



**ALPHACOOOL – THE COOLING COMPANY**



## Alphacool 4HE Rendermaster Super Computer Barebone

### What is it?

4U barebone system with dual socket custom super computer motherboard. It offers space for 8 Dual Slot graphics cards and two Intel Socket LGA 2011-3 processors. In addition, there are various mounting options for a complete water cooling in the housing

### Highlights

- Pre-assembled Super Computer Dual Socket Mainboard for up to 8 dual slot graphics cards
- Mounting options for 2 x 360 mm radiators and other water cooling components
- Ideal for high performance rendering and AI servers

Version: 07.04.2020

We assume no responsibility for any typing errors.

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## Scope of delivery

1 pcs 4HE case  
1 pcs Super Computer Mainboard  
6 pcs 120 mm AVC DBPJ1238B2G P003 industrial fans

Technical data rcase	
Formfactor	4HE
L x W x H:	104,5 x 45 x 18 cm
Material:	Full copper
Material thickness	1 mm

Technical data Mainboard	
Chipset	Intel C612
Socket	2 x Intel LGA 2011-3
Ram socket	8 x DDR4 RDIMM per CPU (16 at all)
Bios	128MB SPI Flash EEPROM AMI Bios
PCIe	8x PCIe 3.0 x16 + 2x PCIe 3.0 x8
M.2 Slot	1 x PCIe 2.0 x4
SATA	10 x SATA3 (6Gpbs)
RAID	0, 1, 5, 10
USB	4 x USB 3.0 + 2x USB 2.0
Network	2 x RJ45 (10Base-T, 100Base-TX, 1000Base-T) 1 x Dedicated IPM LAN port RJ45 (10Base-T, 100Base-TX, 1000Base-T)
VGA	ASPEED AST2400BMC VGA Anschluss

Technical data PSU	
Type	Great Wall GW-CRPS1600D
Power	1600W
DC Output 200-240V	12V-132A, +12VSB-3A
Efficiency	80+ Platinum
Number of power supply units	4 x

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<b>Other data</b>	
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## Article text

With the Rendermaster Super Computer Barebone Server Case, Alphacool offers the perfect foundation for a dual-socket 4U server rack. The combination of mainboard and case is specially designed to accommodate many graphics cards. In addition, the case offers mounting options for a complete water cooling system to cope with the high heat of the powerful components.

### **Super Computer Mainboard!**

With two LGA 2011-3 sockets and 8 x PCIe 3.0 x16 slots an extremely powerful render server can be built. Of course, a high number of graphics cards can also be used for AI designations and much more. The PCIe 16x slots are positioned in such a way that graphic cards in 2-slot design can be accommodated. This means that the motherboard is suited for graphics cards with a powerful air cooling and liquid cooling. Each CPU has 8 Ram banks available. Further connections, like a COM port (RS-232), 10x SATA3 (6Gbps) and several USB connections, are present as per usual. The mainboard also supports the Intelligent Platform Management Interface 2.0 (IPMI) to control the system easily via remote control.

### **Perfect for Air and Water Cooling**

The case can of course be equipped with air coolers as usual. But since Alphacool is a worldwide known water cooling manufacturer, the case also offers extensive possibilities to install a complete water cooling solution for all hardware. For this purpose, the case offers mounting positions for 2 x 360 mm radiators and various mounting options for pumps and reservoirs. At the front there are two openings for hoses or quick connectors. This allows for additional external cooling components to be attached to the cooling loop. The cooling is based on 6 x 120 mm industrial fans from AVC which rotate at up to 7000 rpm and thus ensure an extremely high air flow rate. The fans can be easily replaced thanks to clip-on mounting. Paired with 2 x 360 mm NexXxoS XT45 solid copper radiators, more than 2000W of heat can be easily dissipated.

### **Lots of Space and Possibilities**

At the front there are 10 hot-swap 2.5" bays for classic HDD or SSD drives. So hard disks can be exchanged easily and quickly. On the left side there are also 2 x USB 3.0 ports and a VGA port for system maintenance. The front consists of a wide mesh grid with the already mentioned hose pass-throughs. This allows the air to pass unhindered through the front. On the rear side, besides the 3 x RJ45 network ports, there are further USB ports, the serial port and a VGA output. There are 16 PCIe slot covers for

the graphic cards, enough to equip the system with 8 dual-slot graphics cards. Unused PCIe slot bezels are perforated to allow airflow through the case.

### **80+ Platinum power supply**

For the power supply 4 x Great Wall power supplies with 1600W each are included. Thanks to an 80+ Platinum certification, the power supplies operate with an efficiency of over 94% at 50% load and over 91% at up to 100% load. The power supplies can be used with two active and two redundant power supplies ensuring high reliability.