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^{MX}

• System shall be a 1 Rack-Unit (RU) high all metal chassis utilizing temperature reactive forced air cooling.

• Shall include options for rack mounting as a single unit

• Shall include three DisplayPort 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^{MX}

• System shall be a 2 Rack-Unit (RU) high all metal chassis utilizing 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 DP 1.4, HDMI 2.0, or 12G-SDI) with status indication LEDs.

• 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^{MX}

• System shall be a 2 Rack-Unit (RU) high all metal chassis utilizing 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 LEDs.

• 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 Synchronization.

• 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^{MX}

• System shall be a 4 Rack-Unit (RU) high all metal chassis utilizing 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 Synchronization.

• 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^{MX}

• System shall be a 4 Rack-Unit (RU) high all metal chassis utilizing 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 LEDs.

• 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 Synchronization.

• 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 releases 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 utilize a hardware-based license protection system.

• Shall utilize a Microsoft Windows 10 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 color 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 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 synchronizing media players to each other on a local machine and across the local network.

• Media Server shall support playback synchronization 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 color 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 SPOUT input on every media layer.

• 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 visualizer.

• Media Server shall include an integrated 3D object and visualization 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 fiber-optic based 3D automated alignment.