

xR Virtual Production Rendering and Compositing Server

xR P6-MUHD Plus



Specification Document

Revision History

| Release Version | Release Date | Update Notes |
|-----------------|--------------|-----------------|
| V1.0 | 2023-09-13 | • First release |

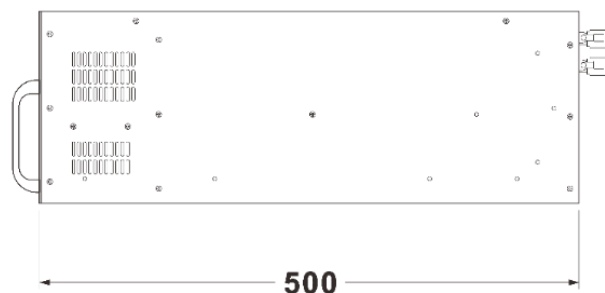
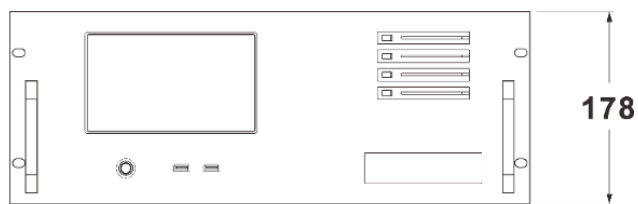
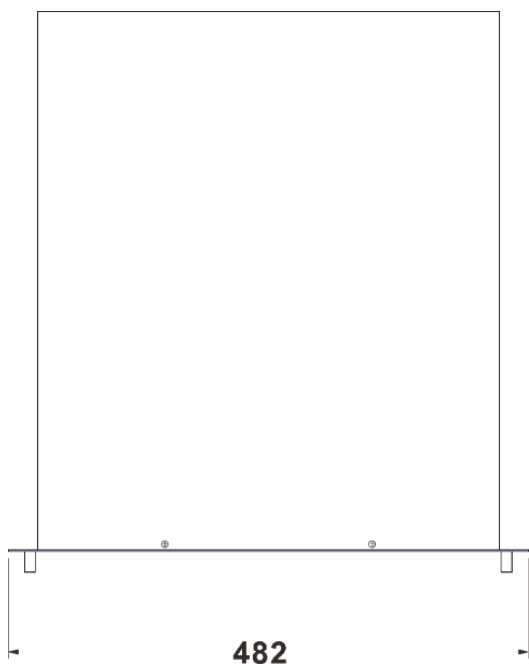
Product Introduction

The xR P6-MUHD Plus xR Rendering and Compositing Server provides rendering, compositing, and streaming services for xR virtual production. It features state-of-the-art NVIDIA GPUs, supporting leading engines such as UE5. With powerful GPU rendering capabilities, it delivers photorealistic quality and lifelike lighting effects, offering robust application support for xR virtual production.

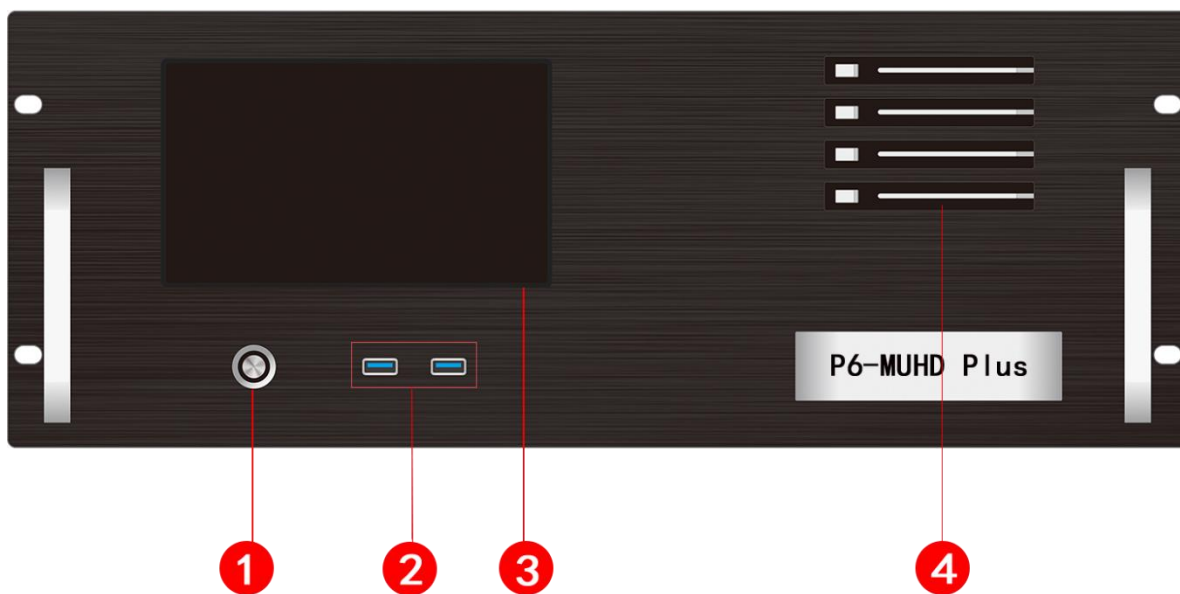
Product Features

- Unlimited SDI/NDI Input/Output port expansion;
- Unlimited SRT I/O port expansion;
- Unlimited SMPTE 2110 I/O port expansion;
- Support professional camera tracking system;
- Supports independent zoom/focus encoders;
- Synchronously fuse real and virtual camera movements;
- Support virtual production based on LED large screen;
- Network expansion;
- Multi-machine expansion;
- Multi-GPU expansion.

Product Dimensions

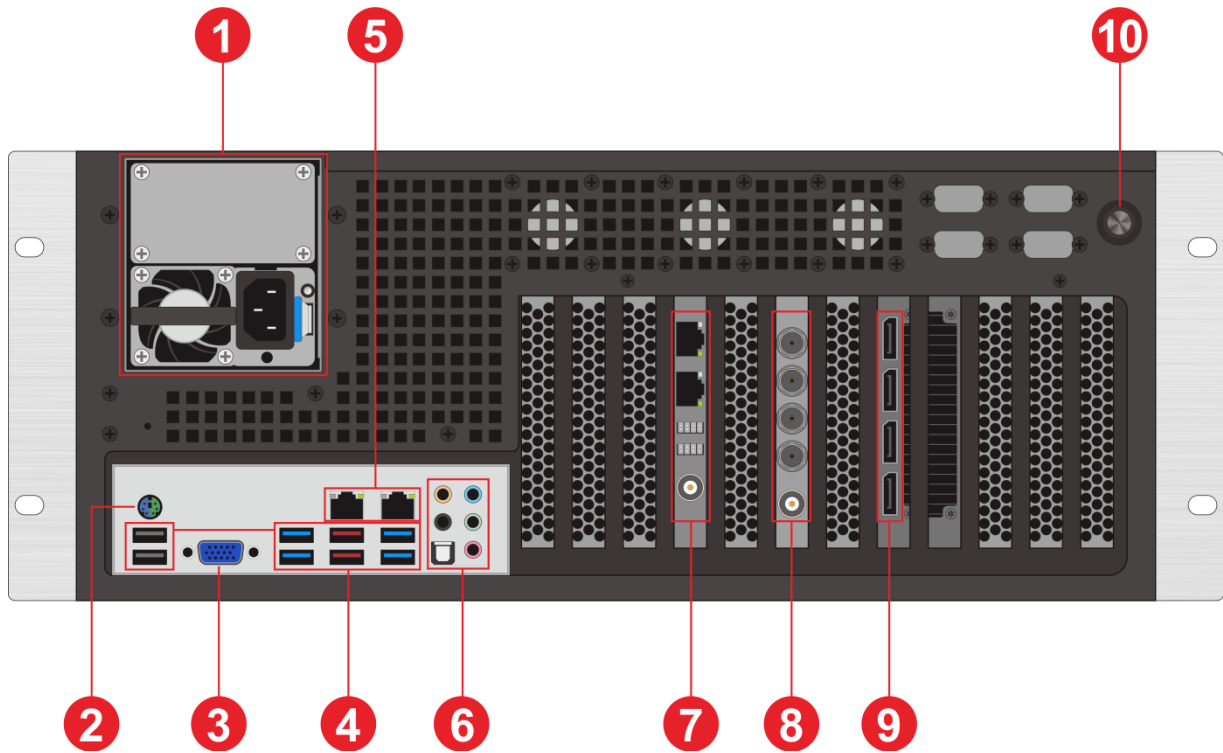


Product Appearance



Front Panel

| Index | Interface | Quantity | Illustrate |
|-------|----------------------------|----------|----------------------------------------------------------------------------------------------|
| 1 | Power on and off button | 1 | • Power on and off button |
| 2 | USB | 1 | • Type-A USB3.0 *2 |
| 3 | 7-inch touchscreen display | 1 | • Display system information, hardware monitoring, temperature detection, output port status |
| 4 | Front hard drive enclosure | 4 | • 2.5-inch SATA HDD can be installed |



Back Panel

| Index | Interface | Quantity | Illustrate |
|-------|--------------|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Power input | 1 | <ul style="list-style-type: none"> • Power input • 110V-240V 50/60Hz • Alternating current |
| 2 | PS/2 | 1 | <ul style="list-style-type: none"> • Connect a PS/2 device |
| 3 | VGA | 1 | <ul style="list-style-type: none"> • Connect a VGA display • For setting up the system only |
| 4 | USB | 8 | <ul style="list-style-type: none"> • 8×Type-A |
| 5 | RJ45 | 2 | <ul style="list-style-type: none"> • 2×Gigabit self-adaptive RJ45 ports |
| 6 | Audio | 1 | <ul style="list-style-type: none"> • Standard 3.5 audio port |
| 7 | Sync card | 1 | <ul style="list-style-type: none"> • 2×RJ45 ports for cascading between sync cards • 1×BNC port for connecting external frame synchronization signals |
| 8 | Capture card | 1 | <ul style="list-style-type: none"> • 4×BNC ports for transmitting SDI video sources • 1×BNC port for connecting external frame synchronization signal |
| 9 | DP1.4 port | 4 | <ul style="list-style-type: none"> • 4 DP1.4 ports • Capable of outputting 4 channels of 4K video signals |
| 10 | Reset button | 1 | <ul style="list-style-type: none"> • Bios reset button • Pressing resets the server |

Device Hardware/software

| Hardware Parameters | |
|---------------------|-----------------------------------------------------------------|
| CPU: | INTEL XEON W2255(10 cores, 20 threads) |
| Memory: | 64GB DDR4 RECC server error correction memory |
| Storage: | 4TP*2 Raid0, Raid11, with support for hot-swappable hard drives |
| Graphics Card: | Nvidia Quadro RTXA6000 professional graphics card |
| Frame Sync Card: | Nvidia Quadro SYNCII |
| Capture Card: | Blackmagic Deck Link 8K Pro |
| Power Supply: | 2000W power supply (can be upgraded to 1+1 redundant backup) |
| Chassis: | 4U hot-swappable chassis |
| Radiator: | Air-cooled heat dissipation |
| Software | |
| Operating system: | Windows 10 Pro |
| power supply | |
| Input Power: | 110-220V AC ~50hz |
| Maximum Power: | 2000W |

Equipment Specifications

| | |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical Specifications: | 110-240V~ 6A 50/60Hz ;2000W maximum power |
| Installation Specifications: | 4U rack-mounted installation (considering on-site conditions). |
| Dimensions: | 500mm (length) × 482mm (width) × 178mm (height) |
| Operating environment: | Temperature: 5-35°C (40°-95°F), Humidity: 5%-95% (non-condensing) |
| Storage environment: | -10°C~+60°C ;0%RH~95%RH, (non-condensing) |
| Package size: | 678mm (length) × 548mm (width) × 265mm (height). |
| Accessories: | Power Cable*1, Ethernet Cable*1, Mouse and Keyboard Set*1, Wireless Network Adapter*1, DP Cable*8, MiniDP to HDMI Cable*1, MiniDP to DVI Cable*1, Activation Label*1 (Attached to the Front Panel of the Chassis), Inspection Report*1, Test Report*1, Certificate of Conformity*1, Packing List*1 |

Features

1. **Powerful rendering capability:** Support real-time 2D/3D rendering, post-processing, special effects, color grading, LUT, and advanced 3D graphics functions, such as HDR, depth of field, shadows, reflections, refractions, etc.
2. **Unreal Engine Real-time Rendering Support:** Support DLSS, ray tracing, RTXGI, and other technologies.
3. **Virtual Studio features:** Include advanced chroma keying, multiple editable motion paths for virtual cameras, customizable virtual cameras, and broadcast control interfaces.
4. **Live Actor Interaction:** Provide virtual lighting for live actors, as well as real-time casting of shadows, reflections, and refractions.
5. **Device Compatibility:** Support the use of object tracking systems to achieve the purpose of camera tracking, such as Antilatency, OptiTrack, Qualisys, HTC Vive and other devices.
6. **High-Definition Rendering:** Support rendering at any resolution up to 8K.
7. **Multi-platform Live Streaming:** You can directly stream to platforms supporting RTMP such as Bilibili, Douyin and others.
8. **Flexible Programming Interface:** Provide node-based graphical programming interface and real-time scene editing, as well as curve-based real-time timeline and animation editing.
9. **Multiple control methods:** Support all events and rendering parameters through touch screen, mouse, keyboard, GPIO, MIDI, DMX/ArtNet.
10. **Customization capability:** 3D objects and scenes with materials and animations can be imported via COLLADA or FBX format, and custom materials/post-processing shaders can be created in the node-based editor.
11. **Multi-language Support:** Support Chinese and English switching.

Packing List

| Product | Quantity | Specification | Unit |
|------------------------------|----------|------------------------------------|-------|
| Host | 1 | xR P6-MUHD Plus | Unit |
| Power Cord | 1 | 1.8 meters | Strip |
| HDMI Cable | 1 | 2 meters | Strip |
| DP Cable | 4 | 2 meters | Strip |
| Wireless Network Card | 1 | USB wireless network card | piece |
| Keyboard and Mouse | 1 | Dual delphinium USB keyboard mouse | Set |
| Certificate of Compliance | 1 | | Copy |
| Inspection Report | 1 | | Copy |
| Functionality Checklist | 1 | | Copy |
| Packing list | 1 | | Copy |

i Illustrate

When using the equipment, please ensure it is placed horizontally. Do not invert or place vertically.

This product can be installed in a standard 19-inch equipment rack. The weight-bearing requirement for the rack is at least four times the weight of all equipment inside. Please use four M5 panel screws for secure installation.

Affirmations and Warnings

This is a Class A product. In a residential environment, this product may cause radio interference. In such cases, users may need to take practical measures to address the interference.

Disclaimer

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