HYY Technology Co.,Ltd

Development board specification

H-3588

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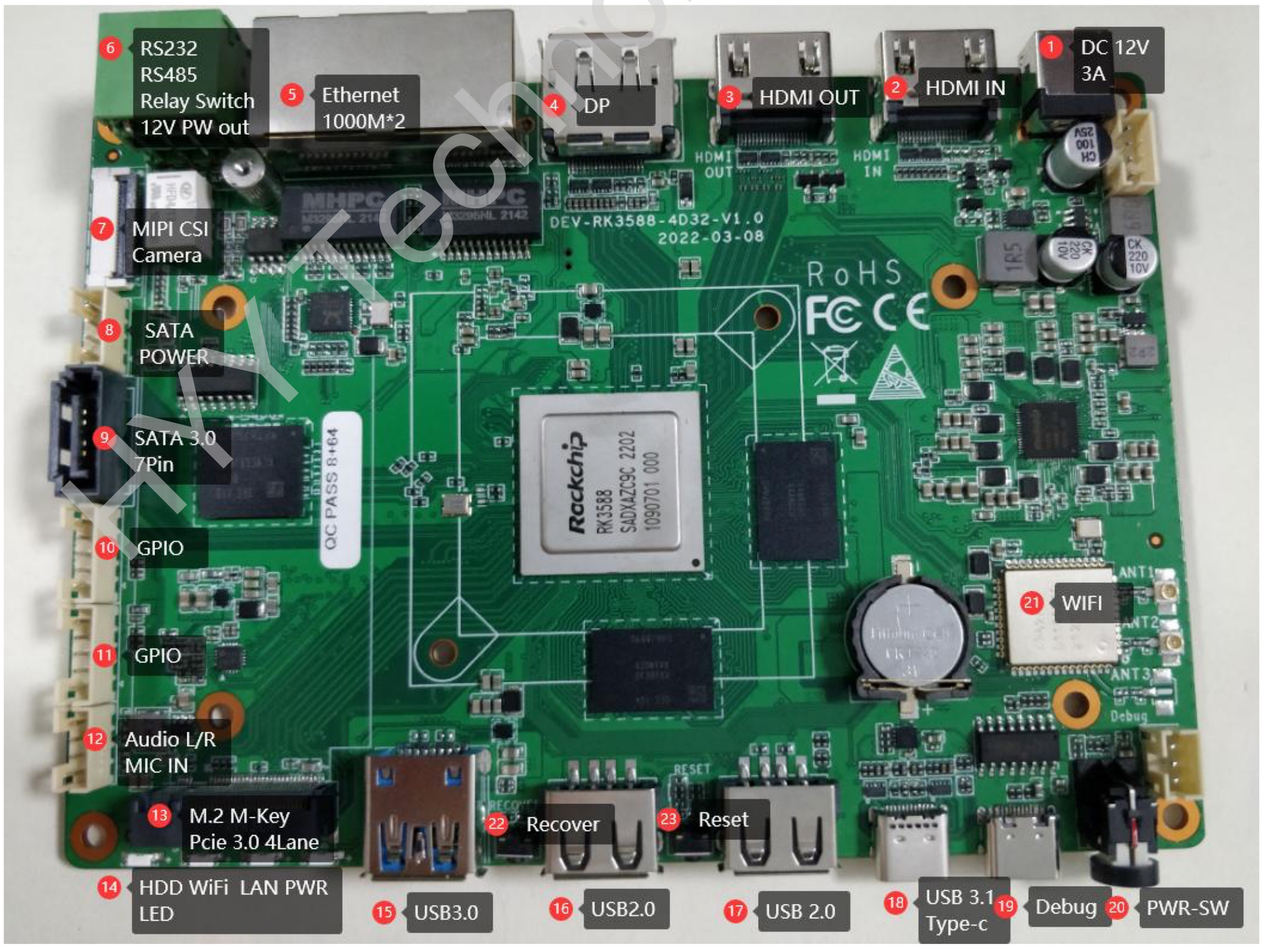
H-3588 Product introduction

- H-3588 is an embedded 8K artificial intelligence board developed by HYY based on the core module SOM3588 designed by Rockchip, with the core of the new generation flagship chip RK3588 8-core (A76x4+A55x4) 64-bit processor of Rockchip; The main frequency is up to 2.4GHz, the integrated quad-core Mali-G610 GPU, and the AI accelerator NPU with built-in 6.0TOPs computing power. With strong performance and ultra-low power consumption, it can bring more optimized performance for various AI application scenarios.
- H-3588 supports multi-channel 8K video output and 4K video input 8K@60fps H.265/VP9 video decoding and 8K@30fps H.265/H.264 video coding, can be coded and decoded simultaneously, up to 32 channels 1080P@30fps Decoding and 16-way 1080P@30fps code; The powerful video encoding and decoding ability can make the picture 8K HD, and the picture quality is more exquisite.
- H-3588 supports Ubuntu 20.04, Debian11, Android 12 and other systems, with excellent real-time performance and high stability. In terms of hardware and software, it can add its own unique technology to ensure the stability of the product. It is widely used in ARM PC, edge computing, cloud server, intelligent NVR, smart large screen, AR/VR, smart car and other fields. It is equipped with complete development materials and mature application solutions, which can reduce the threshold for customer research and development, Shorten product development cycle.



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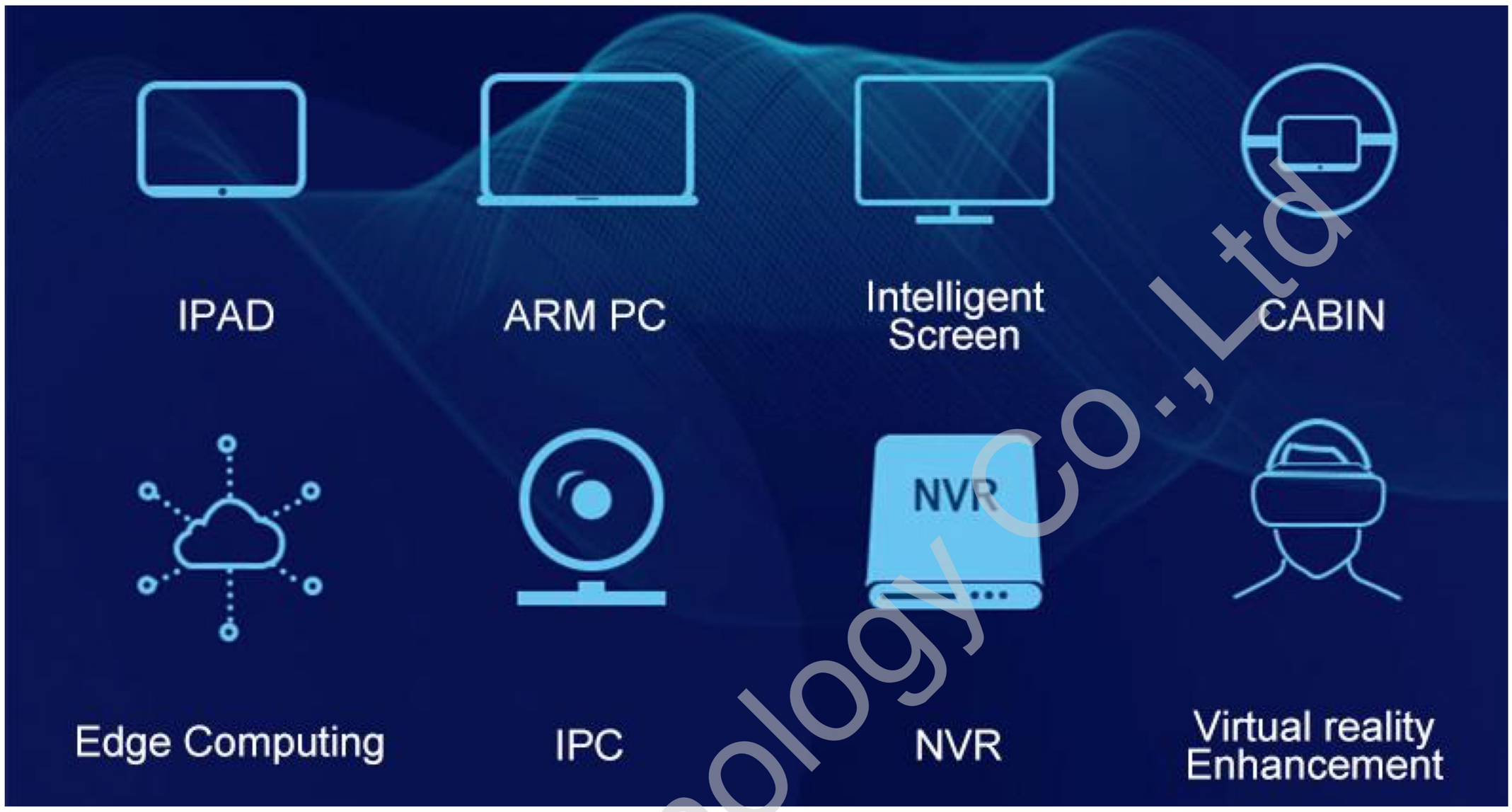
Application field

H-3588 board can be used in edge computing,cloud server,ARM PC,smart NVR,intelligent cockpit,smart video wall,AR/VR,high-end tablet,multi-lens camera,smart car and other fields.



Specifications

Basic Specifications	
SOC	RockChip RK3588
CPU	4x Cortex-A76 and 4x Cortex-A55 cores in dynamIQ configuration
GPU	Arm Mali “Odin” MP4 GPU
AI Accelerato	6 TOPS NPU 3.0 (Neural Processing Unit) Supports framework switching of TensorFlow/MxNet/PyTorch/Caffe/etc
ISP	Integrated 48MP ISP with HDR&DNR
VPU	Video decoding:
	8K@60fps H.265/VP9/AVS2
	8K@30fps H.264/AVC/MVC
	4K@60fps AV1
	1080P@60fps MPEG-2/-1/VC-1/VP8
	Video encoding:
	8K@30fps encoding,Supports H.265/H.264
	* Achieves up to 32-channel 1080P@30fps decoding and 16-channel

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	1080p@30fps encoding
RAM	4GB/8GB/16GB/ 64bit LPDDR4/LPDDR4x/LPDDR5(Up to 32GB optional)
Storage	16GB/32GB/64GB/128GB eMMC
Storage Expansion	1x SATA3.0,can expand with 1pcs of SATA3.0SSD/HDD
Hardware Specifications	
Wireless	2.4GHz/5GHz dual-band WiFi 6,Bluetooth 5.0,supports 5G/4G LTE expansion
Ethernet	2 x GbE(RJ45),one supports POE power supply,max output 60w
Display	Video output:
	1 x HDMI2.1(8K@60fps or 4K@120fps)
	1 x DP1.4(8K@30fps,multiplexed with USB3.0)
	Video input:
	1 x HDMI_IN(4K@60fps),Supports HDCP2.3
	1 x 2 lane MIPI_CSI input
	* Supports multi-channel 8K video output and 4K video input, up to four-screen output with different displays
Audio	1 x Speaker output
	1 x HDMI Audio output
	1 x DP Audio output
	1 x HDMI Audio input
PCIE	1 x PCIe3.0(4Lane),can expand with standard PCIe3.0 devices
SATA	1 x M.2 interface(SATA3.0),4 x standard SATA3.0 interface
USB	1 x USB3.0(Limit 1A)
USB	2 x USB-C(USB3.0/DP1.4)(Limit 2A)
Power	DC12V input(DC5.5x2.1mm)
	POE 48V power input (up to 60w)
Other Interface	1xRS485,1xRS232,1xI2C,1xHeating(12V),6xGPIO
OS/Software	
OS	Android 12.0
	Ubuntu Desktop,Ubuntu Server,Debian11,RTLinux,Kylin Linux,UOS
	* Supports UEFI Boot
General	
Size	14cm x 10cm
Heat Dissipation	Heat sink installation hole pitch:45mm
Power Consumption	Idle:≈1.35W(12V/110mA)
	Typical:≈4.8W（12V/400mA）
	Max: ≈12W (12V/1000mA)
Evironment	Operating Temperature:-20℃-60℃
	Storage Temperature:-20℃-70℃
	Storage Humidity:10%-80%

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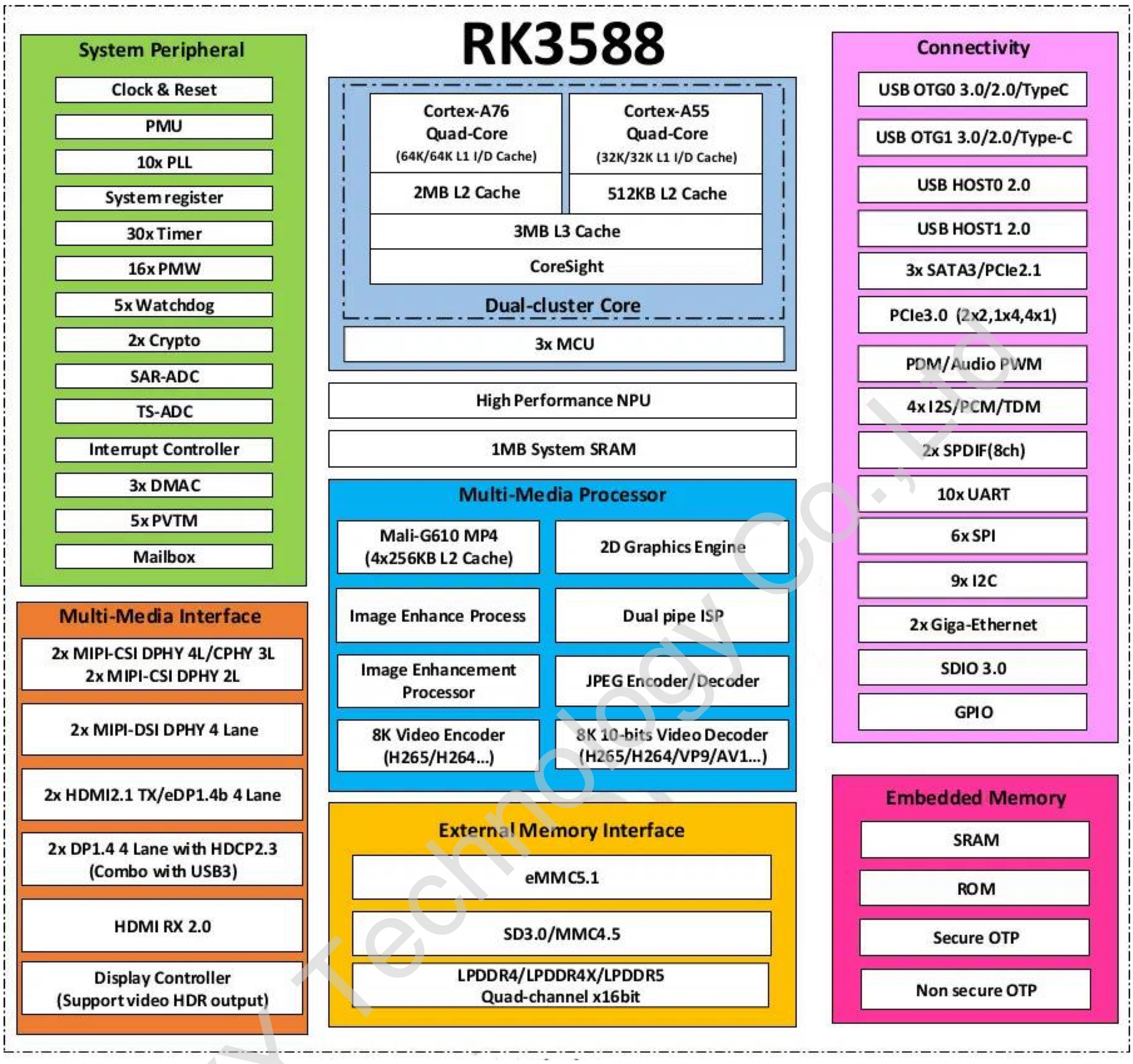

More help

If you have any questions about our products or services, you can contact us through the following ways：

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