HYY Technology Co.,Ltd

# Development board specification

## F-3588 1U Server

http://www.we-signage.com/

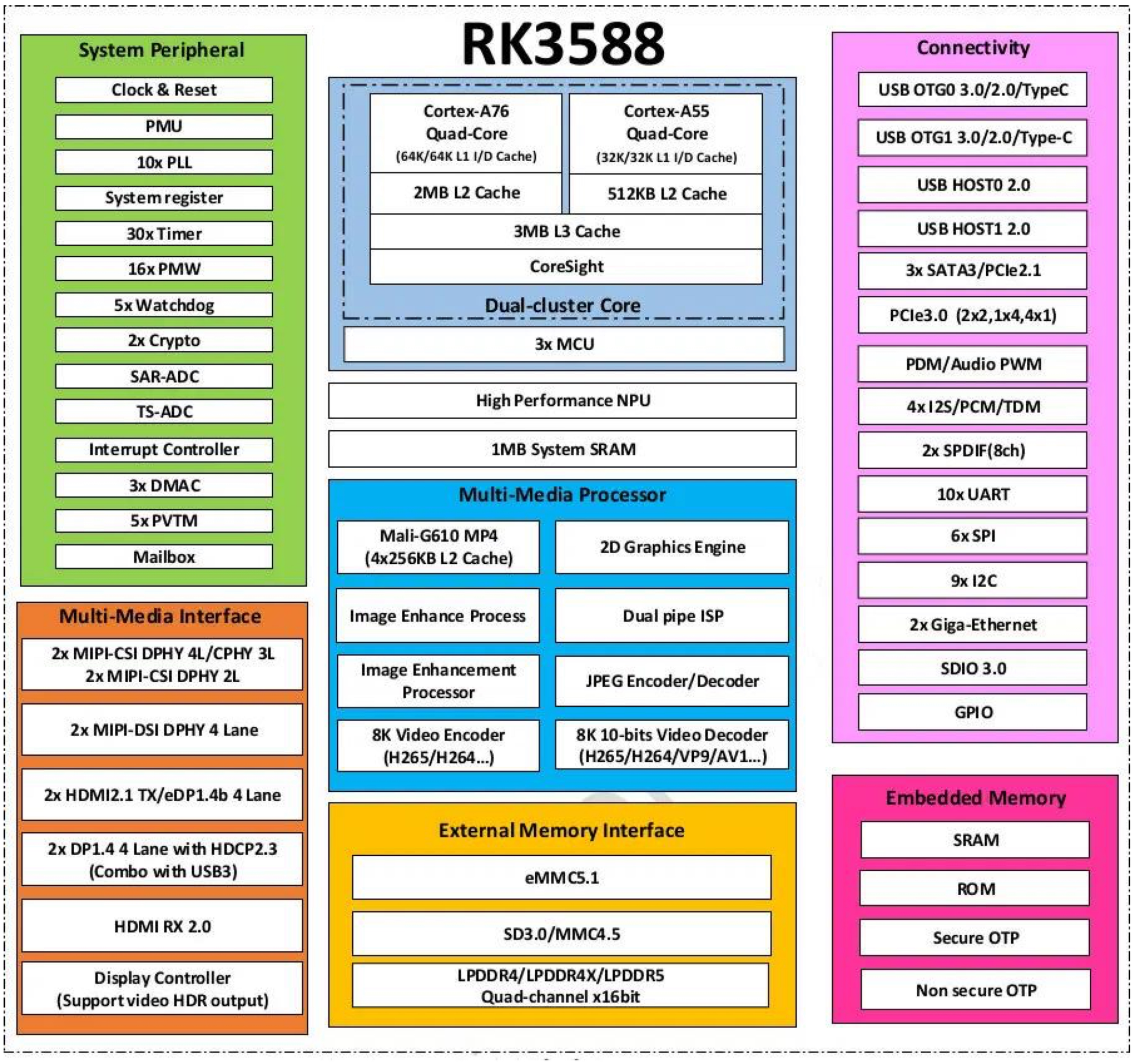
# F-3588 1U Server Product introduction

- F-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.
- F-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.
- F-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.  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.

# Specifications

| Basic Specifications | |
|---|---|
| SOC | 2x 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)<br>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 1080p@30fps encoding |
| RAM | 4GB/8GB/16GB/ 64bit LPDDR4/LPDDR4x/LPDDR5(Up to 32GB optional) |
| Storage | 16GB/32GB/64GB/128GB eMMC |
| Storage Expansion | 2x 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% |




# More help

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

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