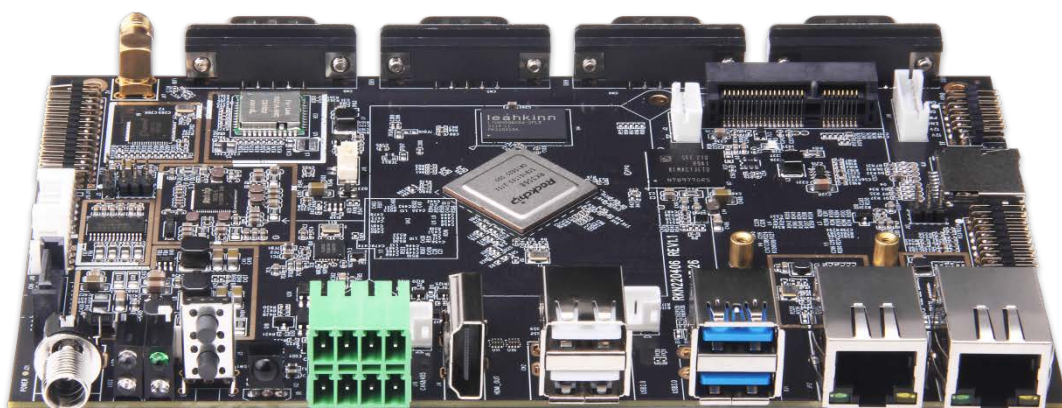


深圳金亚太科技有限公司

Shenzhen Geniatech Co.,Ltd.

SPECIFICATION

MODEL:DS-3568



APPROVED BY GENIATECH		
PREPARED BY 编写	CHECKED BY 审核	APPROVED BY 批准

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Revision History

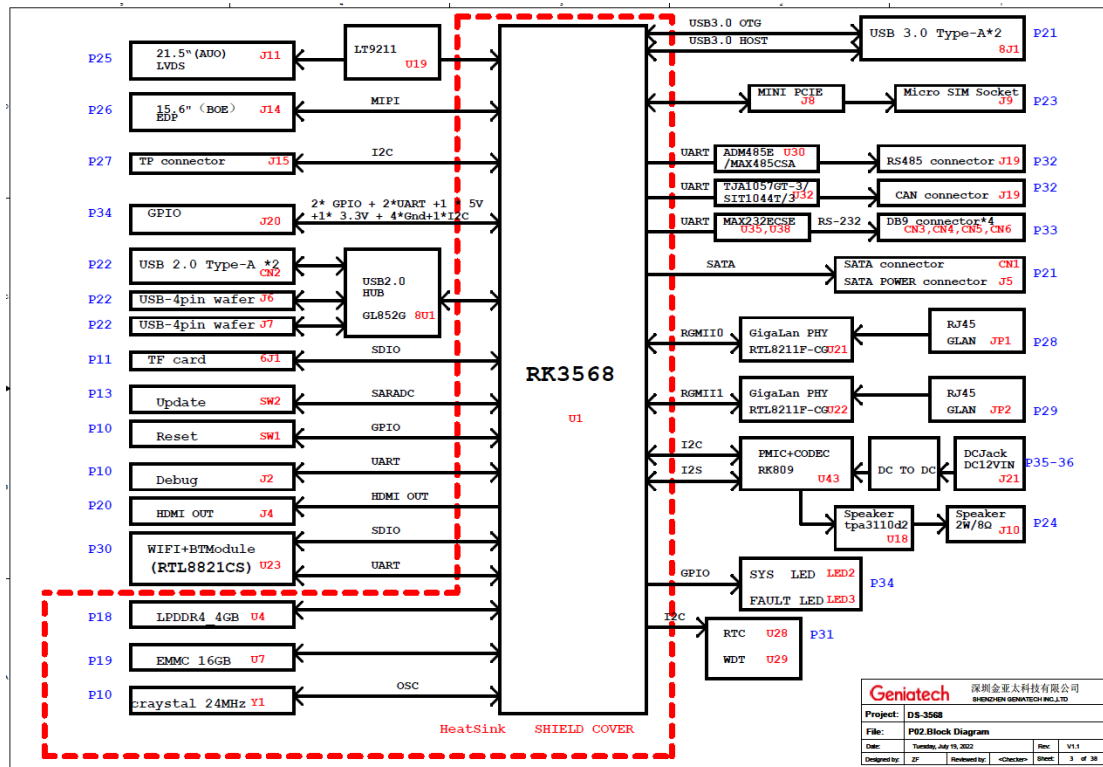
VERSION	DATE	BOARD ID	PAGE	DESCRIPTION	AUTHOR
V1.0	2022/5/30	DS-3568	6		
V1.1	2022/7/28	DS-3568	7		
V1.2	2022/10/29	DS-3568	7		

1. GENERAL DESCRIPTION

DS3568 is an Android Customized Board with below new features:

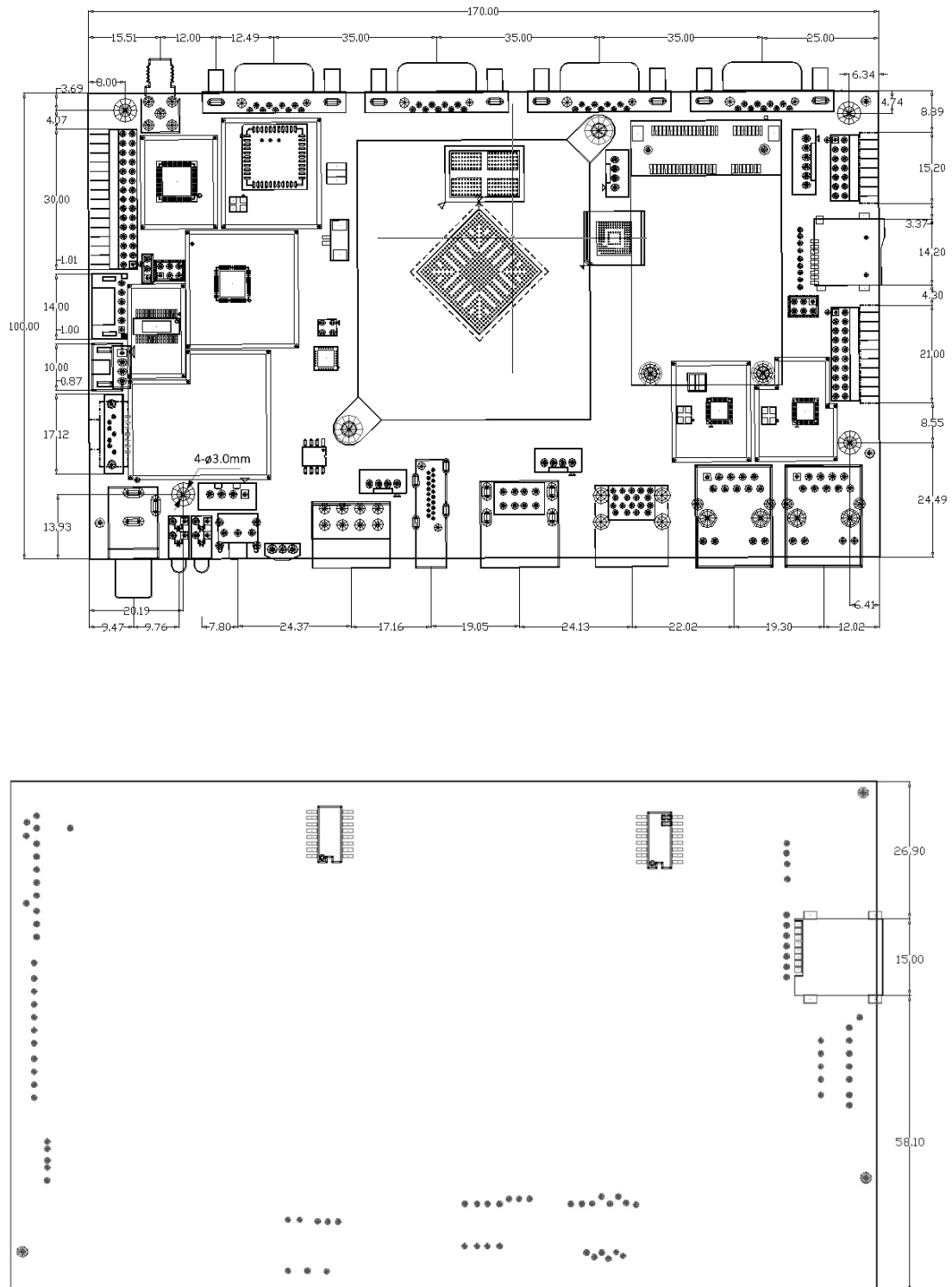
- (I) Quad core ARM Cortex-A55 CPU up to @ 2.0GHz
- (II) ARM Mali-G52 GPU, Support OpenGL ES1.1/2.0/3.2, OpenCL2.0 and Vulkan 1.1
- (III) NPU: Neural network acceleration engine with processing performance up to 0.8 TOPS
- (IV) Support Android 11.0 / Linux Debian/Ubuntu OS
- (V) Support 2GB/4GB/8GB LPDDR4, 8~128GB eMMC, External expansion TF/SATA3.0/USB storage
- (VI) Dual Ethernet 10/100/1000M
- (VII) IEEE 802.11b/g/n/ac (2.4G&5G) +BT4.2 (BT5.0 optional)
- (VIII) Support Mini PCIE LTE(Modules such as Quectel / Fibocom)
- (IX) 1 * HDMI Out, 1 * LVDS, 1 * eDP, support multi-screen simultaneous display, multi-screen different display, multi-screen rotation splicing, multi-channel video source simultaneous decoding, etc. Display method
- (X) Support 4 * RS232(DB9) + 1 * RS485 + 1 * Can + 2 * GPIO industrial control bus
- (XI) 2 * USB3.0 + 4 * USB2.0 (Two built-in)
- (XII) Support hardware WDT & RTC + 1*SATA3.0 + 1*Speaker (Max: 2*5W8Ω)
- (XIII) Support USB and I2C TP
- (XIV) Support wide voltage 9~24V power input, standard EMC and ESD protection design
- (XV) Specially designed for smart express cabinet, smart commercial display, smart vending machine, digital signage, smart home, etc.

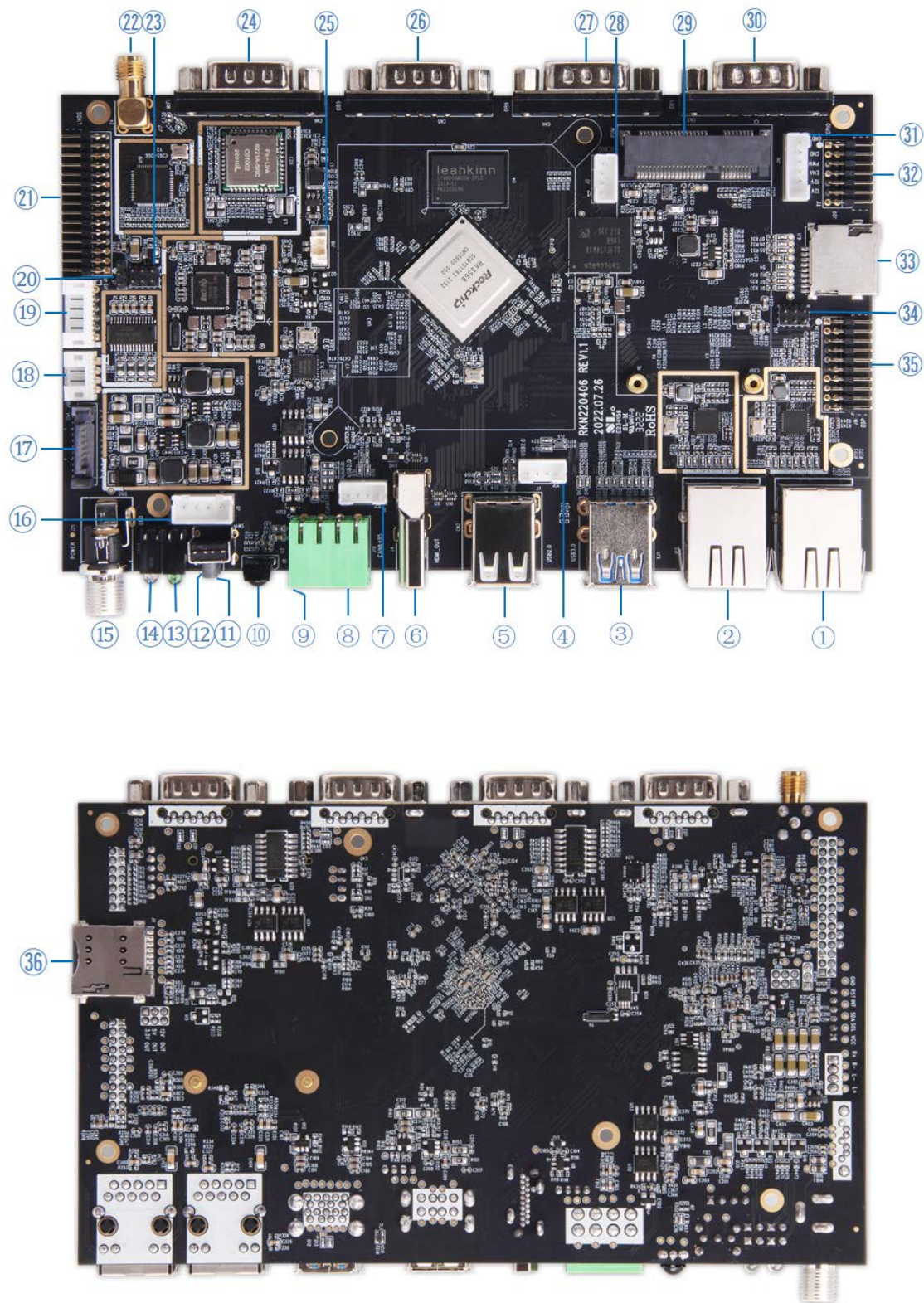
PCBA block diagram



2. PRODUCT OVERVIEW

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





No.	Name	Description
1	LAN-1	1 * RJ45(10/100/1000M)
2	LAN-2	1 * RJ45(10/100/1000M)
3	USB3.0	1 * (2*USB3.0-Type A)
4	USB2.0-1	1 * 4Pin 2.0mm
5	USB2.0-(2~3)	1 * (2*USB2.0-Type A)
6	HDMI OUT	1 * HDMI
7	USB2.0-4	1 * 4Pin 2.0mm
8	RS485 (UP)	1 * (15EDGRV-3P 3.81mm)
9	CAN (Down)	1 * (15EDGRV-4P 3.81mm)
10	IR	1 * IR
11	Update (Up)	1 * Switch
12	Reset (Down)	1 * Switch
13	Fault LED	2 * LED(Red/Blues)
14	Power LED	2 * LED(Red/Green)
15	DC In	1 * (DC-025MT/Φ5.5mm / φ2.1mm)
16	SATA Power	1 * 4Pin 2.54mm
17	SATA3.0	1 * SATA3.0
18	Speaker	1 * 4Pin 2.0mm
19	I2C(TP)	1 * 6Pin 2.0mm
20	LCD Type Options	1 * 3Pin 2.0mm
21	LVDS	1 * (2x15Pin 2.0mm)
22	WIFI/BT ANT	1 * SMA
23	LVDS Voltage	1 * (3x2Pin 2.0mm)
24	RS232-1	1 * DB9
25	RTC Battery prot	1 * 2Pin 1.27mm
26	RS232-2	1 * DB9
27	RS232-3	1 * DB9
28	Debug	1 * 4Pin 2.0mm
29	LTE	1 * Mini PCIE
30	RS232-4	1 * DB9
31	Backlight	1 * 6Pin 2.0mm
32	GPIO	1 * (2x7Pin 2.0mm)
33	Micro SD	1 * Micro SD
34	eDP Voltage	1 * (3x2Pin 2.0mm)
35	eDP	1 * (2x10Pin 2.0mm)
36	Micro SIM	1* Micro SIM

3.FEATURES

CHIPSET	Rockchip RK3568	
MARKET AREA	Global	
OSD LANGUAGE	English/Chinese (multi language OSD)	
Processor	OS	Android 11.0 / Linux Debian
	CPU	Quad-core ARM Cortex-A55 up to @2.0GHz
	GPU	ARM Mali-G52 GPU, support OpenGL ES1.1/2.0/3.2, OpenCL2.0 and Vulkan 1.1. etc.
	NPU	Neural network acceleration engine with processing performance up to 0.8 TOPS
	LPDDR4	4GB (2G/8G Optional)
	EMMC FLASH	16GB (8~128G Optional)
NETWORK	Ethernet	2 * RJ45 (10/100/1000M)
	WiFi	IEEE 802.11b/g/n/ac
	Bluetooth	BT4.2 (Optional 5.0)
	3G/4G	1 * Mini PCIE (Optional)
Interface	HDMI OUT	1 * HDMI
	RJ45	2 * RJ45(LED)
	RS232	4 * DB9
	RS485	1 * 3Pin3.81mm
	Can bus	1 * 4Pin3.81mm
	GPIO	1 * 2x7Pin2.0mm 90°
	LVDS	1 * 2x15Pin2.0mm 90°
	eDP	1 * 2x10Pin2.0mm 90°
	Back light	1 * 6Pin2.0mm
	USB3.0	2 * USB3.0 Type A
	USB2.0	2 * USB2.0 Type A +2 * 4PIN2.0mm
	TP(I2C)	1 * 6Pin2.0mm
	SATA3.0	1 * SATA3.0
	SATA Power	1 * 4Pin2.54mm
	Speaker	1 * 4Pin2.0mm
	SIM	1 * Micro Sim + 1 * Mini PCIE (LTE)
	SD	1 * Micro SD
	Fault LED	2 * LED(Red/Blues)
	Working LED	2 * LED(Red/green)
	WIFI+BT ANT	1 * SMA
	IR	1 * IR
	Update	1 * Switch
	Reset	1 * Switch

	DC IN	1 * DC IN
Adapter	DC 9~24V (Φ5.5mm / φ2.1mm)	
Accessory	1 * Adapter (AC 100 ~ 240V 50/60Hz)	
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	MPEG-1	MP up to 1920x1088@60fps
	MPEG-2	MP up to 1920x1088@60fps
	MPEG-4	SP@L0~5 up to 1920x1088@60fps
	H.263	Up to 720x576@60fps
	H.264	AVC/MVC@L5.1 up to 4096x2304@60fps
	H.265	HEVC/MVC@L5.1 up to 4096x2304@60fps
	VC1	AP@L0~3 up to 1920x1088@60fps
	VP9	Up to 4096x2304@60fps
	VP8	Up to 1920x1088@60fps
Video Encoder	H.264/AVC	BP/MP/HP@L4.2up to 1920x1080@100fps
	H.265/HEVC	MP@L4.1 up to 1920x1080@100fps (4096x4096@10fps with TILE)
	YUV/RGB	Support YUV/RGB video source with rotation and mirror
Picture	Jpg, png	
Audio	MP3,AAC,WMA, RM, FLAC, Ogg	

5.Precautions for use

1. Relative humidity: 10% ~ 95% .
2. Storage temperature: -20 ~ 85℃ (if Extended commercial -40~100℃)
3. Operation temperature: commercial (0 °C ~60 °C)/Extended commercial (-40 °C ~ 85℃ the SOC is RK3568J)
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.