

深圳金亚太科技有限公司

Shenzhen Geniatech Co.,Ltd.

SPECIFICATION**MODEL:DB3588**

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Revision History

VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR

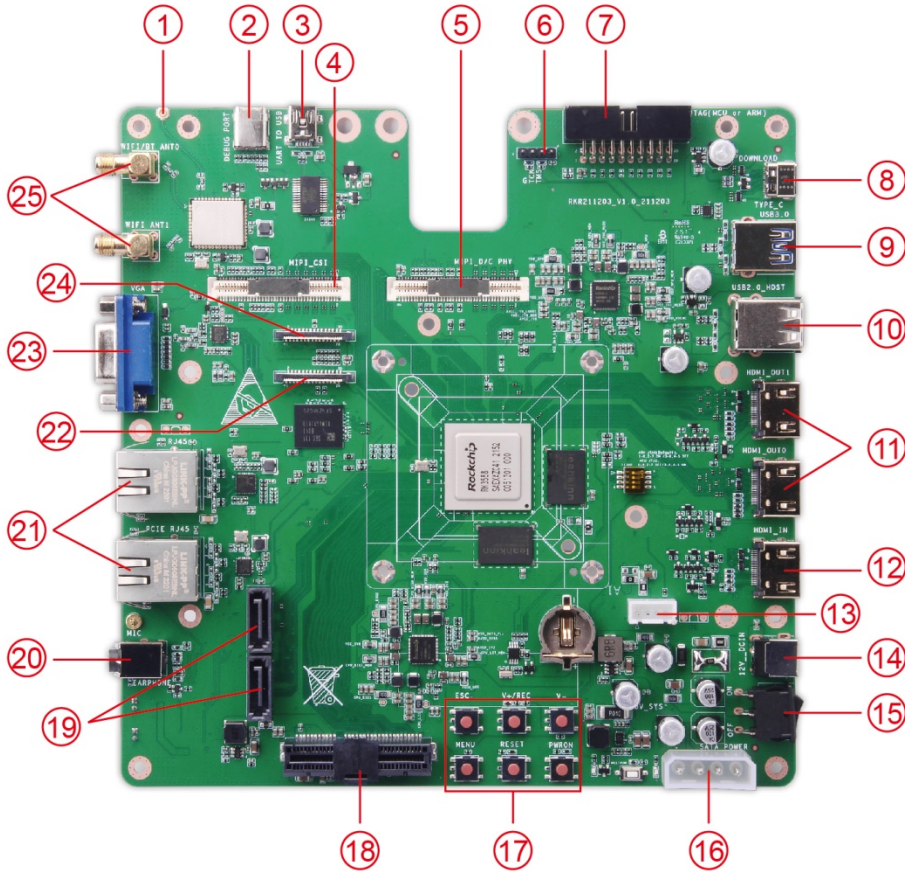
1. GENERAL DESCRIPTION

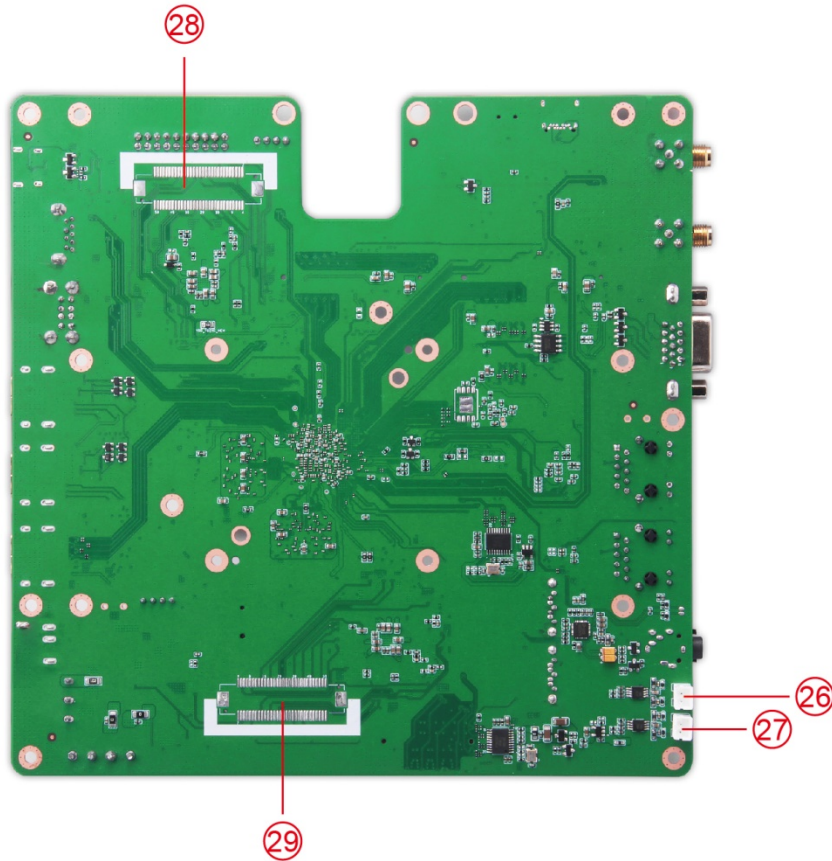
DB3588 is an open source single board machine, based on Rockchip's latest SoC solution RK3588 which is the most powerful industry solution with below new features:

- (I) Quad-core Cortex-A76 and quad-core Cortex-A55, build-in NPU up to 6TOPs, and with GPU Mali-G610 MP4 , Android 12 OS or Linux
- (II) Support 8KP60 decoder and 8KP30 encoder
- (III) Support 2~32GB RAM, 8~256GB eMMC flash, external expansion storage Micro SD card (Max 512GB)
- (IV) Peripheral interface: USB2.0 * 1, USB3.0 * 1, Type-C *1, Earphone * 1, Debug(Type-C) * 1, Uart to USB (MiniUSB) *1, JTAG * 1
- (V) Display interface: HDMI IN * 1, HDMI OUT * 2, VGA * 1
- (VI) Build-in: MIPI CSI * 2, MIPI DSI * 1, MIPI D/C PHY * 1, PCIe * 1, SATA * 2, MIC * 2
- (VII) Network: WIFI6(2.4G+5.8G), BT5.0, GIGA Ethernet * 2
- (VIII) Dimension: 180mm * 180mm, Weight: 160g
- (IX) Power supply: Adapter 12V/2A

2.PRODUCT OVERVIEW

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

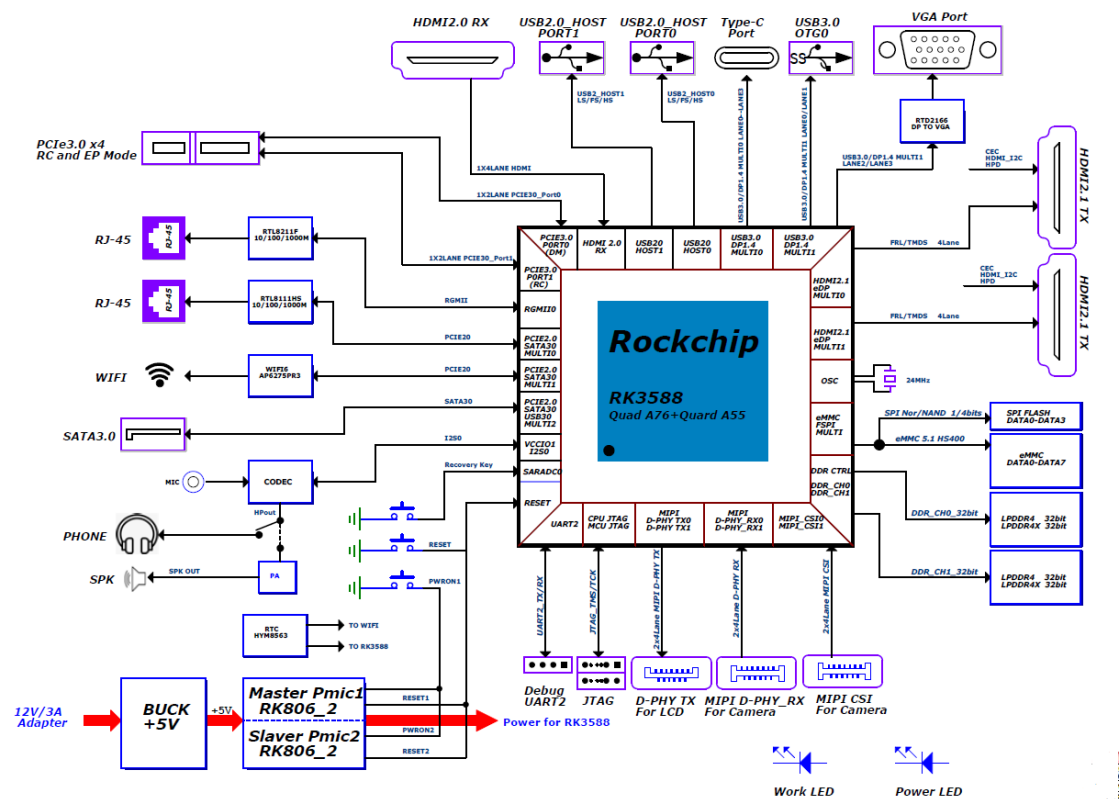




No.	Name	Description
1	Antenna	BT Antenna
2	Type-C	DEBUG
3	Mini USB	UART to USB
4	MIPI CSI	*1
5	MIPI D/C PHY	*1
6	JTAG1	MCU JTAG
7	JTAG2	CPU JTAG
8	Type-C	OTG
9	USB3.0	*1
10	USB2.0	*1
11	HDMI	HDMI OUT * 2
12	HDMI	HDMI IN * 1
13	FAN_POWER	*1 (12V)
14	DC IN	12V/2A
15	Power Switch	*1
16	SATA Power	*1
17	Key Array	*6 (V+/V-/MENU/RECOVERY/POWER/RESET)

18	PCIe	*1
19	SATA	*2
20	3.5mm Slot	*1 (Earphone)
21	RJ45	*2 (1000M)
22	MIPI CSI	*1
23	VGA	*1
24	MIPI DSI	*1
25	Antenna	WIFI Antenna
26	SPEAKER	*1
27	SPEAKER	*1
28	PMIC1 Power Test	*1
29	PMIC2 Power Test	*1

3. Block Diagram



4.FEATURES

CHIPSET		Rockchip RK3588
MARKET AREA		Global
Processor	OS	Android 12.0/Linux
	CPU	Quad-core Cortex-A76 and Quad-core Cortex-A55
	GPU	Mali-G610 MP4 GPU
	LPDDR4	4GB (2/8/16/32GB optional)
	EMMC FLASH	16GB (8/32/64/128/256G Optional)
NETWO RK	Ethernet	RJ45*2, 10/100/1000M
	WiFi	WIFI/802.11.AX, MIMO
	Bluetooth	BT5.0
Adapter		DC12V / 2A
Dimension		180mm * 180mm
Weight		160g
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.

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)②
- 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

- a.Relative humidity: $\leq 90\%$.
- b. Operation temperature: 0~ 60℃
- c.Do not squeeze、 distort or disassemble the PC.
- d.Keep the Board away from static electricity .
- e.Keep the Board away from water and other liquid.
- f.Don't use long connect wires which may affect performance and image quality.