深 圳 金 亚 太 科 技 有 限 公 司

**Shenzhen Geniatech Co.,Ltd.**

# SPECIFICATION

## MODEL:APC3576V2

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# Revision History

| VERSION | DATE | BOARD ID | PAGE | DESCRIPTION | AUTHOR |
|---|---|---|---|---|---|
| V1.0 | 2026/02/11 | APC3576V2 | 6 | - | Tina |
| V1.1 | 2026/07/07 | APC3576V2 | 6 | Add FCC Statement | Tina |
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# 1. GENERAL DESCRIPTION

APC3576V2 is an intelligent development board based on RK3576/RK3576J,which is a low power, high performance processor for ARM-based PC and Edge Computing device with below new features:

(I) Quad-core Cortex-A72 and Quad-core Cortex-A53

(II) ARM Mali-G52 MC4 GPU, Support OpenGL ES1.1/2.0/3.2, OpenCL2.0 and Vulkan 1.1

(III) NPU: Neural network acceleration engine with processing performance up to 6 TOPS

(IV) Support Android 14.0 / Linux Debian12

(V) Support 4GB/8GB/16GB LPDDR4, 16~256GB eMMc, External expansion M.2/USB storage

(VI) Dual Ethernet 10/100/1000M

(VII) 2T2R 802.11 ax/ac/a/b/g/n Wi-Fi + BT 5.0 Module,LTE 4G Moudle(options)

(VIII) 1 * HDMI Out, 1 * LVDS, 1*MIPI DSI support multi-screen simultaneous display, multi-screen different display, multi-screen rotation splicing, multi-channel video source simultaneous decoding, etc. Display method

(IX) Support 2 * RS232 + 2 * RS485 + 1 * Can + 1 * GPIO industrial control bus

(X) 1* USB3.0 + 1*type-c(full-featured)+5*USB2.0

(XI) Support hardware WDT & RTC +1*M.2（Scalable 2230 PCIe NVMe SSD）+ 1*Speaker+1*SPDIF

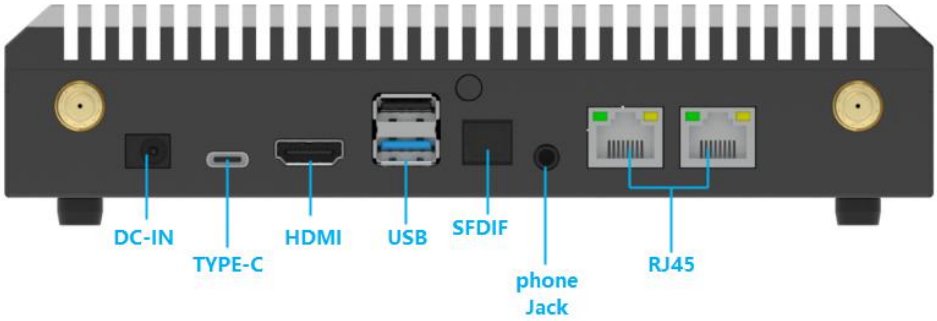
(XII) Support USB and I2C TP

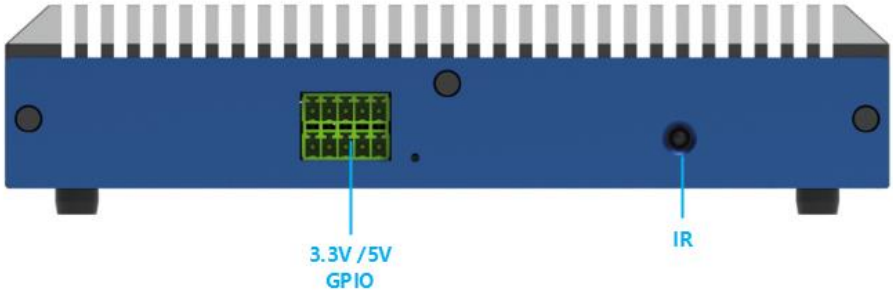
(XIII) Support wide voltage 12~24V power and POE module (options) power supply input, standard EMC and ESD protection design

(XIV) Specially designed for smart express cabinet, smart commercial display, smart vending machine, digital signage, smart home, etc.

# 2. PRODUCT OVERVIEW

Below picture is for reference only, please prevail in kind.




# 3.FEATURES

| | | |
|---|---|---|
| CHIPSET | Rockchip RK3576/RK3576J | |
| MARKET AREA | Global | |
| OSD LANGUAGE | English/Chinese (multi language OSD) | |
| | OS | Android 14.0 / Linux Debian12 |
| | CPU | Quad-core Cortex-A72 and Quad-core Cortex-A53 |
| | GPU | ARM Mali-G52 MC4 GPU, support OpenGL ES1.1/2.0/3.2, OpenCL2.0 and Vulkan 1.1. etc. |

| | | |
|---|---|---|
| Processor | NPU | Neural network acceleration engine with processing performance up to 6 TOPS |
| | LPDDR4 | 4/8/16GB |
| | EMMC FLASH | 32GB（16~256G Optional） |
| NETWORK | Ethernet | 2 * RJ45 (10/100/1000M) |
| | WiFi | IEEE 2T2R 802.11 ax/ac/a/b/g/n |
| | Bluetooth | BT5.0 |
| | 3G/4G | 1 * Mini PCIE (Optional） |
| Interface | HDMI OUT | 1 * HDMI |
| | RJ45 | 2 * RJ45(LED) |
| | RS232 | 2 * 4Pin2.0mm(built in) |
| | RS485 | 2 * 4Pin2.0mm(built in) |
| | Can bus | 1 * 4Pin2.0mm(built in) |
| | GPIO | 1 * 2x5Pin3.81mm (built in) |
| | LVDS | 1 * 2x15Pin2.0mm(built in) |
| | Backlight | 1 * 6Pin2.0mm(built in) |
| | USB3.0 | 1 * USB3.0 Type A |
| | USB2.0 | 1 * USB2.0 Type A +2 * 4PIN2.0mm |
| | TP(I2C) | 1 * FPC 0.5mm(built in) |
| | M.2 | 1*M.2 key-M connecter(built in) |
| | Speaker | 1 * 3.5mmJacker/SPK connecter |
| | SIM | 1 * Micro Sim + 1 * Mini PCIE (LTE) (built in) |
| | WIFI+BT ANT | 2 * IPX |
| | IR | 1 * IR |
| | Switch*3 | 1 * Power /1*reset /1*recpvery |
| | DC IN | 1 * DC IN |
| Adapter | DC 12~24V (Φ5.5mm / φ2.1mm) | |
| Size | 146*102mm | |
| Customizable GUI | We provided GUI customization and we have a vast collection of Launcher created by our R&D team for you to choose from. | |

# 4.Support Formats

| Media Remark | Codec | Remark |
|---|---|---|
| Video Decoder | H.264/AVC | up to 4K@60fps |
| | H.265/HEVC | up to 8K@30fps or 4K@120fps |
| | AV1 | up to 8K@30fps or 4K@120fps |
| | VP9 | up to 8K@30fps or 4K@120fps |

| | | |
|---|---|---|
| | AVS2 | up to 8K@30fps or 4K@120fps |
| Video Encoder | H.264/AVC | up to 4K@60fps |
| | H.265/HEVC | Up to 4K@60fps |
| Picture | Jpg，png | |

# 5.Precautions for use

1. Relative humidity: 10% ~ 95% ,non-condensing.
2. Storage temperature: -20 ~ 85℃ (if Extended commercial -40~100℃)
3. Operation temperature: commercial (0 °C ~60 °C)/Extended commercial (-40 °C ~ 85°C )
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.

# 6. FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

•Reorient or relocate the receiving antenna.

•Increase the separation between the equipment and receiver.

•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

•Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.