

Preview Version Specification

MODEL:APC3588



Confirmation

REVISION HISTORY					
VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
V1.0	2022/10/25		9	Preview Version Specification	

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Website: www.geniatech.com

Address: Room 02-04, 10 / F, Block A, Building 8, Shenzhen International Innovation Valley, Dashi Road, Nanshan District, Shenzhen, Guangdong, China.

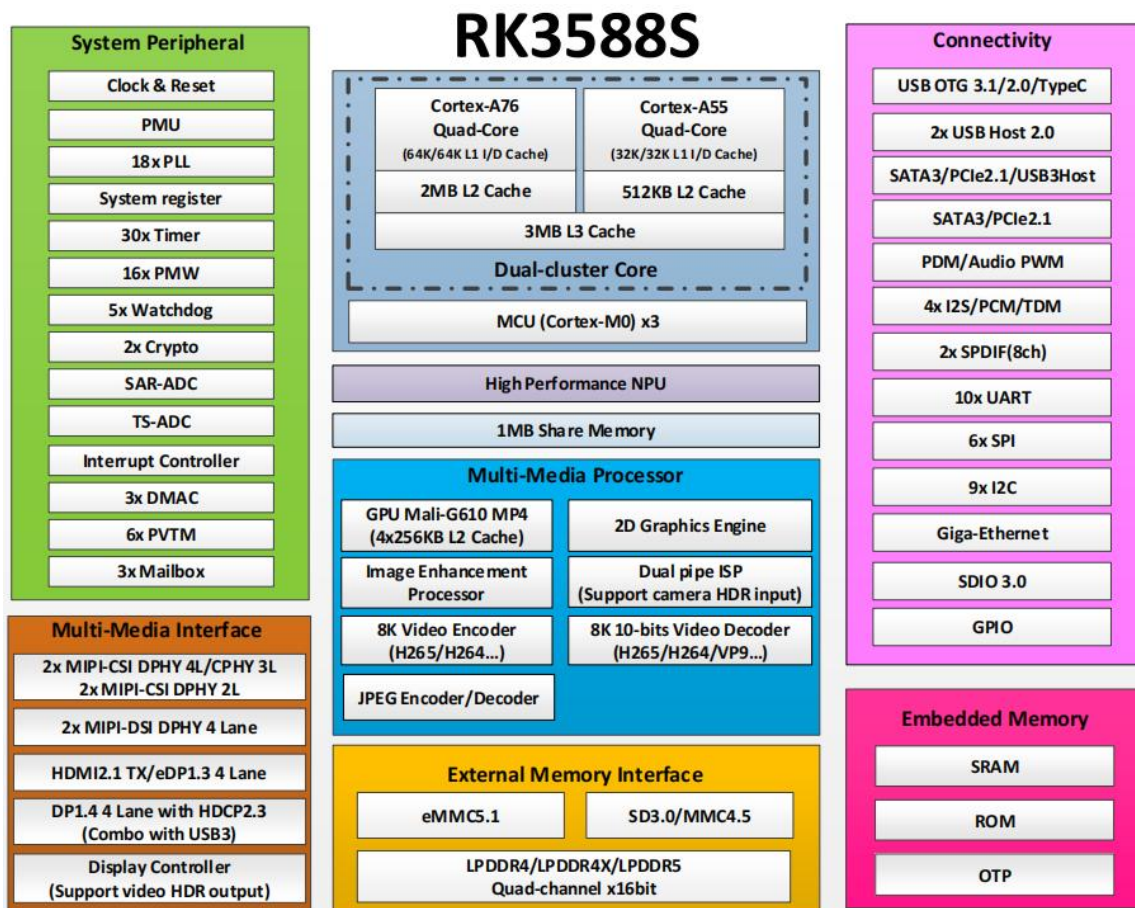
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1. General Description

The APC3588 is designed by Geniatech, based on Rock-chip RK3588S, with quad-core Cortex-A76 and quad-core Cortex-A55, build-in NPU 6TOPs. It supports Bluetooth, Wi-Fi, audio, video, camera and other functions, and has a variety of video input and output interfaces. With the gigabit adaptive RJ45 Ethernet port, it is suitable for intelligent NVR, cloud terminal, Internet of Things gateway, industrial control, information publishing terminal, multimedia advertising machine and other scenarios, and can also be widely used in the field of embedded artificial intelligence. Below is the detail features:

- (I) Quad-core Cortex-A76 and Quad-core Cortex-A55, build-in NPU up to 6TOPs, Support mainstream deep learning frameworks; It can bring more optimized performance for all kinds of AI application scenarios.
- (II) LPDDR up to 32GB ,32-256GB EMMC FLASH.
- (III) Integrated PCIe/GMAC/SDIO3.0/USB3.0,With extensible gigabit Ethernet, WiFi6/ Bluetooth, so that network communication has a higher rate.
- (IV) Support 8K@60fps H.265/VP9 video decoding and 8K@30fps H.265/H.264 video coding, support the same coding and solution, up to 32 channels 1080P@30fps decoding and 16 channels1080p@30 FPS encoding.
- (VI) Supports Android12&Debian11 multiple operating systems, the performance is stable and reliable.
- (VII) With immersion gold process pin, corrosion resistant, 2 studs fixed, It can operate stably at 0℃ -80℃ working temperature for 7X24 hours.

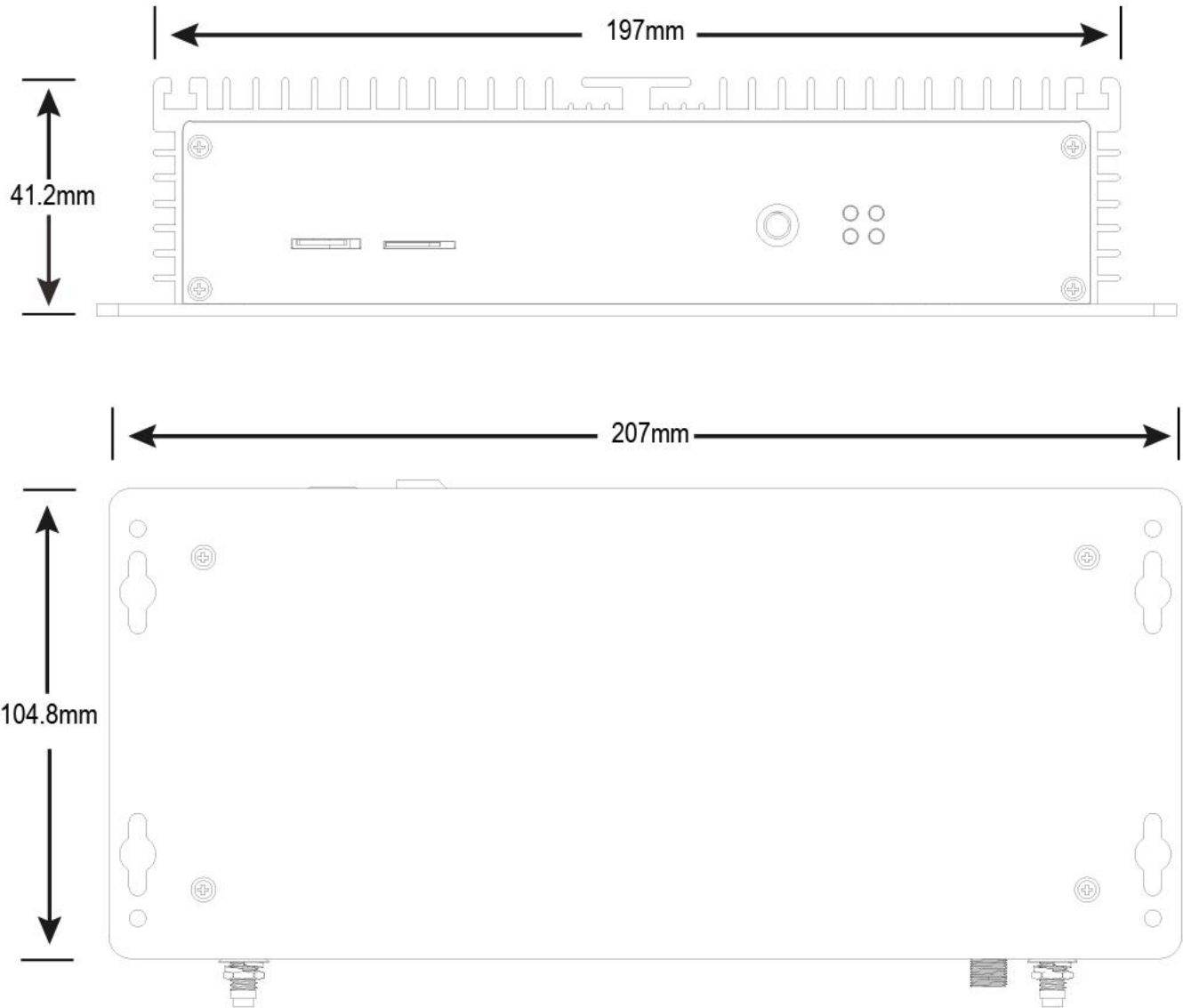


2. Product Pictures

Below pictures are for reference only:



3. Board View



4. Features

Chips	Rockchip RK3588S	
Market area	Global	
OSD Language	English/Chinese(multi language OSD)	
Processor	OS	Android12 / Debian11
	CPU	Quad-core Cortex-A76 and Quad-core Cortex-A55
	GPU	Mali-G610 MP4 (4x256KB L2 Cache)
	RAM	4GB(8/16/32G Optional)
	EMMC FLASH	32GB (64G/128G/256G Optional)
I/O Interfaces	Ethernet	2 x GIGABIT Ethernet RJ45
	USB	2 x USB3.0、 2 x USB2.0 Host、 1 x USB2.0 OTG
	HDMI IN	1 x HDMI IN(4096x2160p@60Hz)
	HDMI OUT	1 x HDMI OUT(7680x4320@60Hz)
	CAN	x 1
	RS485	x 1
	GPIO	x 4
	RS232	x 1
	TTL	x 1
	5V Out	x 1
	3.3V Out	x 1
	SIM Card	x 1
	TF Card	x 1
	IR	x 1
	LED	x 4
POWER	12V/2A	
Dimensions	207x104.8x41.2mm	
Other	2 x Antenna	

5. Support Formats

Video Decoder

- Real-time video decoder of MPEG-1, MPEG-2, MPEG-4, H.263, H.264, H.265, VC-1, VP9, VP8, MVC, AV1
- MMU Embedded
- Multi-channel decoder in parallel for less resolution
- H.264 AVC/MVC Main10 L6.0 :8K@30fps (7680x4320)
- VP9 Profile0/2 L6.1 :8K@60fps (7680x4320)
- H.265 HEVC/MVC Main10 L6.1 :8K@60fps (7680x4320)
- AVS2 Profile0/2 L10.2.6 :8K@60fps (7680x4320)
- AV1 Main Profile 8/10bit L5.3 :4K@60fps (3840x2160)
- MPEG-2 up to MP :1080p@60fps (1920x1088)
- MPEG-1 up to MP :1080p@60fps (1920x1088)
- VC-1 up to AP level 3 :1080p@60fps (1920x1088)
- VP8 version2 :1080p@60fps (1920x1088)

Video Encoder

- Real-time H.265/H.264 video encoding
- Support up to 8K@30fps
- Multi-channel encoder in parallel for less resolution

6. Precautions For Use

1. Relative humidity: 10% ~ 90% .
2. Storage temperature: -20 ~ 85℃
3. Operation temperature: -20 ~ 70℃
4. Do not squeeze、 distort or disassemble the board.
5. Keep the board away from static electricity .
6. Keep the board away from water and other liquid.
7. Clean the board with soft and clean dry cloth when it's dirty.
8. Don't use long connect wires which may affect performance and image quality.