CSC2-N48 Power Server

- RK3588S, RK3588, RK3576
- BM1684X, BM1688
- Jetson Orin Nano, Jetson Orin NX

V1.0 2025-8-21

T-CHIP INTELLIGENCE TECHNOLOGY

Product features

48 computing nodes, providing strong computing power

The server has 48 built-in distributed computing nodes, and you can choose from Rockchip, Computing, NVIDIA and other platforms. Each node can provide 6TOPS-157TOPS computing power, and 48 computing nodes can be optional.

Support the privatization deployment of large models

It supports the privatization deployment of large models such as mainstream language models (Deepseek-R1, Llama, Qwen), large visual models (SAM, ViT), and image generation models (Flux, Stable Diffusion).

Supports a variety of deep learning frameworks

Support traditional network architectures such as CNN, RNN, LSTM, etc. Supports multiple deep learning frameworks such as TensorFlow, PyTorch, PaddlePaddle, ONNX, Caffe, etc., and supports custom operator development.

Touch screen for real-time device info

Equipped with a touch screen, it can display device information such as chassis temperature, energy efficiency, fan speed, network IP, date, and time in real time, making it convenient for users to grasp the operating status of the device at any time.

Product features

Four 10G ports, strong network capacity

It has four 10GE ports (SFP+) and 1 MGMT (BMC management network interface), so that network communication has a higher speed.

New structural exterior design

The standard 2U rack server chassis design perfectly matches most types of cabinets in data centers, improving space utilization and easy management and maintenance.

Equipped with BMC management system

Equipped with BMC intelligent management system, it can easily complete real-time monitoring, software configuration, hardware management, troubleshooting, system upgrade, and can provide secondary development.

Wide range of application scenarios

It is widely used in intelligent computing servers, edge computing, large model localization, smart cities, smart healthcare, smart industry, intelligent security and other types of products and fields.

Specifications

		RK3588S	RK3588	RK3576	BM1684X	BM1688	Jetson Orin Nano (8GB)	Jetson Orin NX (16GB)
Technical Specifications	Server form	2U rackmount computing power server						
	Architecture	ARM architecture						
	Number of nodes	48 distributed computing nodes + 1 control node						
	Compute nodes	Octa-core 64-bit processor RK3588S, up to 2.4GHz	Octa-core 64-bit processor RK3588, up to 2.4GHz	Octa-core 64-bit processor RK3576, up to 2.2GHz	Octa-core 64-bit processor BM1684X, up to 2.3GHz	Octa-core 64-bit processor BM1688, up to 1.6GHz	Hexa-core 64-bit processor NVIDIA Jetson Orin Nano, up to 1.7GHz	Octa-core 64-bit processor NVIDIA Jetson Orin NX, up to 2.0GHz
	Control nodes	Octa-core 64-bit processor RK3588, with a maximum clock speed of 2.4GHz and a peak computing power of 6TOPS						
	AI computing power	288T (6T × 48, INT8)	288T (6T × 48, INT8)	288T (6T × 48, INT8)	1536T (32T × 48, INT8)	768T (16T × 48, INT8)	3216T (67T × 48, INT8)	7536T (157T × 48, INT8)
	RAM	16GB LPDDR5 × 48 (4/8/16/32GB)	16GB LPDDR4 × 48 (4/8/16/32GB)	8GB LPDDR4 × 48 (4/8/16GB)	8GB LPDDR4 × 48 (8/12/16GB)	8GB LPDDR4 × 48 (4/8/16GB)	8GB LPDDR5 × 48	16GB LPDDR5 × 48
	Storage	256GB eMMC × 48 (16/32/64/128/256GB)	256GB eMMC × 48 (16/32/64/128/256GB)	64GB eMMC × 48 (16/32/64/128/256GB)	32GB eMMC × 48 (32/64/128GB)	32GB eMMC × 48 (16/32/64/128/256GB)	Not	
	Storage expansion	2280 PCIe NVMe SSD × 48 (Optional)					256GB (2280 PCIe NVMe SSD, the server is internally assembled)	
	Power	2 AC redundant power supplies (Hot-swappable supported)						
	Screen	1 touch screen display						
	Fan module	12 high-speed cooling fans						
Physical Specifications	Size	724.0mm (L) × 430.0mm (W) × 88.8 mm (H)						
	Full weight	Net weight of the server: 23.1kg, total weight with packaging: 25.3kg						
	Environment	Operating Temperature: 0°C ~ 35°C, Storage Temperature: -40°C ~ 60°C, Operating Humidity: 5% ~ 80%RH (non-condensing)						
Software Specifications	BMC	Integrated BMC management system based on web management interface, supports monitoring, configuration, alarming, remote operation and maintenance, virtual replacement management, and provides CLI command line and Redfish and other tools to facilitate secondary development						
	Large language models	All models support the privatization of ultra-large-scale parametric models under the Transformer architecture, such as Deepseek-R1 series, Gemma series, Llama series, ChatGLM series, Qwen series, Phi series and other large language models						
	Visual large model	BM1684X: Support the privatization deployment of large visual models such as ViT, Grounding DINO, SAM, etc. Jetson Orin Nano/Jetson Orin NX: Supports the privatization deployment of large vision models such as EfficientVIT, NanoOWL, NanoSAM, SAM, TAM, etc.						
	AI Painting	BM1684X/Jetson Orin Nano/Jetson Orin NX: Support the private deployment of Flux, Stable Diffusion, and Stable Diffusion XL image generation models						
	Deep learning	All models: Supports traditional network architectures such as CNN, RNN, LSTM, and supports a variety of deep learning frameworks, including TensorFlow, PyTorch, PaddlePaddle, ONNX, Caffe, etc. Support custom operator development and Docker containerization management technology Jetson Orin Nano/Jetson Orin NX: Support Ollama local large model deployment framework and ComfyUI graphical deployment framework						
Interface Specifications	Internet	4 × 10G Ethernet (SFP+), 1 × Gigabit Ethernet (RJ45, MGMT used as BMC management network)						
	Console	1 × Console (RJ45, BMC debug serial port, baud rate 115200)						
	Display	1 × HDMI (Maximum resolution 1080P, BMC management display)						
	USB	2 × USB3.0 (The lower USB is USB3.0 OTG, and the BMC can be upgraded OTG using a USB flash drive)						
	Button	1 × Reset button, 1 × Power button, 1 × Restart BMC button						

Interface description

Console
BMC debug serial port

MGMT
BMC management network

Touch display

Power button
Blue (solid): The server is in standby
Blue (flashing): BMC management system is starting
Green (solid): The server is powered on
Off: The server is not powered on

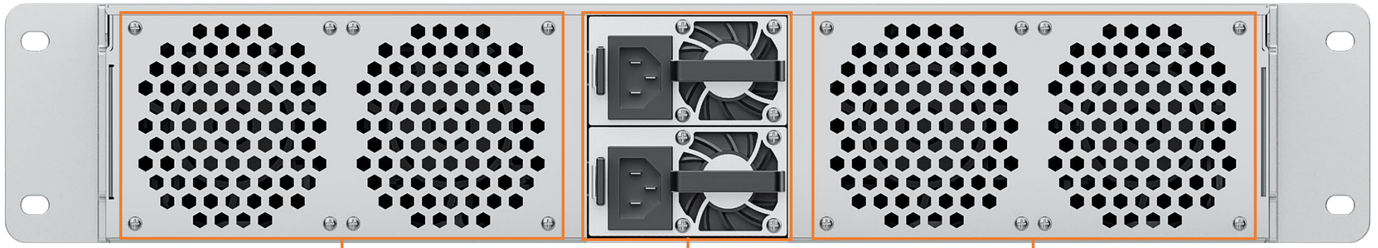
HDMI
1080P

2×USB3.0
Lower: OTG

4×10GE
SFP+

Restart BMC button
Short press

Reset button
Reset password: Press and hold for 5s until the BS light flashes slowly
Factory reset: Press and hold for 10s until the BS light flashes
Wrong press to recover: Press and hold until the BS light returns to solid on



Fan module

2×Power module

Fan module

Dimension

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