output
- 75 Ohm termination
- 1x Wordclock, rising edge

MIDI I/O/T
- DIN5 jacks: in/out/thru

Converters
- 8 x AK4620B (AKM)
- max 192kHz

A/D conversion
- 16 x balanced phone jacks
- max input signal: 20dBu
- analog gain: 29 steps of 0.5dB
- S/N: 108dB
- THD+N: -93dB
- crosstalk: -105dB
- delay: 0.9ms @ 48kHz, 0.45ms @ 96kHz, 0.2ms @ 192kHz
- OpAmp: RC4580
- level indicator: 76 segments for each input

D/A conversion
- 16 x balanced phone jacks
- max output signal: 20dBu
- analog gain: 29 steps of 0.5dB
- S/N: 112dB
- THD+N: -100dB
- crosstalk: -105dB
- delay: 0.58ms @ 48kHz, 0.29ms @ 96kHz, 0.15ms @ 192kHz
- OpAmp: RC4580
- level indicator: 76 segments for each input

Power
- 12V, 16W typ, 24W max
- External Power Supply 100-240V included
A32 AD/DA Converter

Professional 32 channel audio AD/DA converter, 32 balanced inputs, 32 balanced outputs, 2x coaxial and optical MADI, 8 x optical ADAT interfaces, optional Dante or AVB support, input and output level displays, routing, level and gain adjustment, redundant power supply

Audio Converter
The A32 is a 32 + 32 channel AD/DA converter with highest quality, professional analog and digital I/O's and outstanding user interface. Using four TFT displays makes configuration and control of this interface a breeze. ADAT and MADI interfaces allow to connect the A32 to your professional equipment. Flexible routing possibilities and individual control over gain/levels of each channel allows integration in an easy way. Optional Dante or AVB interfaces allows A32 to convert from and to digital audio networks.

Timecode Distributor and Genlock Signal Generator
In BRAINSALT systems with multiple video servers, the A32 is typically used as timecode distributor and Genlock Signal Generator. The balanced outputs assure an error-free timecode distribution. The audio channels not needed for timecode distribution can be used for conventional audio playback. During final on-site audio editing, A32 can interface to the audio production desk. It can also be used to receive and route timecode from an external source (like audio or light desk) to a BRAINSALT server cluster. With optical or coaxial MADI, up to 2 units can be daisy chained to output up to 64 audio channels.

Analog Interface
- 32 balanced inputs, 32kHz - 192kHz
- 32 balanced outputs, 32kHz - 192kHz

Digital Interface
- 2x coaxial and 2x optical MADI (incl. MIDI over MADI)
- 8x ADAT

System Interfaces
- BNC wordclock Input
- BNC wordclock Output
- Genlock Signal Generator (24 - 120 Hz)
- MADI over MIDI
- Physical MIDI connectors for remote

Frontpanel
- four TFT displays show the high resolution level meters of all inputs and outputs
- preset management
- keyboard lock
- detailed status display for monitoring all inputs
- graphical adjustment of levels and gains
- routing Editor
- SMUX control

Technical Specifications

MADI I/O optical interface
- 64 channels @32kHz, 44.1kHz, 48kHz
- 32 channels @48kHz (16 optical + 16 coaxial)
- delay: 3 samples
- onboard MADI
- automatic switching between optical <-> coax MADI when signal lost

ADAT I/O
- 4 + 4 optical interfaces
- 32 channels @32kHz, 44.1kHz, 48kHz
- 16 channels @96kHz
- n/a channels @192kHz

S/PDIF
- ADAT 4 I/O can be reconfigured as S/PDIF
- input has sample rate converter included (performance of SRC: -128dB)
- output follows A32 sample frequency

Dante, AVB, DSP
- Optional modules to interface to Dante and AVB networks (not available yet)

Wordclock
- BNC: 1x input, 1x output
- 75 Ohm termination
- 1x Wordclock, rising edge
- Sync generator frequencies: 24, 25, 30, 48, 50, 60, 72, 75, 90, 96, 100, 120 Hz

MIDI I/O/T
- DIN5 jacks: in/out/thru

Headphone output
- independent channel
- select any mono or stereo source
- select one of 5 mixes of all inputs and outputs
- digital volume control

USB
- USB 2.0 for remote, update

A/D conversion
- 4x CS4398 (Cirrus Logic)
- 4x 256dB / Tascam
- analog switches: -20dBu, -13dBu, +4dBu
- digital gain: -20dBu... +8dBu, 1dB steps
- 5%: 114dB
- THD+N: 105dB
- interchannel isolation: 110dB
- latency @32kHz, 44.1kHz, 48kHz: 12% (0.25ms @48kHz)
- latency @48kHz, 88.2kHz, 96kHz: 9% (0.0973ms @96kHz)
- latency @96kHz, 176.4kHz, 192kHz: 5.1% (0.026ms @192kHz)
- OpAmps: RC4660 x OPAm8464
- level indicator: TFT screen, 28 levels

D/A conversion
- 4x CS43436 (Cirrus Logic)
- 4x 256dB / Tascam
- analog switches: -20dBu, -13dBu, +4dBu
- digital gain: -20dBu... +8dBu, 1dB steps
- 5%: 114dB (A-weighted)
- THD+N: 100dB
- interchannel isolation: 110dB
- latency @32kHz, 44.1kHz, 48kHz: 7.8% (0.1625ms @48kHz)
- latency @48kHz, 88.2kHz, 96kHz: 5.4% (0.05625ms @96kHz)
- latency @96kHz, 176.4kHz, 192kHz: 6.6% (0.034375ms @192kHz)
- OpAmps: RC4660 x OPAm8464
- level indicator: TFT screen, 28 levels

Lock feature
- unit can be (un-)locked using a factory set secret 6 digit number

Power supply
- 2x input jacks with screw lock for redundant power
- voltage supervision, warning message on screen when PSU input fails
- 2x power supply included, 12V, 3A
B6 Series Options
Alignment CAM

Camera for Auto Alignment including lens and USB 2.0 extender over CAT5E (or better) up to 60 meters including 7.4V power outlet for one Alignment Camera

The ALIGNMENT CAM consists of a DSR camera, a high quality wide angle lens and an USB over ethernet extender.

USB 2.0 Extender
The ALIGNMENT CAM USB EXTENDER is a modified version of the USB 2.0 Ranger 2212 developed by Icron Technologies Corporation. It allows USB 2.0 and power distribution over one CAT5e (or better) cable without the need of a power supply at the receiver. The version adds a 7.4V power output to feed one ALIGNMENT CAMERA.

Camera Power Supply
To be able to run one ALIGNMENT CAMERA with only one cable between computer and camera, BRAINSALT added a power connector to the receiver unit that outputs the required 7.4V for one ALIGNMENT CAMERA. The maximum distance between USB Sender and USB receiver is limited to 60 meters.

Specifications
- 80° horizontal, 57.3° vertical field of view
- 4272 x 2848 pixel
- USB 2.0 over CAT5e (or better) cable up to 60 meters
- Power supply at sender, no power supply at receiver
- Dimensions of USB Sender and Receiver: 100mm x 76mm x 26mm

in the box
- Camera
- Lens
- USB Sender unit
- USB Receiver unit
- Power Supply 100V-230V
- USB cable to connect to computer and camera
- Power cable to connect Receiver unit to camera
- Adapter to feed camera through external power supply
B6 Monitoring Server

Remote monitoring of BRAINSALT video servers. Timecode display and monitoring. Realtime video streaming of video outputs up to 8 displays. Supports network cameras for control room operation.

The Monitoring Server gives a realtime overview of all video servers in a network. Each video server output can be streamed in realtime to a defined region on the screen - allowing the operator to get an overview of the complete installation. Multiple presets can be defined and the software can automatically cycle through that presets, showing videos of all scenes at once or one after each other. Timecode can also be observed. The monitoring server triggers notifications to operators, if a server or timecode is lost. Network cameras with h.264 streaming can also be displayed on the screen, allowing to show not only video server outputs, but also live images from the site.

## Outputs
- Eight DP output for control monitors, DP->DVI Adapter included

## Control
- Easy integration with UDP remote control

## Operating System
- Microsoft Windows 7 Embedded Standard

## Hardware
- 3U 19" chassis
- Redundant fans
- Power supply: 2 x 800W redundant, 100V - 340V
- Dimensions (WxHxD): 45 x 13.3 x 65 cm
- Shipping Dimensions (WxHxD): 67 x 32.5 x 87 cm
- Shipping weight: 26 kg

### Example of streaming 16 videos in realtime to 4 displays
Below is a step by step guide to choose the correct BRAINSALT equipment for your project. Some example systems can be found after the design rules.

1) Type of Audio Output
Choose between standard 7.1 (unbalanced), ADAT or MADI with or without external 16 channels DA converter (balanced outputs), AES, Cobranet, Dante or AVB (required MADI).

2) Count of Audio Channels
Multiple ADAT, MADI, AES and Cobranet outputs can be added to one machine.

3) Count of Synchronous Running Video Channels
This is typically the count of projectors or displays you want to feed.

4) PLUS or ECO Model
PLUS models do have a redundant power supply and redundant fans. They are designed for mission critical applications. ECO models are also designed for 24/7/365 operation but do not have any hardware redundancy. PLUS models can have more playback channels per server than ECO models. 4K playback is only supported by PLUS models. Framerates beyond 30 FPS are only supported by PLUS models.

5) Maximum Framerate and Output Resolutions
Choose between 30, 60 or 120 frames per second. More frames per seconds require bigger storage and more system bandwidth. Based on this, you can already decide for a single server or multi server scenario. The following table shows maximum output channels of B6 Series Server, based on output resolution and framerates:

<table>
<thead>
<tr>
<th>Max. Framerate</th>
<th>Possible Video Outputs per Server</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ECO MODELS</strong></td>
<td></td>
</tr>
<tr>
<td>HD/2K 30</td>
<td>1, 2, 4</td>
</tr>
<tr>
<td><strong>PLUS MODELS</strong></td>
<td></td>
</tr>
<tr>
<td>HD/2K 30</td>
<td>1, 2, 4, 6, 8, 10</td>
</tr>
<tr>
<td>HD/2K 60</td>
<td>1, 2, 4</td>
</tr>
<tr>
<td>4K 30</td>
<td>1, 2</td>
</tr>
<tr>
<td>4K 60</td>
<td>1, 2</td>
</tr>
<tr>
<td>4K 120</td>
<td>1</td>
</tr>
</tbody>
</table>
6) Single or Multi-Server System
If one server does not cover your required playback channels, you need to go for an multi server scenario. In a multi server scenario there is always one main machine, the CONTROLLER. This machine outputs Audio, Timecode and Genlock Signal (needed for 3D projections or framergates above 30 FPS). For timecode output and distribution we always use our A16 AD/DA converter together with either an ADAT or MADI sound option. One A16 outputs up to 16 balanced audio channels that can directly connect to playback servers with timecode input (-TC). Unused outputs can be used as normal audio playback channels. If you need AES or Cobranet output, you can add these cards to the CONTROLLER. In this case, you must use a MADI card for timecode output, because only the MADI card can be synced by wordclock to an AES or COBRANET card.

7) 2D or 3D Projection
For perfect 3D projection, all playback channels must run pixel synchronous. In single server scenarios with up to 4 outputs, these outputs run pixel synchronous by default. For any system with more than 4 physical outputs, or for any multi server system, you need GENLOCK OUTPUT (-GL) for the CONTROLLER and GENLOCK OPTION (-GL) for the TC-PLAYERS. These options add hardware to the machines to allow pixel synchronous output signals over multiple output cards and servers. In a multi server system with a CONTROLLER, the genlock signal is generated by the A16 AD/DA CONVERTER (Wordclock Out). This signal must be feed into the CONTROLLER genlock card input (BNC).

The genlock card in the CONTROLLER looks equal to the cards in the -GL Videoserver: In addition to the BNC connector it has two CAT5 connectors for input and output. Connect the output from the CONTROLLER to the input of the first -GL Videoserver. Also connect the output of the first -GL Videoserver with the input second Videoserver and so on. The CONTROLLER and -GL Videoservers are daisy-chained for transmitting the genlock signal.

8) Camera Based Auto Alignment to set Warping and Blending of Projectors
Our Auto Alignment system automatically adjusts and calibrates warping and blending of any amount of projectors to any screen surface. In general we suggest to use it for any 360° or dome installation or if projectors are blended on more than two sides. These installations are hard to calibrate by hand, even for real experts. If there are no technicians that can maintain a projection system on site during operation, our Auto Calibration system can be used for more simple installations, too. It allows an operator to recalibrate the system by simply pushing a button. The costs for the Auto Alignment is calculated per projector. In simple systems with only one camera and only one server, the ALIGNMENT PER CHANNEL - SINGLE CAM, SINGLE PLAYER must be purchased for each projector. In all other systems with either multiple cameras or a multi server system, the ALIGNMENT PER CHANNEL must be purchased for each projector. 4K Projectors need ALIGNMENT PER 4K CHANNEL licenses and Active 3D projectors need 1.5 regular “PER CHANNEL” licenses.

9) Separate Media Managing Machine ALIGN/STORE
In multi server environments with Auto Alignment, the media import for all playback channels is handled through one machine. This can either be handled by the CONTROLLER or by an separate ALIGN/STORE machine. A separate machine allows you to import media parallel to normal show operation - that way you can prepare content during show time and load it to the server system afterwards, when a show day is over. Scale the storage of an ALIGN/STORE machine to at least match the sum of storage of all servers that will receive content from this machine. In single server environments the media import is always done at the server itself.

10) Alignment Cameras Position and Count
The Alignment Cameras must be positioned that way, that they “see” the complete projection screen and that they overlap at least 20% with their neighbor camera[s]. Our Alignment Cameras do have a 86° horizontal and 57.3° vertical field of view. They are allowed to be angled up to 45° to the screen. The physical maximum resolution for the Alignment Camera is 4272 x 2848 pixels. In any part of the screen, the physical camera resolution must not be less than the projected physical pixels resolution. With other words: a projected image with 2048x1080 must be at least 2048x1080 in the camera’s field of view. If multiple cameras are used, at least one camera must match the projected physical pixels in every area of the screen. The Alignment Camera includes an USB over CAT5/CAT6 extender to connect to your camera over distances up to 80 meters. Communication and power for the camera is covered with one single CAT5/CAT6 cable, there is no need for a power supply at the receivers/cameras end. Alignment cameras connect to the same machine where the media import is done, either the SERVER itself (single server scenario) or the CONTROLLER or ALIGN/STORE (multi server scenario).

11) Control External Devices or Light Synchronous to Video Playback
If you need to control any effects or lights synchronous to video, use CONDUCTOR on a standalone server or on the CONTROLLER. Together with our PRO I-O devices you can control nearly any equipment through RS232, network, DMX, analog and digital outputs. For show programming you can use CONDUCTOR on an separate laptop (Full Version required) to create your show and to control the single server or server cluster.

12) Video Input
You can capture external video source[s] and overlay them with warping and blending to the output. This feature is only available on stand alone servers. The captures video can either manually positioned on the screen or with systems with our Auto Alignment, the image is either stretched over the complete screen or stretched over the complete screen with keeping the aspect ratio. Add SINGLE CHANNEL DVI-SL CAPTURE or DUAL CHANNEL DVI-SL CAPTURE to the server.
# B6 Series

## Example System Design

1) **PROJECTION WITH 1 x HD PROJECTOR WITH IMAGE WARPING**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HD-PLUS 30</td>
</tr>
</tbody>
</table>

2) **SIMPLE 3D PROJECTION AND SPECIAL EFFECTS OUTPUT AND PROGRAMMING, MOVIE LICENSING SYSTEM**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HD2-ECO 30</td>
</tr>
<tr>
<td>1</td>
<td>CONDUCTOR 2.0 FULL VERSION</td>
</tr>
<tr>
<td>1</td>
<td>PRO I-O SHOW COMMANDER 2</td>
</tr>
</tbody>
</table>

3) **PROJECTION WITH 4 x WUXGA PROJECTORS, 30 FPS MAX., 7.1 AUDIO**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HD4-ECO 30</td>
</tr>
</tbody>
</table>

4) **2D PROJECTION WITH 8 x WUXGA PROJECTORS, 30 FPS MAX., 7.1 AUDIO**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HD8-PLUS 30</td>
</tr>
</tbody>
</table>

5) **PASSIVE 3D PROJECTION WITH 2 x 2K PROJECTORS, 60 FPS MAX., AES AUDIO, SHOW CONTROL WITH DMX**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
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<tbody>
<tr>
<td>1</td>
<td>HD2-PLUS 60</td>
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<tr>
<td>1</td>
<td>HD-AES 16/16</td>
</tr>
<tr>
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<td>CONDUCTOR 2.0 FULL VERSION</td>
</tr>
<tr>
<td>1</td>
<td>PRO I-O DMX</td>
</tr>
</tbody>
</table>

6) **2D PANORAMA PROJECTION WITH 4 x WUXGA PROJECTORS, 60 FPS MAX., 32 COBRANET AUDIO**

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>HD4-PLUS 60</td>
</tr>
<tr>
<td>2</td>
<td>HD-COBRANET 16/16</td>
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</tbody>
</table>
7) 2D PANORAMA PROJECTION WITH 6 x WUXGA PROJECTORS, 30 FPS MAX., 32 BALANCED ANALOG AUDIO

<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>HD6-PLUS 30</td>
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<tr>
<td>1</td>
<td>HD-ADAT 32/32</td>
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<tr>
<td>2</td>
<td>A16 AD/DA CONVERTER</td>
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</tbody>
</table>

8) PASSIVE 3D PROJECTION WITH 2 x 4K PROJECTORS, 30 FPS MAX., 16 BALANCED ANALOG AUDIO

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
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<tbody>
<tr>
<td>1</td>
<td>4K2-PLUS 30 GL</td>
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<tr>
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<td>HD-ADAT 32/32</td>
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<tr>
<td>1</td>
<td>A16 AD/DA CONVERTER</td>
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</tbody>
</table>

9) DOME PROJECTION WITH 8 x WUXGA PROJECTORS, 30 FPS MAX., 16 BALANCED ANALOG AUDIO, AUTO ALIGNMENT SYSTEM, SHOW CONTROL WITH DMX AND DIGITAL OUTPUTS

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>HD8-PLUS 30</td>
</tr>
<tr>
<td>1</td>
<td>HD-ADAT 32/32</td>
</tr>
<tr>
<td>1</td>
<td>A16 AD/DA CONVERTER</td>
</tr>
<tr>
<td>1</td>
<td>CONDUCTOR 2.0 FULL VERSION</td>
</tr>
<tr>
<td>1</td>
<td>PRO I-O SHOW COMMANDER 2</td>
</tr>
<tr>
<td>1</td>
<td>ALIGNMENT INITIAL</td>
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<tr>
<td>8</td>
<td>ALIGNMENT PER CHANNEL</td>
</tr>
<tr>
<td>3</td>
<td>ALIGNMENT CAM</td>
</tr>
<tr>
<td>3</td>
<td>ALIGNMENT CAMERA MOUNT</td>
</tr>
<tr>
<td>5</td>
<td>TECHNICIAN PER DAY</td>
</tr>
</tbody>
</table>

10) CYLINDER PROJECTION WITH 32 x WUXGA PROJECTORS, 60 FPS MAX., 32 BALANCED ANALOG AUDIO, AUTO ALIGNMENT SYSTEM, SEPARATE MEDIA MANAGING MACHINE, SHOW CONTROL WITH DMX AND DIGITAL OUTPUTS

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>PLUS CONTROLLER FOR GL</td>
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<tr>
<td>1</td>
<td>HD-MADI 64</td>
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<tr>
<td>3</td>
<td>A16 AD/DA CONVERTER (1 for Timecode Distribution)</td>
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<tr>
<td>8</td>
<td>HD4-PLUS 60 TC-GL</td>
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<tr>
<td>1</td>
<td>CONDUCTOR 2.0 FULL VERSION</td>
</tr>
<tr>
<td>1</td>
<td>PRO I-O SHOW COMMANDER 2</td>
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<tr>
<td>1</td>
<td>ALIGN/STORE/ENCODE 8TB</td>
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<tr>
<td>1</td>
<td>ALIGNMENT INITIAL</td>
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<td>32</td>
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</tr>
<tr>
<td>10</td>
<td>TECHNICIAN PER DAY</td>
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</tbody>
</table>
11) 3D DOME PROJECTION WITH 32 x WUXGA PROJECTORS, 60 FPS MAX., 64 COBRANET AUDIO, AUTO ALIGNMENT SYSTEM, SEPARATE MEDIA MANAGING MACHINE

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>PLUS CONTROLLER FOR GL</td>
</tr>
<tr>
<td>1</td>
<td>HD-MADI 64</td>
</tr>
<tr>
<td>1</td>
<td>A16 AD/DA CONVERTER (1 for Timecode Distribution)</td>
</tr>
<tr>
<td>4</td>
<td>HD-COBRANET 16/16</td>
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<tr>
<td>8</td>
<td>HD4-PLUS 60 TC-GL</td>
</tr>
<tr>
<td>1</td>
<td>ALIGN/STORE/ENCODE 8TB</td>
</tr>
<tr>
<td>32</td>
<td>ALIGNMENT INITIAL</td>
</tr>
<tr>
<td>4</td>
<td>ALIGNMENT CAM</td>
</tr>
<tr>
<td>4</td>
<td>ALIGNMENT CAMERA MOUNT</td>
</tr>
<tr>
<td>10</td>
<td>TECHNICIAN PER DAY</td>
</tr>
</tbody>
</table>

12) DOME PROJECTION WITH 5 x 4K PROJECTORS, 60 FPS MAX., 8 BALANCED ANALOG AUDIO, AUTO ALIGNMENT SYSTEM, SEPARATE MEDIA MANAGING MACHINE

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PLUS CONTROLLER FOR GL</td>
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<tr>
<td>1</td>
<td>HD-ADAT 32/32</td>
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<td>4K-PLUS 60 TC-GL</td>
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<tr>
<td>1</td>
<td>ALIGN/STORE/ENCODE 8TB</td>
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<tr>
<td>1</td>
<td>ALIGNMENT INITIAL</td>
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<tr>
<td>5</td>
<td>ALIGNMENT PER 4K CHANNEL</td>
</tr>
<tr>
<td>3</td>
<td>ALIGNMENT CAM</td>
</tr>
<tr>
<td>3</td>
<td>ALIGNMENT CAMERA MOUNT</td>
</tr>
<tr>
<td>5</td>
<td>TECHNICIAN PER DAY</td>
</tr>
</tbody>
</table>

13) DOME PROJECTION WITH 12 x WUXGA PROJECTORS, 30 FPS MAX., 64 COBRANET AUDIO, AUTO ALIGNMENT SYSTEM, NO SEPARATE MEDIA MANAGING MACHINE

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PLUS CONTROLLER</td>
</tr>
<tr>
<td>1</td>
<td>PLUS CONTROLLER STORAGE 4 TB</td>
</tr>
<tr>
<td>1</td>
<td>HD-MADI 64</td>
</tr>
<tr>
<td>1</td>
<td>A16 AD/DA CONVERTER (1 for Timecode Distribution)</td>
</tr>
<tr>
<td>4</td>
<td>HD-COBRANET 16/16</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>5</td>
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14) 3D DOME PROJECTION WITH 32 x WUXGA PROJECTORS, 60 FPS MAX., 64 COBRANET AUDIO, AUTO ALIGNMENT SYSTEM, SEPARATE MEDIA MANAGING MACHINE

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Article</th>
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<tr>
<td>1</td>
<td>PLUS CONTROLLER FOR GL</td>
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<td>HD-MADI 64</td>
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<td>HD-COBRAKET 16/16</td>
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Show Controllers and I/Os
Solid State and Network Connected
Conductor is a timeline based show programming software that visualizes every numeric output (any analog, digital or DMX output) through a curve. Commands can be placed along the timeline in commands channels. A numeric channel can have different interpolation modes: step, linear or curve. Just add control points by double clicking into to channel, edit value and time by dragging the point or enter accurate values through the quick edit command.

Live Recording and Timeline Editing
You can map and record an external devices like Mouse, Keyboard, Joystick, MIDI faders and Game Controllers to any or multiple channels and program your show in real-time. Punch In/Out can be set per group - you decide to record to all or single channels. Input values can be scaled or inverted and you can define ease-in and out times for devices with no force feedback, to avoid any jumps in the recording data.

Keyframe Sliders
As an alternative to direct point manipulation, the keyframe sliders allow you to jump from point to point and adjust the value of the point with the slider.

Multi Channel Audio With Volume Control
Load and route audio to up to 16 audio channels. Volume Envelopes can be put to every audio file.

Artnet & DMX Recording
Record and monitor up to 16 Artnet universes at once or one universe through Pro I-O DMX interface and assign the recorded data to any Artnet or Pro I-O DMX output device. The recorded data can also be extracted for editing. Recording is synchronized either through Artnet timecode or can be triggered by the first changing DMX channel or by hitting a button.

Offline Editing
Import video and have a frame accurate preview for offline editing, if your final show should run synchronous to video.
C# Scripts
Conductor allows to access channel values through C# and modify it programmatically. Any output channel can then refer to the result of the C# script. This allows to add mathematical calculations between programming curves and output values.

Upload and run from ProCommander show controllers
Final shows can be exported to flash card or deployed to ShowCommander(s) over network. During export you can choose the start mode of each show, i.e. if it should play immediately after power on or on an external trigger. Shows can be mixed: while a main show is running, multiple other shows can be started that run parallel to the main show. A powerful script language with the support of variables allows you to create simple show logic on the ProCommander show controllers.

Editions
We offer different versions to meet project requirements and budget. Please contact us for details.

<table>
<thead>
<tr>
<th>Editions for ProCommander Show Controller</th>
<th>Conductor Full Show Control and Creation</th>
</tr>
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<tbody>
<tr>
<td>ConductorPro</td>
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<tr>
<td>Max. ProCommander per Showfile</td>
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<td>Max. Pro I/O Modules as ProCommander Slaves per Showfile</td>
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<td>Max. Standalone Pro I/O Modules per Showfile</td>
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<tr>
<td>DMX recording</td>
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<tr>
<td>DMX output</td>
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<tr>
<td>Artnet recording</td>
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<tr>
<td>Artnet devices in Conductor</td>
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<tr>
<td>Max. number of shows per export to flash card</td>
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<tr>
<td>Input controller for programing</td>
<td>Keyboard and Mouse only</td>
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<tr>
<td>C# script channels, Custom Plugins</td>
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</tr>
<tr>
<td>Import and Export CSV Files, Import Open-Hex Files</td>
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</tr>
<tr>
<td>Sync to external timecode (Possible Inputs: Pro Commander, LTC Reader on Computer, Playmaker on Video Server)</td>
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</tr>
<tr>
<td>Remote control of Conductor through UDP commands</td>
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</tr>
<tr>
<td>Saving enabled</td>
<td>√</td>
</tr>
</tbody>
</table>

Editions
We offer different versions to meet project requirements and budget. Please contact us for details.
Show Controller and I/Os
Show Controller and I/Os

The ProCommander and Pro I-O Series is a set of solid-state show controllers and network connected I/O Modules that allows you to interface with nearly any device you need to control. Conductor is used to create and export shows to ProCommanders.

The ProCommanders are solid-state show controllers with a flash memory card slot. Different shows can be stored on a card and either run automatically, triggered by an external event or scheduled at a specific time. The ProCommanders can be daisy chained with one or multiple Pro I-O Modules - just add modules for every interfaces you need.

Both, ProCommanders and Pro I-O Modules can be accessed through our show programming software Conductor. Alternatively to run shows live from Conductor on a BRAINSALT video server, Conductor allows to upload show data to ProCommander show controllers. Shows on a ProCommander can be set to loop on power-up; be triggered internally by other timelines, digital or analog inputs; wait to sync with incoming SMPTE timecode; or simply begin from a UDP command.

ProCommander Series

The ProCommander Series features solid-state show controllers built for playback of synchronous audio, animation, lighting, and mechanical action. The flexible architecture options and open control protocols allow inspired attractions to be designed without hardware limitations.

Pro I-O Modules

Pro I-O’s offer powerful features in a small form factor. The integration of analog and digital PWM, contract closure outputs, standard ArtNet and DMX gives you the opportunity to expand the capabilities of the Conductor and ProCommander Series anywhere on a regular network system.
ProCommander 2

Features
- 16 digital outputs at 48VDC/500mA
- 16 digital inputs OR 8 digital and 8 analog
- 3 x RS-232 serial ports
- 512 channels of DMX output
- On-board Ethernet
- 4 x servo outputs
- User replaceable chipsets
- Mounts in 1/2 rack space
- Battery, solar and charging capable
- 8 x high powered relays optional
- IR remote control available
- High powered on-board class-D stereo amp
- Integrated DMX merger with LTP, HTP modes
- Integrated MicroSD storage for audio/timeline data

Hardware
- Power Requirements: 36 W, 12V - 24V
- External Power Supply: 100V - 240V, 24V Output
- Operating Temperature Range 0°C - 40°C (32°F - 104°F)
- Operating Relative Humidity Range 8% - 80% (non-condensing)
- Dimensions (WxHxD): 11.5 x 4.5 x 16.6 cm
- Shipping Dimensions (WxHxD): 18 x 8.5 x 28 cm
- Weight: 1.2 kg

BACK VIEW
ProCommander PHX

**Features**
- Polyphonic Audio Layering
- Dual-zone Support
- UDP Audio Mix Control
- SMPTE Timecode In & Out
- Real Time Clock & Scheduler
- 16 digital outputs at 48VDC/500mA
- 16 digital inputs
- 2 x RS-232 serial ports (1 RS-485 capable with adapter)
- 512 channels of DMX input
- 512 channels of DMX output
- On-board Ethernet
- PNP Positive driver optional
- 8 x high powered relays optional
- IR remote control available
- 4-channel line out through RCA connectors
- 4-channel integrated amplifier
- Integrated DMX merger with LTP, HTP modes
- Integrated MicroSD storage for audio/timeline data

**Hardware**
- Power Requirements: 36 W, 12V - 24V
- External Power Supply: 100V - 240V, 24V Output
- Operating Temperature Range 0°C - 40°C (32°F - 104°F)
- Operating Relative Humidity Range 8% - 80% (non-condensing)
- Dimensions (WxHxD): 11.5 x 4.5 x 16.6 cm
- Shipping Dimensions (WxHxD): 18 x 8.5 x 28 cm
- Weight: 1.2 kg
ProCommander ES

Features
- A full universe of DMX512 Output
- 8x Digital In
- 8x Digital Out
- Stereo Out
- High powered on-board class-D stereo amp
- Network Ready
- On-board Ethernet
- Mounts in 1/4 rack space
- Integrated MicroSD storage for audio/timeline data
- High power mofset transistor

Technical Highlights
- Network jack for UDP messaging and show file uploads
- Play up to 6 timelines (1 audio playback stream concurrently) to allow management of a variety of tasks around your exhibit
- Powerful Class-D amplifier provides in place amplification throughout the exhibit space

Hardware
- Power Requirements: 36 W, 12V - 24V
- External Power Supply: 100V - 240V, 24V Output
- Operating Temperature Range 0°C - 40°C (32°F - 104°F)
- Operating Relative Humidity Range 8% - 80% (non-condensing)
- Dimensions (WxHxD): 10.6 x 4.1 x 10.9 cm
- Shipping Dimensions (WxHxD): 18.5 x 6 x 25 cm
- Weight: 0.8 kg
PRO I-O DMX 512

Features
- Full universe of 512 DMX channels
- 3 pin and 5 pin XLR output connector
- 5 pin XLR input
- DMX recording
- DMX merging (HTP, LTP, ADD, Change, & Combine)
- Selectable DMX frame rate from 10fps to 44fps
- Display of 16 selectable DMX channels in alpha numeric display

Common features for Pro I-O modules
- Ethernet connection
- USB connection
- ArtNet Support
- RS485 in/out for daisy chain connection
- 19" rack mount adapter available
- Din-rail mount available

Hardware
- Power Requirements: 36 W, 12V - 24V
- External Power Supply: 100V - 240V, 24V Output
- Operating Temperature Range 0°C - 40°C (32°F - 104°F)
- Operating Relative Humidity Range 8% - 80% (non-condensing)
- Dimensions (WxHxD): 10.6 x 4.1 x 10.9 cm
- Shipping Dimensions (WxHxD): 18.5 x 6 x 25 cm
PRO I-O DIGITAL 32

Features
- 32 open collector digital channels outputs
- Up to 400 mA per channel
- Available with NPN (negative) or PNP (positive) output driver
- Display of ON/OFF status of the outputs
- DMX read in for DMX to digital out conversion (via ArtNet)
- Overvoltage protection
- Short circuit protection with PNP driver output
- 48V/500mA output driver

Common features for Pro I-O modules
- Ethernet connection
- USB connection
- ArtNet Support
- RS485 in/out for daisy chain connection
- 19” rack mount adapter available
- Din-rail mount available

Hardware
- Power Requirements: 36 W, 12V - 24V
- External Power Supply: 100V - 240V, 24V Output
- Operating Temperature Range 0°C - 40°C (32°F - 104°F)
- Operating Relative Humidity Range 8% - 80% (non-condensing)
- Dimensions (WxHxD): 10.6 x 4.1 x 10.9 cm
- Shipping Dimensions (WxHxD): 18.5 x 6 x 25 cm
- Weight: 0.8 kg
PRO I-O Relay 8

Features
- 8x Relay outputs
- 48V/3A switching load
- Display of ON/OFF status of the outputs
- DMX read in for DMX to relay conversion (via ArtNet)

Common features for Pro I-O modules
- Ethernet connection
- USB connection
- ArtNet Support
- RS485 in/out for daisy chain connection
- 19” rack mount adapter available
- Din-rail mount available
PRO I-O Analog 8

Features
- 8x 0-10V analog outputs
- Up to 300mA per output channel
- 50mA output driver
- On screen level display for each output
- DMX read in for DMX to analog conversion (via ArtNet)
- Short circuit protection

Common features for Pro I-O modules
- Ethernet connection
- USB connection
- ArtNet Support
- RS485 in/out for daisy chain connection
- 19" rack mount adapter available
- Din-rail mount available

Hardware
- Power Requirements: 36 W, 12V - 24V
- External Power Supply: 100V - 240V, 24V Output
- Operating Temperature Range 0°C - 40°C (32°F - 104°F)
- Operating Relative Humidity Range 8% - 80% (non-condensing)
- Dimensions (WxHxD): 10.6 x 4.1 x 10.9 cm
- Shipping Dimensions (WxHxD): 18.5 x 6 x 25 cm
- Weight: 0.8 kg
PRO I-O Remote 16

Features
- 8x Relay outputs
- 48V/3A switching load
- Display of ON/OFF status of the outputs
- DMX read in for DMX to relay conversion (via ArtNet)

Common features for Pro I-O modules
- Ethernet connection
- USB connection
- ArtNet Support
- RS485 in/out for daisy chain connection
- 19” rack mount adapter available
- Din-rail mount available
Digital Signage
Create and Distribute Content to Screens
Our Presenter Software enables you to compose and distribute content to screens easily. Simply draw regions on your desktop and put videos, slideshows, webpages, video capture, ticker and clock into their playlist. When done editing, schedule playback and distribute either locally or via BRAINSALT CMS Cloud to internet connected Presenter Players.

Content Editing
Presenter runs on Windows 7.0 Operating System or later. Content Editing can be done on any PC running Windows 7 or later. If you purchase a Presenter Player, you get one license for an "Editing Station" (for example your office PC) for free.

Compose Regions and Content
BRAINSALT Presenter Software lets you tile the display in regions by dragging and scaling a window on your desktop. Each region can be filled with any type of supported media in any order. You can play one or multiple videos followed by some images or a live captured video input and a webpage. Regions can always be modified during editing. The position of each region in the region-list defines the visibility of overlapping regions (z-order). This allows you, for example, to permanently overlay a logo. One primary region controls the timing of the composition: if its playlist has finished, the next composition is loaded or the current is looped. You can enable a "live" preview of each playlist item in each region's content. This allows you to inspect content of each region separately.

The live preview mode shows your composition and gives you the possibility to adjust your layout in real-time. Once editing is done, you can preview the entire composition. After creating one or multiple compositions, you create a schedule for them as preparation for content distribution.

Schedule and Push Content
Your compositions can be scheduled to be played permanently or at certain times. Multiple compositions can be arranged to playback in a loop. A schedule of a day can be easily copied to multiple days until an end date. Push Content is a library for compositions that can be triggered on an external event to be immediately shown on the screen. The actual playing schedule is paused and the triggered Push Content composition is shown.

Distribute
Schedules and Push Content will be distributed directly to players in the local network or to a BRAINSALT Presenter CMS Server in the local network or through the internet. BRAINSALT also operates a CMS server in the internet and offers to use this CMS cloud for content distribution over internet. For this service, BRAINSALT charges a monthly fee per player.

Presenter Pro
Extends the functionality of Presenter with support of video capture cards and remote control possibilities. It supports split screens with up to 6 displays and bezel compensation. Presenter Pro can also be used to create "control room like operation" where multiple capture inputs and network cameras are displayed on multiple outputs.

Supported Media
- Video: MPEG1, MPEG2, H.264, AVC
- Images: PNG (including transparency), JPG, BMP, GIF, TGA, TIFF
- Webpages including Flash
- Static Ticker and RSS feeds
- Analog and digital clock
- Database access through C# live scripting function
Presenter Player

Presenter Passive Cooling

**Specification**
- Passive cooled player, no fans
- Player hardware including Windows 8 Embedded 64 Bit
- BRAINSALT Media Presenter Software installed, license key installed
- Passive Cooling, 80 GB SSD, 2 x miniDP, 1 x Lan, 1 x Audio, 4 x USB, 1 x COM, 0 x WLAN (Optional), 0 x Bluetooth (Optional), Vesa Mount, External power supply 100V - 240V; 65W
- 200 x 150 x 47 mm (DxWxH)
- Operating 0°C ~ +50°C, Storage -20°C ~ +70°C

Presenter

**Specifications**
- Player hardware including Windows 7 Embedded
- BRAINSALT Media Presenter Software installed, license key installed
- Active Fan, 30 GB SSD, 1 x mini DP, 1 x mini HDMI 1.4a, Lan, 4 x USB, 1 x Stereo Audio, Vesa Mount, External power supply 100V - 240V; 65W, Windows Embedded Standard 7.0 64 Bit, 115 x 115 x 50 mm

Presenter Pro 2, 4 or 6

**Specifications**
- Player hardware including Windows 7 Embedded
- BRAINSALT Media Presenter or Presenter Pro Software installed, license key installed
- 2, 4 or 6 channel Display Port outputs, up to 2560x1600@60 or 3840x1080 each output
- Adapter to 4K HDMI 2.0 available
- 400W power supply 100V-240V
- 9”, 3U Rackmount chassis
Presenter CMS Server

The BRAINSALT PRESENTER CMS Server is used to organize and distribute content to groups of players in a local network or over internet. It keeps track of the status of the players and provides detailed system and health information.

PLAYER NETWORK, CONTENT DISTRIBUTION
The players can be organized in a tree-like topology; Content can be uploaded to every node of the tree. Players in that node or in a node beneath of that node will automatically download the new content. If necessary, content delivery can be restricted to certain times of the day (e.g. nightly updates only).

USER MANAGEMENT
Users with different access levels and access nodes can be created. As example: a media creation user might only have the right to upload new content and set that active to a certain group, while an administrative user can move players to different groups, remote connect to it and change the group topology.

STATUS AND HEALTH TRACKING
Each player is in permanent contact to the CMS Server and is reporting its status. The information includes data like: network configuration, display resolution, storage status and temperature sensor values. Several notification events can be set, e.g. if a temperature exceeds a critical point or the player does not connect to the CMS server anymore, a warning email can be set out to the administrator.

REMOTE ACCESS
The CMS server also acts as a repeater for remote connections to a player connected through the internet. If an administrator wants to log into a player, the player is actively opening a remote control session to the CMS server and the remote control session is routed through the CMS server to the software on the administrator’s computer. That way, router and firewall at the player’s end do not need to be specially configured.

Specifications
- CMS Software, 3U Rackmount, redundant Fans and Power Supply, Hardware Raid Controller, 2 x 1 GBit NIC, 10 TB Raid 5, Windows Web Server 2008, Microsoft SQL Server, 6 Core 2.66 Ghz, 12GB Ram, 30 GB System SSD
- Country of origin: Austria, Customs tariff number: 84718000