

Shenzhen Geniatech Inc.,Ltd.**SPECIFICATION****MODEL:APC3588**

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Revision History

VERSION	DATE	BOARD ID	PAGE	DESCRIPTI ON	AUTHOR
V0.1	2023/6/26				

1. Product Introduction

APC3588 is an AI edge computing box based on Rockchip RK3588 processor, with rich peripheral resources and complete interfaces, equipped with octa-core 64-bit CPU, main frequency up to 2.4GHz, integrated ARM Mali-G610 MP4 quad-core GPU, built-in AI accelerator which can provide 6TOPs computing power. It supports dual network ports, Bluetooth, Wi-Fi, audio and video, camera, 4G, SSD hard disk, POE and other functions, support RS232, RS485, UART, CAN and other local communications and has a variety of video input and output interfaces. It is applicable to intelligent NVR, cloud terminal, industrial control, information release terminal, multimedia advertising machine and other scenarios.

The following are the main features of the APC3588:

- Support 32 channels of 1080P 30FPS, support 8K video compilation and decoding.
- Supports 6TOPS of arithmetic.
- Supports LPDDR up to 32GB and EMMC is expandable up to 512GB.
- Supports HDMI IN video input, as well as USB for multiple camera combinations.
- Multiple HDMI OUT video output ports.
- Supports TYPE-C DP/USB3.0/USB2.0/GPIO/CAN/RS485/RS232/TTL peripheral interfaces.
- Supports M.2/SATA3.0/ GTIOT/SPI/ I2C/ UART/USB2.0 and other internal expansion interfaces.
- Supports Gigabit and 100G dual network ports, optional POE power supply, and 2.4G/5G dual-band wifi and Bluetooth.
- Supports multiple operating systems: Android 12 & Debian 11 & Buildroot.
- Built-in watchdog and RTC battery can support 7*24 hours stable work.
- Supports POE power supply (optional).
- Support for SSD hard disk (optional).
- Supports 4G/5G communication module (optional).
- Supports GTIOT-2.4G Zigbee module (optional).





2. Feature

- Abundant peripheral interfaces
- Android 12
- RK3588 quad-core Cortex-A76 and quad-core Cortex-A55
- GPU Mali-G610 MP4 (4x256KB L2 Cache)
- 6TOPS of arithmetic power
- 4GB DDR(8/16/32G optional)
- 32GB EMMC(64G/128G/256G optional)
- Dual Ethernet 100M/1000M
- Support 4G & 5G
- Support wide temperature -20~60℃

- (I) Provide related development documents which is able to do the secondary development of customers
- (II) H.264/H.265 video decoder supports H.264 and H.265 at 8kp30

3.Product Picture



4.Specification

基本规格

OS	Android12
SOC	RK3588
Main frequency	2.4GHZ
CPU	Quad-core Cortex-A76 and Quad-core Cortex-A55
GPU	Mali-G610 MP4 (4x256KB L2 Cache)
NPU	6TOPS
EMMC	32GB (64G/128G/256G optional)
DDR	4GB(8/16/32G optional)
Wifi/BT	2.4G/5.8G WiFi6, BT5.0
4G Module	EC20/EC25 Option
POE	Option Maximum power consumption: 24W
RTC/WDT	support

Peripheral interfaces

DC	12V
HDMI IN	1
HDMI OUT	2
TYPE-C DP	1
USB3.0	1
USB2.0	3
Ethernet RJ45	2 (1*Gigabit Ethernet port, 1*100 Gigabit Ethernet port)
Antennas	2 WIFI antennas by default, (1*4G antenna and 1*WiFi antenna are optional).
SIM (Micro)	1 (4G)
TF	8G-128G
Indicator light	4 (HDD, WIFI, POWER, NET)
IR	1 (2.4G, for infrared remote control)
RS232	2 (Can be switched to 2-way URAT via internal jumpers.)
RS485	1 channel (RS485A,RS485B)
CAN	1 channel (CANH,CANL)
GPIO	4 (IO1, IO2, IO3, IO4)

Power key	1
Function buttons	1 Upgrade Button, 1 Reset Button
POE	1 (optional)
GTIOT	1 (ZigBee optional)
SSD	1 optional (125G)
4G module	1 optional (domestic, European and American)
Power supply	12V/2A
temperature	-20℃~60℃
PCBA Size	150 mm *124 mm *20mm
Size of the whole machine	L160mm*W125.5mm*H48mm

5.Precautions for use

- 1.Relative humidity: ≤80%
2. Ambient temperature: -20~ 60℃
- 3.Do not squeeze, distort or disassemble
- 4.Keep the board away from static electricity
- 5.Keep the board away from water and other liquids
- 6.Do not use long connection cables, which may affect performance and image quality