

# Hippotizer Hardware and Software Specifications

Revision	Release Date	Notes
1.0	1-Apr-2021	Initial Release
1.1	20-Oct-2021	Added V4+ MK2 Hardware
2.0	30-Jan-2025	Added MX Hardware

## Hardware Specifications:

### Teka<sup>MX</sup>

- System shall be a 1 Rack-Unit (RU) high all metal chassis utilising temperature reactive forced air cooling.
- Shall include options for rack mounting as a single unit
- Shall include three Display Port 1.4 video outputs: one dedicated for control (Zookeeper) and the other two for production output.
- System shall be comprised of an AMD-based embedded motherboard with integrated AMD Graphics.
- Shall include 16GB of DDR4 RAM and 2TB solid state storage drive for media.
- Shall include dedicated 500GB solid state storage drive for OS.
- Shall include integrated 600W switch mode power supply
- Shall include a status indicating LED front panel display.
- Shall include the option for one PCI-based hardware video capture card or additional dedicated graphics card specified at purchase

### Tagus<sup>MX</sup>

- System shall be a 2 Rack-Unit (RU) high all metal chassis utilising temperature reactive forced air cooling.
- Shall include a status indicating LED front panel display.

- Shall include OLED front panel display with button control to change the readout of displayed information.
- Shall include two dedicated for control (Zookeeper) video outputs. One DP 1.4 and one HDMI 2.0.
- Shall include two swappable user defined production outputs (either DP1.4, HDMI 2.0, or 12G-SDI) with status indication LED's.
- Shall include the option for one PCI-based hardware video capture card specified at purchase.
- Shall include modular and field replaceable back panels for video, network, and control input/outputs.
- System shall be comprised of an AMD Ryzen 7 Pro series CPU and B650 Motherboard.
- Shall include 32GB of DDR5 RAM and 4TB solid state storage drive for media storage
- Shall include dedicated AMD Pro GPU with 8GB DDR6 RAM.
- Shall include the ability carry out software based EDID emulation of all outputs.
- Shall include dedicated 500gb solid state storage drive for OS.
- Shall include integrated 800W switch mode power supply with locking Neutrik PowerCon True1 connection.
- Shall include rear illumination of the system.
- Shall include two network two 1Gb RJ45 and two 10Gb RJ45 Network Connections installed in a protective, locking D-Type Neutrik bulkhead.

## **Kasai<sup>MX</sup>**

- System shall be a 2 Rack-Unit (RU) high all metal chassis utilising temperature reactive forced air cooling.
- Shall include a status indicating LED front panel display.
- Shall include OLED front panel display with button control to change the readout of displayed information.
- Shall include two dedicated for control (Zookeeper) video outputs. One DP 1.4 and one HDMI 2.0.

- Shall include two swappable user defined production outputs (either DP1.4, HDMI 2.0, or 12G-SDI) with status indication LED's.
- Shall include the option for one PCI-based hardware video capture card specified at purchase.
- Shall include modular and field replaceable back panels for video, network, and control input/outputs.
- System shall be comprised of an AMD Ryzen 7 Pro series CPU and B650 Motherboard.
- Shall include 32GB of DDR5 RAM and 4TB solid state storage drive for media storage
- Shall include one toolless swappable U.3 PCIe drive slot.
- Shall include the ability carry out software based EDID emulation of all outputs.
- Shall include dedicated 500gb solid state storage drive for OS.
- Shall include integrated 800W switch mode power supply with locking Neutrik PowerCon True1 connection.
- Shall include rear illumination of the system.
- Shall include dedicated NVIDIA Pro GPU with 20GB DDR6 RAM with error-correction code (ECC) and Genlock Synchronisation.
- Shall include the ability to genlock lock the control and production outputs together.
- Shall include two network two 1Gb RJ45 and two 10Gb RJ45 Network Connections installed in a protective, locking D-Type Neutrik bulkhead.

## **Meuse<sup>MX</sup>**

- System shall be a 4 Rack-Unit (RU) high all metal chassis utilising temperature reactive forced air cooling.
- Shall include a status indicating LED front panel display.
- Shall include OLED front panel display with button control to change the readout of displayed information.
- Shall include two dedicated for control (Zookeeper) video outputs. One DP 1.4 and one HDMI 2.0.

- Shall include two swappable user defined production outputs (either DP1.4, HDMI 2.0, or 12G-SDI) with status indication LED's.
- Shall include the option for two PCI-based hardware video capture card specified at purchase.
- Shall include modular and field replaceable back panels for video, network, and control input/outputs.
- System shall be comprised of an AMD PRO 7000 WX-Series Processor CPU and WRX90 Motherboard.
- Shall include 64GB of DDR4 RAM and 8TB PCIe NVMe solid state storage drive for media storage
- Shall include one toolless swappable U.3 PCIe drive slot.
- Shall include dedicated NVIDIA Pro GPU with 24GB GDDR6 RAM with error-correction code (ECC) and Genlock Synchronisation.
- Shall include the ability to genlock lock the control and production outputs together.
- Shall include the ability carry out software based EDID emulation of all outputs.
- Shall include dedicated 500gb solid state storage drive for OS.
- Shall include integrated 1650W switch mode power supply with locking Neutrik PowerCon True1 connection.
- Shall include four 10Gb RJ45 Network Connections installed in a protective, locking D-Type Neutrik bulkhead.
- Shall include rear illumination of the system.

## **Hyco<sup>MX</sup>**

- System shall be a 4 Rack-Unit (RU) high all metal chassis utilising temperature reactive forced air cooling.
- Shall include a status indicating LED front panel display.
- Shall include OLED front panel display with button control to change the readout of displayed information.

- Shall include two dedicated for control (Zookeeper) video outputs. One DP 1.4 and one HDMI 2.0.
- Shall include two swappable user defined production outputs (either DP1.4, HDMI 2.0, or 12G-SDI) with status indication LED's.
- Shall include the option for two PCI-based hardware video capture card specified at purchase.
- Shall include modular and field replaceable back panels for video, network, and control input/outputs.
- System shall be comprised of an AMD PRO 7000 WX-Series Processor CPU and WRX90 Motherboard.
- Shall include 128GB of DDR4 RAM and 16TB PCIe NVMe solid state storage drive for media storage
- Shall include one toolless swappable U.3 PCIe drive slot.
- Shall include dedicated NVIDIA Pro GPU with 48GB GDDR6 RAM with error-correction code (ECC) and Genlock Synchronisation.
- Shall include the ability to genlock lock the control and production outputs together.
- Shall include the ability carry out software based EDID emulation of all outputs.
- Shall include dedicated 500gb solid state storage drive for OS.
- Shall include integrated 1650W switch mode power supply with locking Neutrik PowerCon True1 connection.
- Shall include two 10Gb RJ45 installed in a protective, locking D-Type Neutrik bulkhead and two 100Gb QSFP Network Connections.
- Shall include rear illumination of the system.

## **Software Design and Features:**

### **Support and physical:**

- Media Server shall include built-in Operating System restore functionality with no internet access dependency.

- Media Server shall have the ability for the user to save and restore the software image without internet access.
- Media Server shall include 24/7 email and phone support.
- Media Server shall include access to at least four new feature release of software with new systems.
- Media Server's user interface shall control the media server across the local network.
- Media Servers shall send real-time control, feedback and media thumbnails across the network.
- Media Server shall include user configurable user interface.
- Media Server shall support hardware video capture depending on server model, including 3G-SDI, DVI, Composite video, DP1.2 and HDMI2.0, 12G-SDI.
- Shall utilise a hardware hardware-based license protection system.
- Shall utilise a Microsoft Windows 11 Operating system pre-deployed with software and utilities key to the operation of the Media Server system.

#### Base (2D) Functionality:

- Media Server shall include a real-time Video Mapping creation and editing tool.
- Media Server shall support pixel accurate Video Mapping on every media playback layer and output window.
- Media Server shall support applying unique warps to each output canvas.
- Media Server shall support edge-blending of each output canvas.
- Media Server shall support colour correction of each output canvas.
- Media Server shall include a built-in mask creation and live-editing tool.
- Media Server shall support applying video masking on every media layer, composition mix and viewport.
- Media Server shall support automatic seamless crossfading between media clips on every media layer.
- Media Server shall support pixel accurate geometry adjustment on every media layer.
- Media Server shall include over 100 unique video effects.

- Media Server shall include two video effect engines per media layer.
- Media Server shall include four video effect engine per media composition mix.
- Media Server shall include over 100 clips of stock content.
- Media Server shall include Notch playback and effects on every media layer.
- Media Server shall include TouchEngine playback and effects on every media layer.
- Media Server shall include a video generator on every media layer.
- Media Server shall include the ability to transfer video between each media layer, composition mix and output canvas.

### **Control Protocols:**

- Media Server shall include real-time control of all attributes from the control interface software.
- Media Server shall include an integrated key-frame timeline.
- Media Server shall support direct, real-time control by DMX lighting desks to include Art-Net, sACN and MA-Net protocols.
- Media Server shall support direct control of Video Mapped tiles by sACN and Art-Net.
- Media Server shall support recording of Layer, Mix and Viewport presets.
- Media Server shall support real-time playback of presets using external control protocols, the timeline and user interface.
- Media Server shall support direct, real-time control by external protocols including: Midi, OSC, TCP, Art-Net, NMEA and GPIO.
- Media Server shall support real-time control by automation protocols including: BlackTrax, Kinesys, DEAP, PRG and Stagetech.
- Media Server shall include an integrated LUA-based scripting engine.

### **Media Playback and Sync:**

- Media Server shall include the ability to playback media encoded at 24,25,29.97,30,59.94 and 60 FPS.
- Media Server shall support 0-400% speed media playback with inter-frame interpolation for smooth slow speed playback.

- Media Server shall support synchronous media playback following Linear Time Code (LTC) input.
- Media Server shall support LTC input from 3rd part devices including Alpermann Velte PCIe LTC and Rosendahl MIF4.
- Media Server shall support synchronising media players to each other on a local machine and across the local network.
- Media Server shall support playback synchronisation to system clock and user defined time.

### **Media encoding, playback and management:**

- Media Server shall include an integrated media management system.
- Media Server shall support the transfer of media files between systems across the network automatically.
- Media Server shall support live updating of media library without disruption to media playback.
- Media Server shall transcode popular intermediate codecs for playback without need of external tools.
- Media Server shall playback HAP encoded content without transcode.
- Media Server shall have the ability to choose content encoding based on user quality and performance requirements.
- Media Server shall have the ability to playback uncompressed, 4:4:4 colour sub-sampled content.

### **Video Input and Output:**

- Media Server shall include Newtek NDI input on every media layer.
- Media Server shall include Newtek NDI output on every media composition mix.
- Media Server shall include hardware capture input on every media layer.

### **3D Functionality:**

- Media Server shall support multiple output projection mapping.
- Media Server shall include a built in 3D video visualiser.

- Media Server shall include an integrated 3D object and visualisation environment.
- Media Server shall include the ability to import multiple 3D models using .obj, .3ds and .dae file formats.
- Media Server shall support the ability to preserve texture data on model import.
- Media Server shall support the preservation of 3D scene tree data on model import.
- Media Server shall support the editing of meshes of 3D objects.
- Media Server shall support the viewing and editing of UV mapping information.
- Media Server shall support the application of video to 3D objects using UV and projective texturing.
- Media Server shall support network control of the 3D environment.
- Media Server shall support automation integration using the BlackTrax protocol.
- Media Server shall support fibre-optic based 3D automated alignment.