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Pandoras Box

Server R5 Hardware User Manual

Hazard Warning

This warning note is part of the Pandoras Box product that you have purchased.

Hazard information:

This device is to be operated indoors only and to be kept away from the influences of humidity, dust and sunshine or other radiating heat sources. Do not open the device. It does not contain any parts to be maintained by the user.



Caution!

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.



Used batteries are not to be disposed of with the household waste! Please dispose them at your local battery collection point!



Instructions for disposal:

Do not dispose of the device as part of household garbage! Electronic devices are to be disposed of in accordance with the guidelines concerning electrical and electronic devices via the local collecting point for old electronic devices.



This device may only be used lower than 2000m altitude.



This device may only be used in non-tropical regions.

Server Hardware

The Pandoras Box Server hardware can be purchased with or without additional software, such as the Pandoras Box or the Widget Designer. Pandoras Box is a software and hardware based solution for show control and realtime video processing. The playback performance depends on the content format, its resolution and frame rate.

The Download-Center includes a performance sheet listing many examples.

The Server hardware is 19" wide and 4 rack units high and includes server grade components built for 24/7 use. There are three Server hardware models, called performance kits PK1-PK3, which define the amount of hard drives (SSD), hard drive space and CPU speed. The number of physical outputs is defined through the graphics card. A maximum of four outputs can be used per card simultaneously.

A LCD interface allows for basic setup of the server such as network, output configuration or to select a test pattern without the need of setting up a network before.

For more information regarding the Pandoras Box product structure, please see the chapter „Product Overview“ in the Pandoras Box manual. It also includes links to chapters that explain the different software solutions and possible hardware accessories. We offer specialized interfaces for SMPTE I/O, DMX, serial and sensor control.

Drivers

All drivers are preinstalled on the system. Please check the Download-Center for updates.

PB Menu

There is software pre-installed on Pandoras Box hardware called the PB Menu. It starts automatically when booting. It covers the Windows desktop and consists of a few buttons that give access to the most needed actions, e.g. starting the Master or Client software or opening the Windows Explorer (File Browser).

The PB Menu includes another software called the Server Management Application. It allows to manage multiple hardware systems and connect via VNC to them.

For more information see the according topics in the main Pandoras Box manual.

Product Specifications

Operating system: Windows 10

Processor: XEON processor

SSD drives (for content): PK1: 1 TB; PK2: 8 TB; PK3: 32 TB

RAID: RAID-0

Storage for operating system: SSD with 480GB

RAM: PK1: 24 GB; PK2: 48 GB; PK3: 48 GB

USB ports: 8x USB ports (front: 2x USB 3.0, rear: 4x USB 3.0, 2x USB 3.1 (1x Type C))

LAN: 1x 1GbE port + 1x 10GbE port + 1x IPMI port

Audio (onboard): Optical S/PDIF output; 3x stereo playback output; 1x stereo playback input (Line-in) and 1x microphone input

Graphics card: Nvidia Quadro P4000, Nvidia RTX A4000 or RTX A6000

Product Size (WxHxD): 422mm x 177mm x 596mm - without handles (19" wide and 4U high);
482mm x 177mm x 636mm - with handles

Weight: approx. 30kg (depends on performance kit and optional cards)

Power: 100-240V AC, 12-6A, 47-63Hz with an integrated 850W power supply unit

Operating temperature: 10° to 35°C (50° to 95°F)

Relative humidity: 10% to 90% noncondensing

Optional cards (total number defined by space and PCIe slots):

- video input boards: HDMI 2.0, Display Port 1.4, 12G-SDI, 3G-SDI
- 8ch ADAT or 256ch Dante audio card
- Sync card (for Framelock and Genlock)
- second graphics card
- 10GbE Ethernet card

For more information regarding each card see the according topics in the main Pandoras Box manual.



Front view, connections from left to right

Power switch

The power switch allows powering on and off the system.

Press the power button after connecting the supplied power cord.

2x LED Status Lights

The upper blue LED indicates the power status. The lower orange LED indicates access to hard drives.

2x USB 3.0 port

Connect USB devices such as external hard drives, SSDs and flash drives to this port. The USB 3.0 port supports SuperSpeed USB 5Gbps.

LCD interface + Rotary push button

The display allows for basic setup of the server such as network, output configuration or to select a test pattern without the need of setting up a network before. Use the rotary push button to navigate through the menu.



Rear view, connections from left to right

Power input 100-240V / 850W

Use the provided power cord to connect the server to a suitably rated grounded AC receptacle. Then press the power switch on the front panel to turn on the system.

1GbE LAN port

Connect a network router, hub or switch or another computer to this port. The eight-pin RJ-45 LAN port supports standard Ethernet cables for connections to local area networks (LAN) with speeds of 100/1000 Mbps.

2x USB 3.1 ports (1x Type C)

Connect USB devices such as external hard drives, SSDs and flash drives to this port. Both USB 3.1 ports support SuperSpeed USB 10Gbps.

COM port

Connect a serial device to this port.

VGA port

Onboard VGA port only for service, no Pandoras Box output!

IPMI port

Dedicated IPMI LAN Port.

2x USB 3.0 ports

Connect USB devices such as external hard drives, SSDs and flash drives to this port. The USB 3.0 ports support SuperSpeed USB 5Gbps.

10GbE LAN port

Connect a network router, hub or switch or another computer to this port. The eight-pin RJ-45 LAN port supports standard Ethernet cables for connections to local area networks (LAN) with speeds of 100/1000/10000 Mbps.

2x USB 3.0 ports

Connect USB devices such as external hard drives, SSDs and flash drives to this port. The USB 3.0 ports support SuperSpeed USB 5Gbps.

3x Audio Out jack, 2x Audio In jack

Connect amplified speakers or headphones to the stereo output jack (3.5mm) and receive the system's audio output signal. There are three output connections: orange: Center / LFE, black: Rear / Surround, lime: Line Out / Front

Connect a Line signal to the light blue stereo input jack (3.5mm).

Connect a microphone signal to the pink stereo input jack (3.5mm).

Optical (S/PDIF out) jack

Connect digital audio receivers and speakers to the optical S/PDIF output.

4x DisplayPort 1.4

Connect a digital display device to the Display port (max. resolution: 3840x2160 @120Hz or 5120x2880 @60Hz).