

T-CHIP TECHNOLOGY

Cluster Server R2

2U ARM Cluster Server



T-chip Intelligent Technology Co.,Ltd.

www.t-firefly.com



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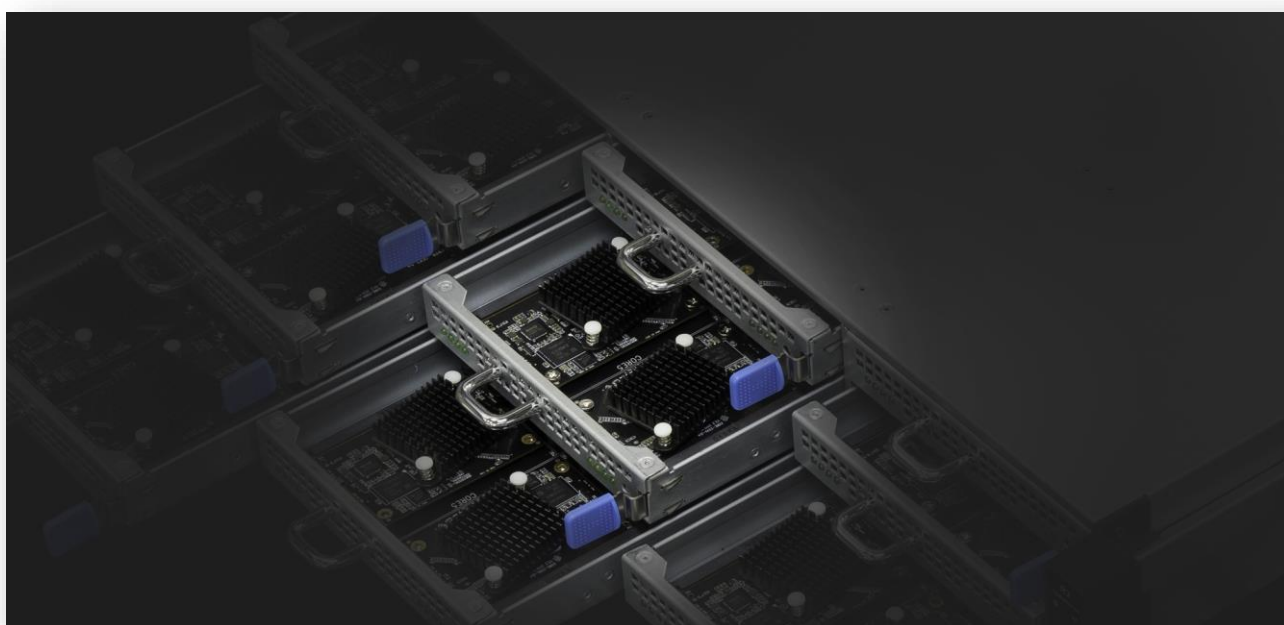
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This standard 2U rack cluster server can be configured with up to 72 core boards, providing remarkable computing power. With high-density hot swap design, it is convenient to replace the components without shutdown.

Supporting various systems, the server is installed with BMC remote management system that supports customized development. It can be used for — virtual desktop, cloud phone, blockchain, cloud gaming, facial recognition server, app cloning, etc.

High-density and powerful

The server can be equipped with up to 72 pieces of 6-core 64-bit core board RK3399 , with up to 432 cores of edge computing power and up to 1.8GHz of every core board' s frequency. When fully equipped, it can be 72 real Linux cloud computers or 72 Android cloud phones; and it supports Android virtualization — to virtualize a large number of Android phones.



Flexible hardware configuration

It can be configured with any number and any type of core boards of Firefly JD4 series — customized core boards are also available. AI accelerator module with up to 2.8T computing power can be equipped in every core board. Two 3.5-inch hard drives are optional for expansion.





Safe and high-speed networking

Owning two 10GbE ports, the server can be connected to broadband of two different operators. Supporting network isolation, link aggregation, network load balancing and flow control, it ensures the security and reliability of the network communication.



BMC remote management system

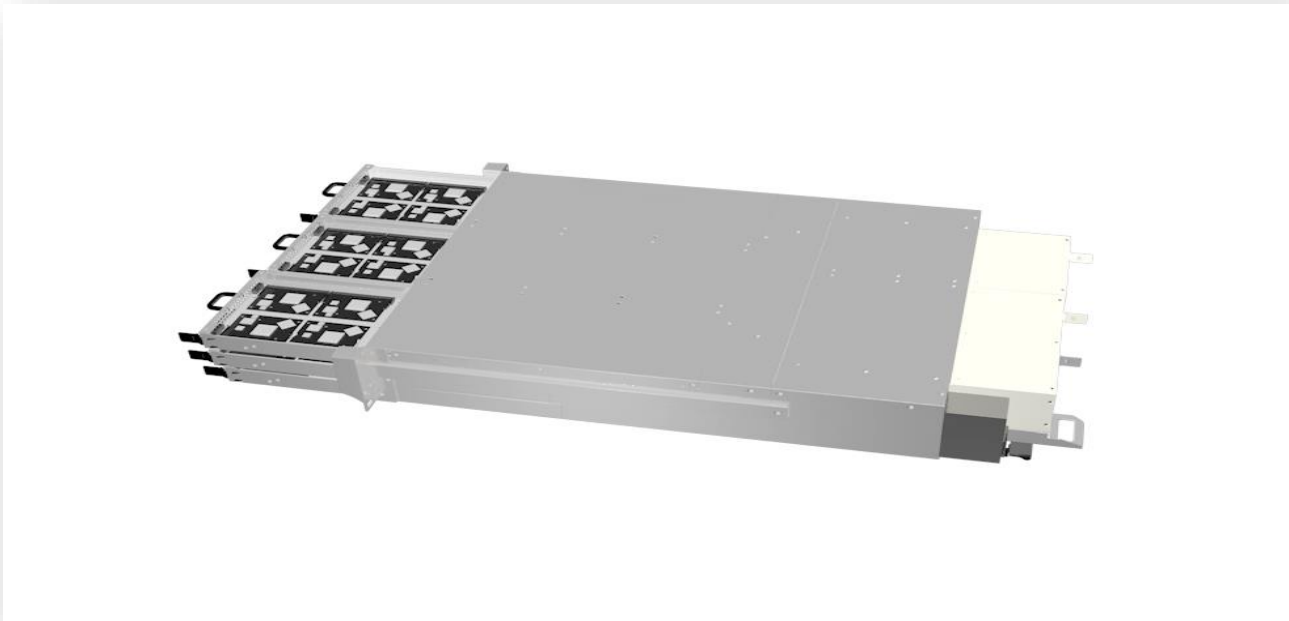
With BMC remote management system, it achieves real-time monitoring, software configuration, hardware management, troubleshooting and system upgrade. The system supports customized development.





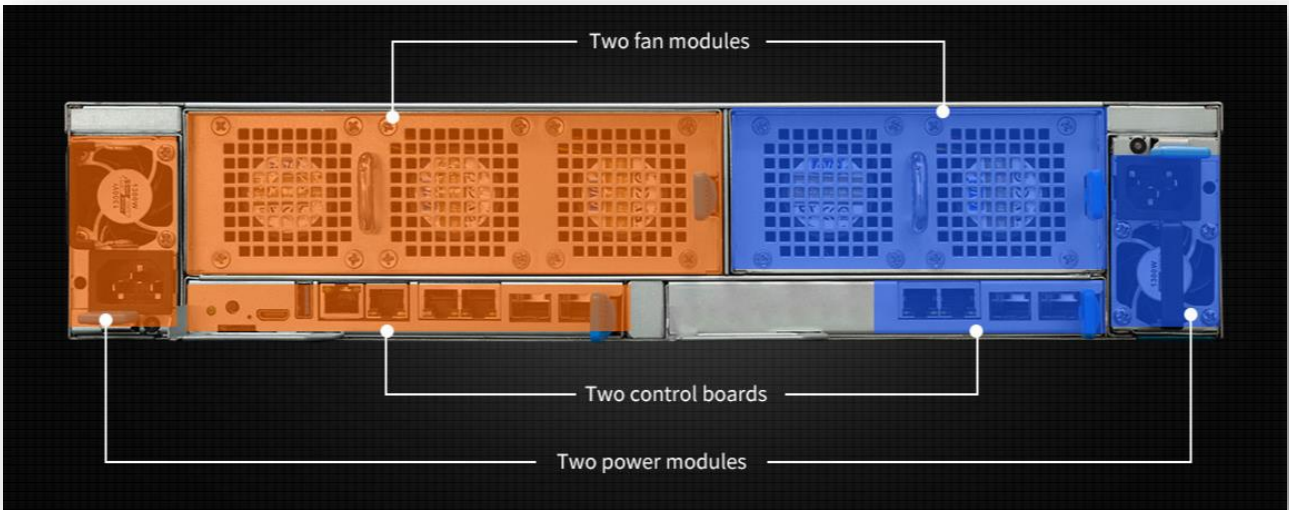
Convenient and efficient modular design

The power supply, fan, network and storage modules adopt modular design and supports hot swap, enabling simplified and more efficient server operation and maintenance.



Stable and reliable redundant design

The power supply, fan, network and storage modules are all with redundant design, realizing independent watchdog, real-time temperature measurement, automatic troubleshooting, parallel recovery and so on, ensuring stable and reliable operation of the server.





Standard 2U rack server

With standard 2U rack server chassis design, its depth is 576mm, perfectly fitting most types of server cabinets in the data centers.



Supports various operating systems

It supports Android, Ubuntu, Linux operating systems, stable and reliable.



Usage scenarios

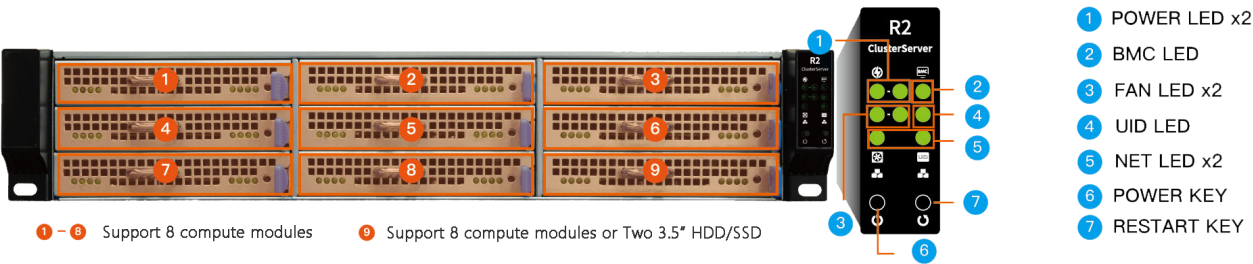
It has a lot of usage scenarios — cloud phone, virtual desktop, cloud gaming, cloud storage, blockchain, multi-channel video decoding, app cloning and so on.



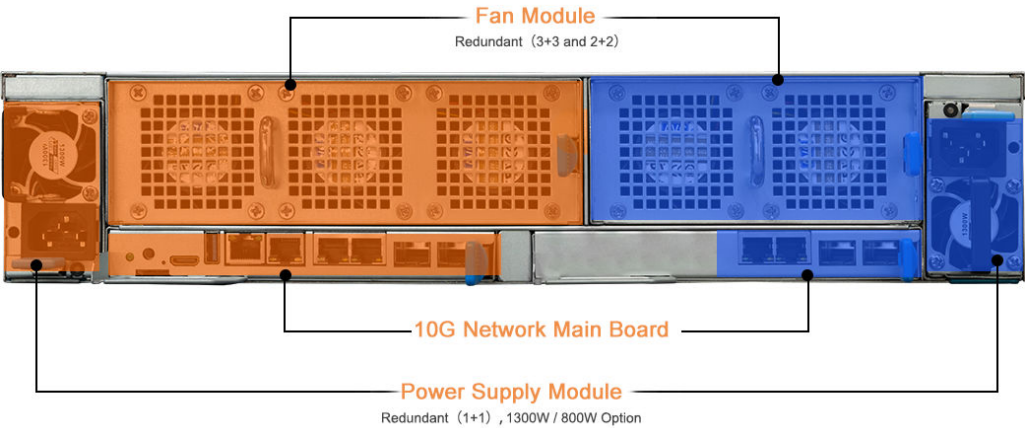
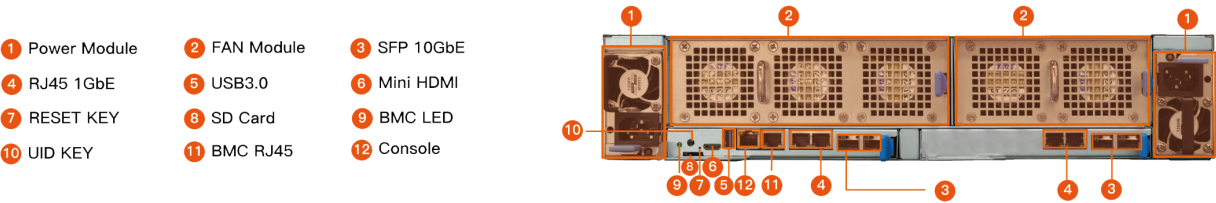


Basic Specifications	
Name	Cluster Server R2
Model	2U rack cluster server
Architecture	ARM architecture
OS	Supports Android, Ubuntu, Linux
Scenario	Cloud phone, virtual desktop, edge computing, cloud gaming, cloud storage, blockchain, multi-channel video decoding, app cloning, etc.
Node Specifications	
Node	9 blade nodes Each blade node can be configured with 8 core boards, Blade node 9 can be installed with two 3.5 SATA/SSD hard disks (supports hot swag)
Number	Up to 72 pcs of core boards (432 pcs of ARM cores in total)
Core Board	RK3399 (AI) core board (Core-3399-JD4) : 6-core 64-bit processor with frequency up to 1.8GHz; on board NPU with up to 2.8 Tops computing power(optional) RK3328core board (Core-3328-JD4) : Quad-core 64-bit A53 processor with frequency up to 1.5GHz; supports 4K/1080P H.265/H.264 video hardware coding & decoding RK1808 (AI) core board (Core-1808-JD4) : Dual-core 64-bit A35 processor with frequency up to 1.6GHz; integrated NPU with up to 3.0 Tops computing power
RAM	Supports 4GB DDR3 / DDR4 / LPDDR4 RAM (Each core board can be optionally equipped with: 1GB / 2GB / 4GB)
Storage	Supports 32GB eMMC internal memory (Each core board can be optionally equipped with: 8GB/16GB/32GB/64GB/128GB) 3.5" SATA/SSD x2 (Blade node 9), supports hot swap SD card slot x1
BMC Module	
BMC	Integrated BMC management system, provides management interface based on Web. BMC management system supports customized development.
Network	Can connect to broadband of two different operators. Supports network isolation, link aggregation, network load balancing and flow control. Dual network controllers redundancy design (realizes network isolation), each controller has: 1000Mb Ethernet port (RJ45)×2 10Gb Ethernet port (SFP+)×2 BMC port×1 Console debug port×1
Display	1×Mini HDMI 2.0, 4K@60Hz (Master board)
USB	1 × USB3.0 HOST
Indicator Light	Master board working indicator: 1 pcs Core board indicators on each blade: 8 pcs; 1 pcs for 1 core board Side handle indicators: Fan 1, Fan 2, Switch module 1, Switch module 2, UID, BMC, Power 1, Power 2
Button	Reset×1, UID×1
Fan Module	
Fan	Two groups of fan modules: Fan module 1 (3×2 redundancy), Fan module 2 (2×2 redundancy)
Power Module	
Power	Dual-channel redundant power design: AC 100~240V 50/60Hz, 1300W / 800W optional
Appearance & Environment	
Size	Standard 2U rack chassis: 580mm x 434mm x 88.8mm
Temperature	Operating Temperature : 0°C - 35°C
Humidity	Operating Humidity : 8%RH~95%RH

Front View



Back View



About us

Company introduction

T-Chip Intelligent Technology Co., Ltd. was founded in 2005. It is a national high-tech enterprise. We focus on the research and development, design, production and sales of open source intelligent hardware, internet of things and digital audio products, and provide the overall solution for intelligent hardware products meanwhile.

The open-source brand "firefly" has an open-source community and online shopping mall on the Internet. At present, it has more than 200000 users and more than 5000 enterprise users, accelerating the R & D process for many technology entrepreneurs and start-ups, and providing professional technical services.

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