Part 1. disguise solo Server

1.01 Control Hardware

A. General

- The product should be a purpose built server system designed for control of video, lighting and other related systems in an architectural or entertainment application. A personal computer running emulation software shall not be acceptable.
- The server shall store show data in non-volatile solid-state memory.
- The operating software of the server shall be stored in a dedicated non-removable non-volatile solid-state memory. It shall be possible to update the Operating Software by download from a remote personal computer over an Ethernet or USB connection.
- The server shall have an internal real-time clock that continues to operate when external power is absent. It shall be capable of adjusting for Daylight Saving Time automatically and can be updated over the Internet using the Network Time Protocol (NTP).
- The server shall be capable of outputting 500 universes of 512 channels of DMX-512 via Ethernet DMX protocols.
- The server shall output control data as Philips KiNet, and Art-Net protocols.
- There shall be visual indicators on the server showing status of the controller.
- The server shall be accessible over IP on its Ethernet interface. This shall allow status information, control and configuration options to be accessed remotely.
- The server shall support incoming LTC Timecode signal
- The server shall be optionally upgradable to contain an RME Audio card, supporting 8 channels of audio over ADAT.
- The server shall be optionally upgradable to feature SDI video capture from Bluefish 444.
- The server shall be optionally upgradable to feature HDMI video capture from Datapath.
- The server shall be optionally upgradable to feature 2x 10Gb Ethernet.
- The server shall support connection to a network to connect multiple systems together from its one control interface software.
- The server shall support multiple streams of timecode and audio data within a single networked system.
- The server shall have a front loaded power button for resetting the unit without removal of power.

B. Mechanical

- The server shall be a black metal enclosure, 2U 19" rack mount.
- The server shall be 520mm x 88mm x 495mm (17.80" x 3.50" x 19.48").
- The server shall weigh 12kg (26.3lbs).
- The server shall have SSD drives with no moving parts in storage drives.
- The server shall operate in a temperature range of 5 35°C (40 95°F).
- The server shall operate in a humidity range of 5 95% non condensing.
- The server shall operate at an altitude range of 0 2700m (0 8850 ft).
- The server shall feature user-replaceable filters for cooling fans, accessible with a standard toolkit.

C. Electrical

- The server shall have the following Inputs and Outputs.
 - 1 x IEC C-13 power input
 - 2 x DisplayPort 1.2 output for screen outputs
 - 1 x DisplayPort 1.2 output for a Graphical User Interface (GUI)
 - 4 x 1Gb Ethernet
 - 2 x USB 2.0
 - 4 x USB 3.0
 - 1 x Line In
 - 1 x Mic Out
 - 3 x SDI input (if SDI capture is fitted)
 - 2 x HDMI input (if HDMI capture is fitted)
 - 2 x Audio breakout ports (if professional audio is fitted)
 - 2 x Optical ADAT ports for SP/DIF (if professional audio is fitted)
 - 2 x 10Gb Ethernet (if 10Gb Ethernet is fitted)
- The server shall offer a power LED to indicate it is powered and operating.
- The server shall feature 2 x DisplayPort 1.2 outputs, supporting up to 4096 x 2160 @ 60Hz
- The server shall feature 1 x DisplayPort 1.2 output for a graphical user interface, supporting up to 4096 x 2160 @ 60Hz.
- The server shall be powered via a worldwide (100-240V AC) auto ranging internal power supply.
- The server shall be powered via a IEC C-13 connector.

2.01 Software

- The server shall function as a 3D media server with advanced networking and interconnectivity options.
- The server shall be based upon Windows 10 IoT LTSB 2016.
- The server shall have the operating software and media stored on separate drives.
- The software shall have a 3D pixel perfect simulation environment.
- The software shall enable pixel perfect preview and playback.
- The server shall support multiple timelines, crossfades and effects running concurrently.
- The server shall support playback of video media with individual pixels mapped to lighting fixtures or video products.
- The server shall have software built in mapping types, including perspective, parallel and direct mappings to allow for flexibility in programming and remapping pixels.
- Show data may be downloaded from a remote personal computer over an Ethernet network connection or USB Drive from specific designer dongle software.
- The server shall offer a projector toolkit including Quick Calibration, Dynamic Blending and multiple types of output warping.
- The server shall offer support for masks and soft-edge generation within the operating software (no third party software required).

- The server shall support MIDI, OSC, Art-Net and UDP commands and triggers.
- The server shall support LTC timecode triggers for cues.
- The server shall be controllable via a DMX input using a user-configurable DMX channel allocation.
- The server shall support playback of DXV, HAP, HAP-Alpha, HAP-Q, Lossless Animation and NotchLC codec formatted video files.
- The server shall support playback of BMP, JPG, PNG, TIFF, DPX and TGA image files.
- The server shall support playback of WAV and MP3 audio files.
- The server shall have a pixel accurate 3D simulator.
- The server shall support proxy files for 3D previsualization.
- The server shall utilise UV maps for 3D content delivery.
- The server shall support media ingestion including understanding of file versions via specific naming convention.
- The server shall support frame replacement in video files.
- The server shall offer connectivity to CAST Software BlackTrax motion tracking systems.
- The server shall be capable of operating as a Master or Understudy depending on configuration.
- An offline version of the server software shall be available for purchase as a Designer system, enabling pre-visualisation, programming and rendering of concepts.
- Multiple Controllers shall automatically synchronise and share triggers when programmed as part of a single show and linked via Ethernet during playback.
- The server shall allow lighting to be programmed as separate zones, with independent triggering and manual intensity control.

3.01 Accessories

- The server shall be supplied with the following packaged in a tray within the shipping container:
 - IEC power cable
 - Getting Started Guide
 - Audio breakout cables (if professional audio is ordered)

4.01 Service, Documentation & Training

- The server shall be covered by a 2 year return to base hardware warranty, extendable to 5 years with an extended warranty package.
- The server shall be supplied with free technical support via phone or email.
- Regular training courses shall be offered for the server and operating software, at both foundation and advanced levels.
- Documentation shall be provided via printed, online and video formats.
- An online knowledge base shall be provided for the server.