



GS1-N1

| Gateway Server

V1.0 2025-8-6

T-CHIP INTELLIGENCE TECHNOLOGY

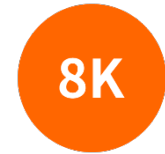


Product features



High-performance edge computing module

Single-core module design, optional RK3576/RK3588S/NVIDIA Jetson Orin Nano/NVIDIA Jetson Orin NX edge computing modules, with a computing power of up to 157TOPS.



Support H.265 video codec, saving bandwidth and storage space

It can support up to 32-channel 8K@60fps H.265 video decoding. Under normal network conditions, H.265 video transmission is clearer and smoother. With the same resolution, the storage volume is smaller, which saves storage space and reduces procurement costs.



Built-in SAS/SATA hard drive bay

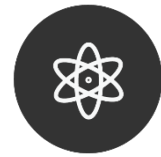
Built-in 3.5"/2.5" SAS/SATA hard drive bay and M.2 PCIe interface, support SATA3.0 HDD/SSD hard disk and PCIe NVMe SSD expansion, allowing devices to easily expand to terabyte-level ultra-large capacity.



Strong network communication capabilities

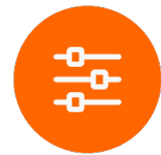
Equipped with two Gigabit Ethernet ports (RJ45), the WiFi module can be expanded through the M.2 interface, and 5G and 4G LTE can be expanded, so that the network communication has a higher speed.

Product features



Multiple RS232 and RS485 interfaces

It is equipped with two RS232 interfaces and three RS485 interfaces, and the signals are drawn out through the Phoenix terminal base and DB9 interfaces, which can meet the diverse serial communication requirements.



Abundant expansion interfaces

It has dual-channel Gigabit Ethernet, HDMI (8K/4K), USB3.0, RS485, RS232, CAN, Mini PCIe (4G), M.2 (WiFi), TF Card and other interfaces, which is convenient for connecting various peripherals.



Standard 1U rack server size

The standard 1U rack server chassis design fully matches most types of cabinets in the data center, improving space utilization and making it easy to manage and maintain.



Wide range of application scenarios

It is widely used in enterprise security, traffic management, public safety, environmental protection, smart city, home security, home storage and other types of products and fields.

Specifications



Specifications							
Basic Specifications	Product type	Gateway Server					
	Core mods	Optional mods	Memory	Storage	AI perf.	Video decoding	Video encoding
		RK3576 module	LPDDR4/LPDDR4x (2/4/8/16GB)	eMMC (16/32/64/128/256GB)	6T	8K@30fps H.265/VP9/AVS2/AV1 4K@120fps H.265/VP9/AVS2/AV1 4K@60fps H.264/AVC	4K@60fps H.265/H.264
		RK3588S module	LPDDR5 (4/8/16/32GB)	eMMC (16/32/64/128GB)	6T	8K@60fps H.265/VP9/AVS2 8K@30fps H.264 AVC/MVC 4K@60fps AV1 1080P@60fps MPEG-2/-1/VC-1/VP8	8K@30fps H.265/H.264
		Jetson Orin Nano module	LPDDR5 (8GB)	Not	67T	1×4K60, 2×4K30, 5×1080p60 H.265	1080p30 H.265
		Jetson Orin NX module	LPDDR5 (16GB)	Not	157T	1×8K30, 2×4K60, 9×1080p60 H.265	1×4K60, 3×4K30, 6×1080p60 H.265
	Storage expansion	1 × SATA3.0 (Extended 3.5" or 2.5" SSD/HDD; This interface is not available when the core module is Jetson Orin Nano or Jetson Orin NX) 1 × M.2 M-KEY (Extended PCIe NVMe 2280 SSD) 1 × TF Card (This interface is not available when the core module is Jetson Orin Nano or Jetson Orin NX)					
	Power	150W AC power supply (Input:100V AC ~ 240V AC, 50-60Hz, 3A)					
	Size	Standard 1U Server Size: 482.0mm (L) × 361.8mm (W) × 44.4mm (H)					
	Environment	Operating Temperature: 0°C ~ 45°C, Storage Temperature: -40°C ~ 60°C, Operating Humidity: 5% ~ 90%RH (non-condensing)					
Video Specifications	Video output	1 × HDMI: RK3576 module: HDMI2.1 (4K@120Hz) RK3588S module: HDMI2.1 (8K@60Hz) Jetson Orin Nano module: HDMI2.0 (4K@30Hz) Jetson Orin NX module: HDMI2.0 (4K@60Hz)					
	Video preview	It supports up to 32 channels of high-definition network video real-time preview, AI analysis, storage, and playback Support multi-view, real-time preview of 1/2/4/8/9/16/32 screen, and synchronous playback of 8/16 screen					
	Audio	1 × Audio input, 1 × Audio output					
Interface Specifications	Ethernet	2 × Gigabit Ethernet(When the core module is Jetson Orin Nano or Jetson Orin NX, the left Ethernet interface is not available), Support IPv6, UPnP (Plug and Play), NTP (Network Timing), SADP (Automatic IP Address Search), DHCP (Automatic IP Address Acquisition) network protocols					
	Wireless network	WiFi: Expand 2.4GHz/5GHz dual band WiFi through M.2 E-KEY (M.2 E-KEY and SATA3.0 multiplexed) 4G: Expand 4G LTE through Mini PCIe 5G: Expand 5G through M.2 B-KEY					
	USB	4 × USB3.0 (When the core module is RK3576, USB(1) defaults to USB2.0), 1 × USB2.0					
	Indicator	1 × Power indicator, 1 × Hard disk indicator, 1 × Network status indicator					
	Button	1 × Power button, 1 × Upgrade button					
	Antenna	1 × 4G/5G antenna, 2 × WiFi antenna					
	Other interfaces	1 × Phoenix connector (12Pin-3.5mm, Lead out: 3×RS485, 1×CAN, 12V-2A output) 2 × DB9 (RS232)					

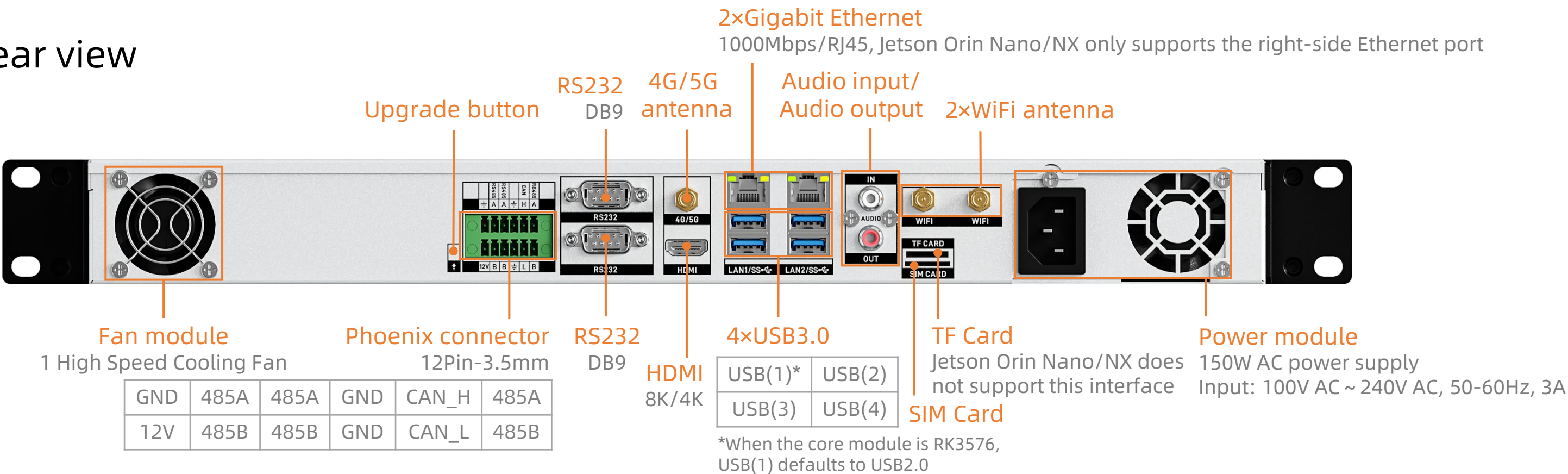
Interface description



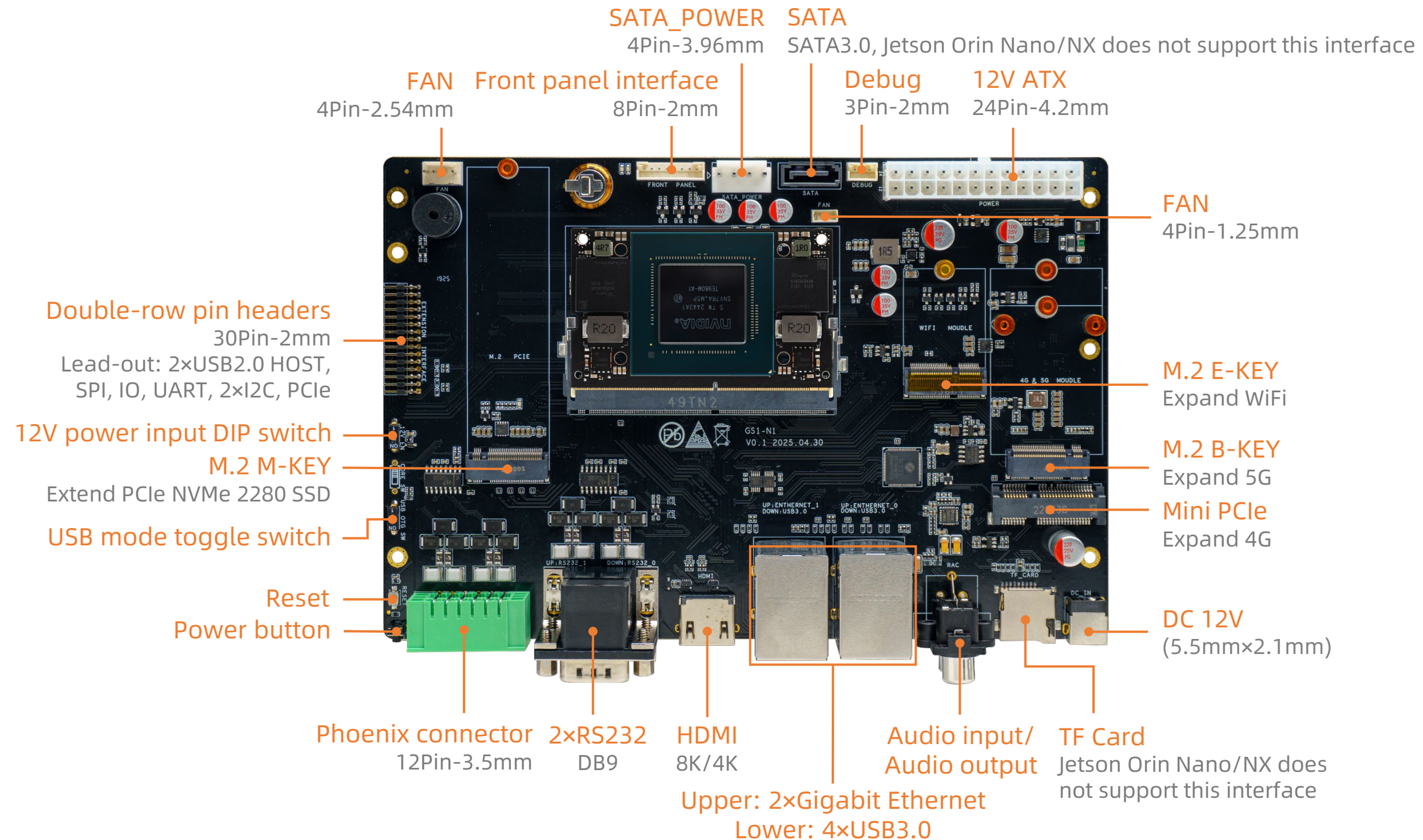
Front view



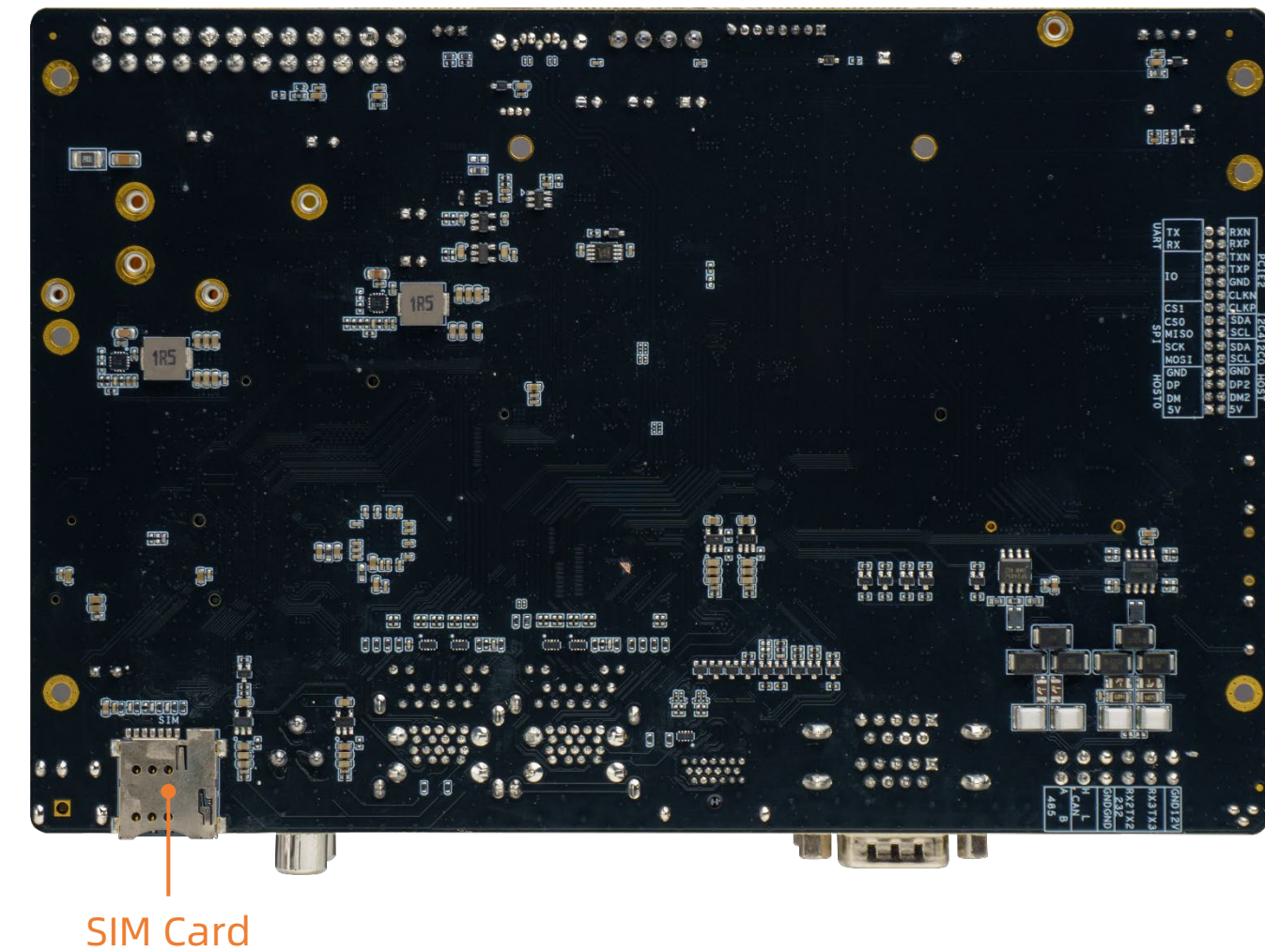
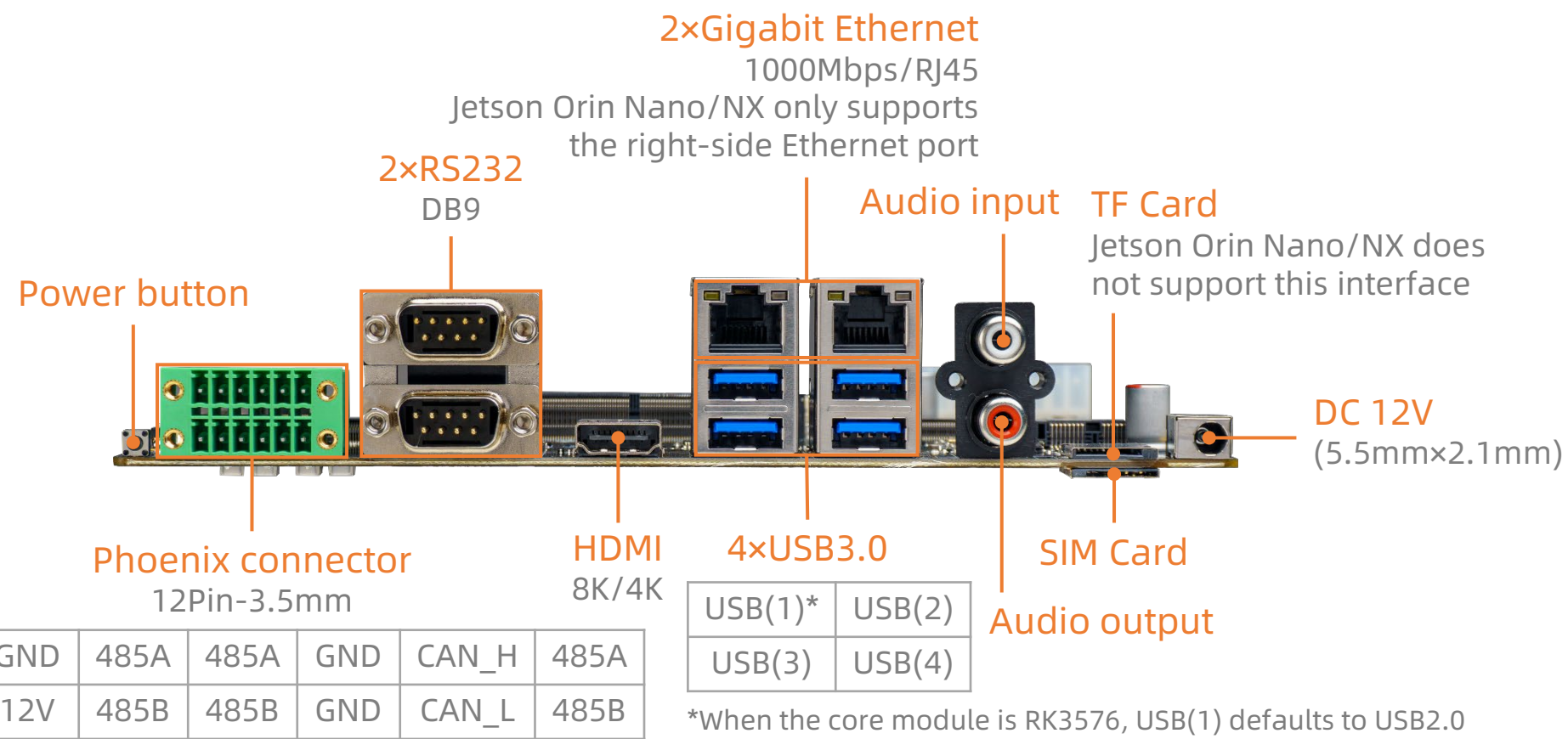
Rear view



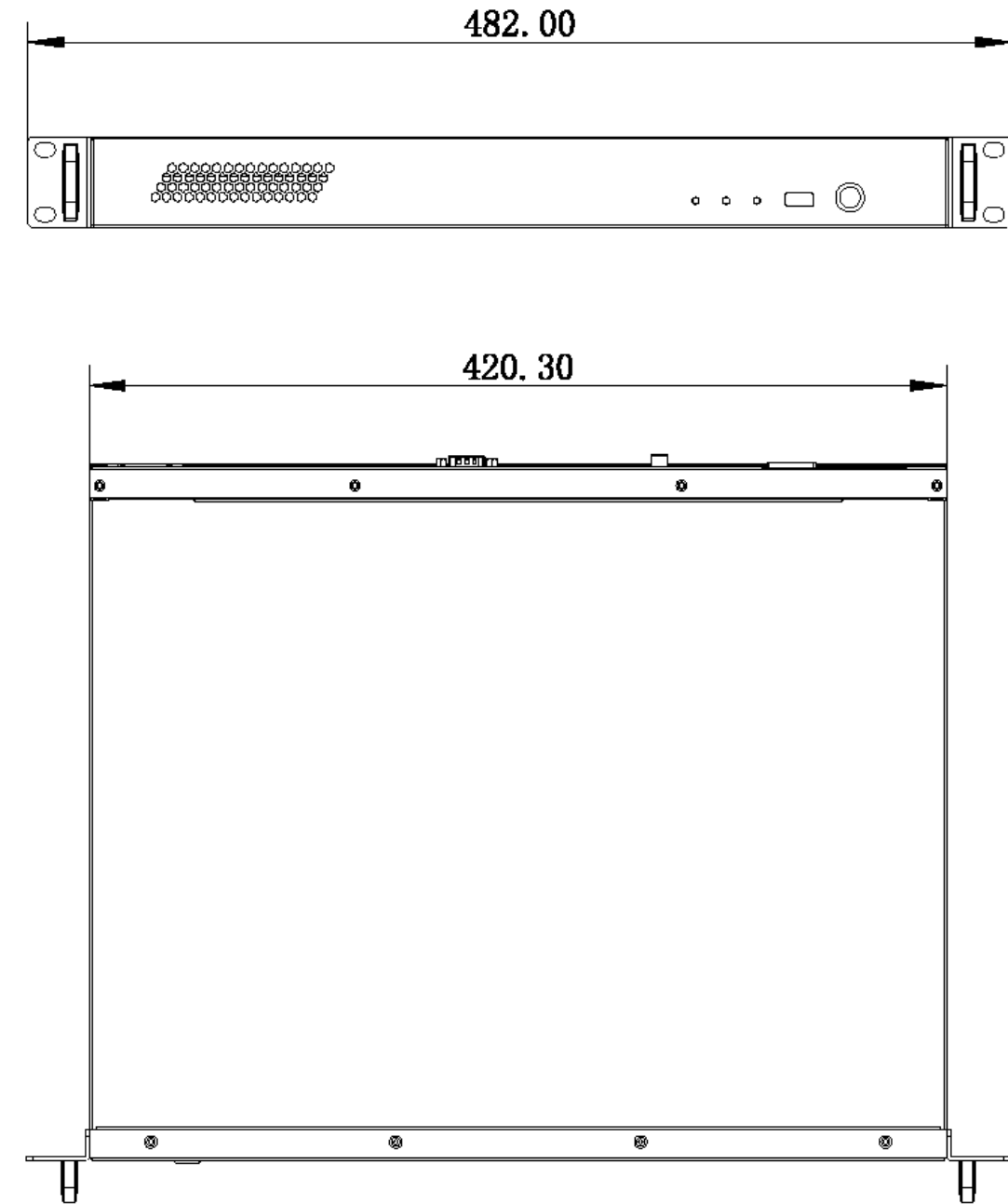
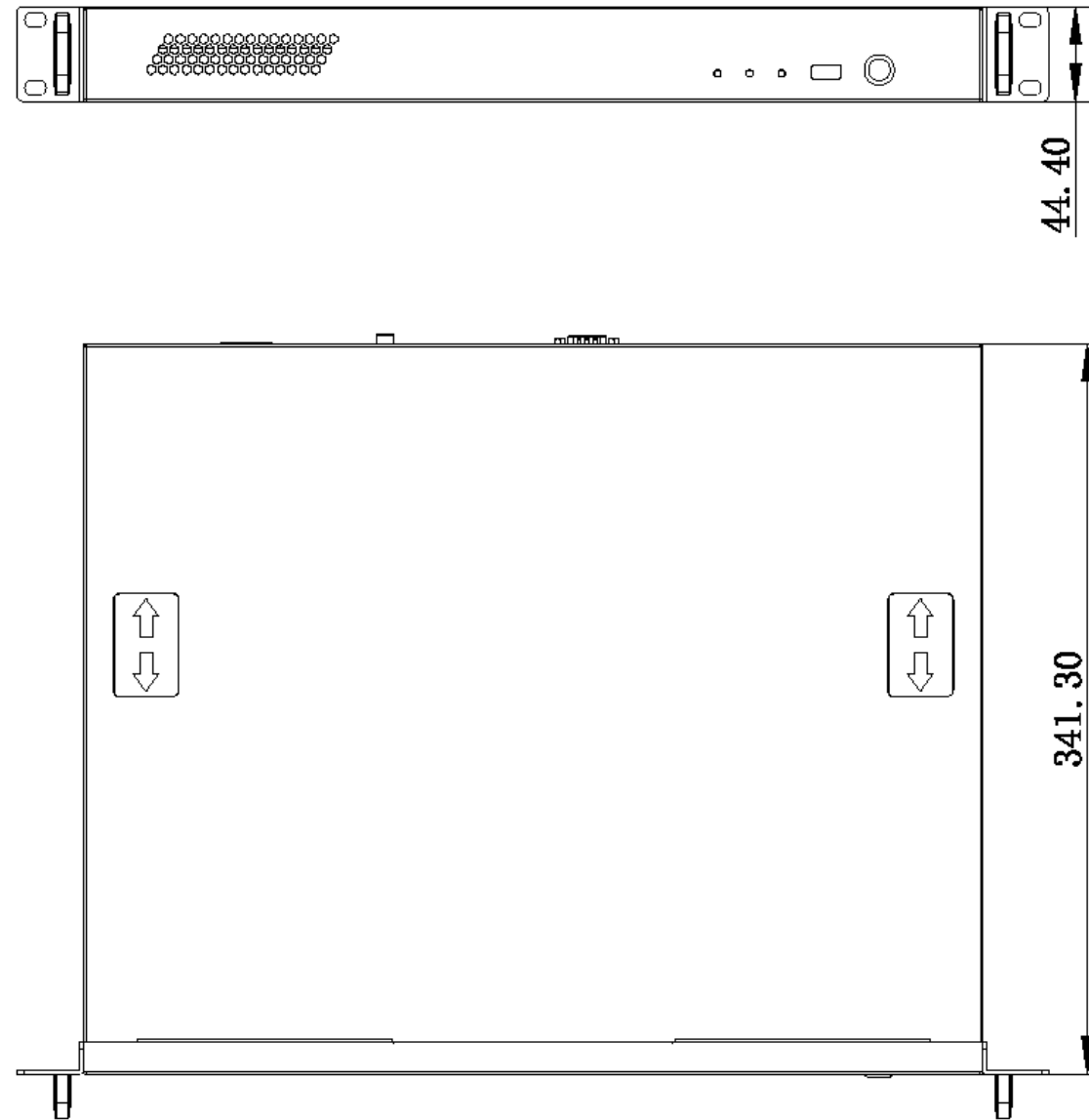
Mainboard Interface description



Mainboard Interface description



Dimension





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