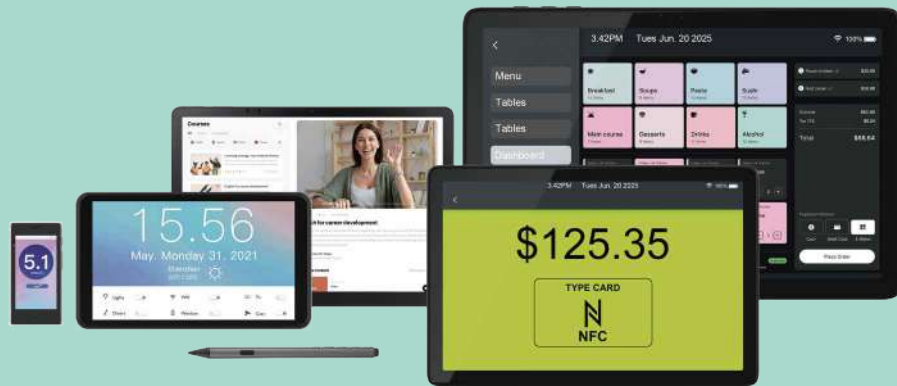


Embedded Touch Screen

ODM Manufacturing Solutions



Smart Devices Service

Where off-the-shelf falls short, our customized solutions deliver.

TOOLING Customization

ID
MD
Injection moulding

HARDWARE Customization

Schematic
Stackup
Layout
PCB sampling & SMT
HW debug

SOFTWARE Customization

OS
Driver
App implement
MDM integration

ACCESSORIES Customization

Protection cover/case/film
Charging station/cabinet
Active stylus
All kinds of cable/adaptor
Bracket/cradle/wall mount

Smart Devices Solutions

Where off-the-shelf falls short, our customized solutions deliver.

01 Home Automation

- Wall-mounted Tablet with POE
- Wall-mounted Panel Gateway
- Smart Gateway Hub with Cellular Network
- Tablet PC for Smart Air Conditioner
- Meeting Conference Schedule Display
- Voice-Controlled Kitchen Cabinet Touch Panel

02 Embedded HMI

- Tablet PC Open Frame for Smart Coffee Machine
- Android Touch Panel for Smart Cooker Panel
- Digital Signage for Vending Machine
- 5 inch Android Tab for e-Bikes
- Smart Android Touch Screen for Home Gym

03 Smart Healthcare

- Smart Device for Skin Care
- Blood Glucose Meter Dongle for Medical
- Senior Care Tablet PC
- Therapeutic Device for Kids
- Smart Display with AR for Kids
- Companion Robot with OpenAI for the Elderly
- Video Call Device for the Hearing Impaired

04 Car Infotainment

- Professional OBD Tablet PC for Repair Shop
- On-Board Diagnostics Tablet PC for Drivers
- High Accuracy Pro Android Portable Navigation
- Car Rear Seat Entertainment System

05 POS

- Smart Tablet Menu
- Kitchen Display with NFC
- Tablet PC for Feedback Management
- Smart Device for Payment Terminal

06 Multi-media Device

- Smart Audio Guide
- Portable Translation Equipment
- Digital Photo Frame

Home Automation Wall Panels

Android POE RS485



Embedded Screen Home Appliance

Android/Linux
No Battery
Serial Port
MDM Software



POS Solutions

Menu Commercial
SoftPos
Charging Rack
Tap to Pay
Restaurant and Shops



Healthcare Solutions

Android/Linux/Windows
3-inch Screen
USB-C x 2
LTE Connection



Car Infotainment

Navigator
Payment Terminal
car-hailing



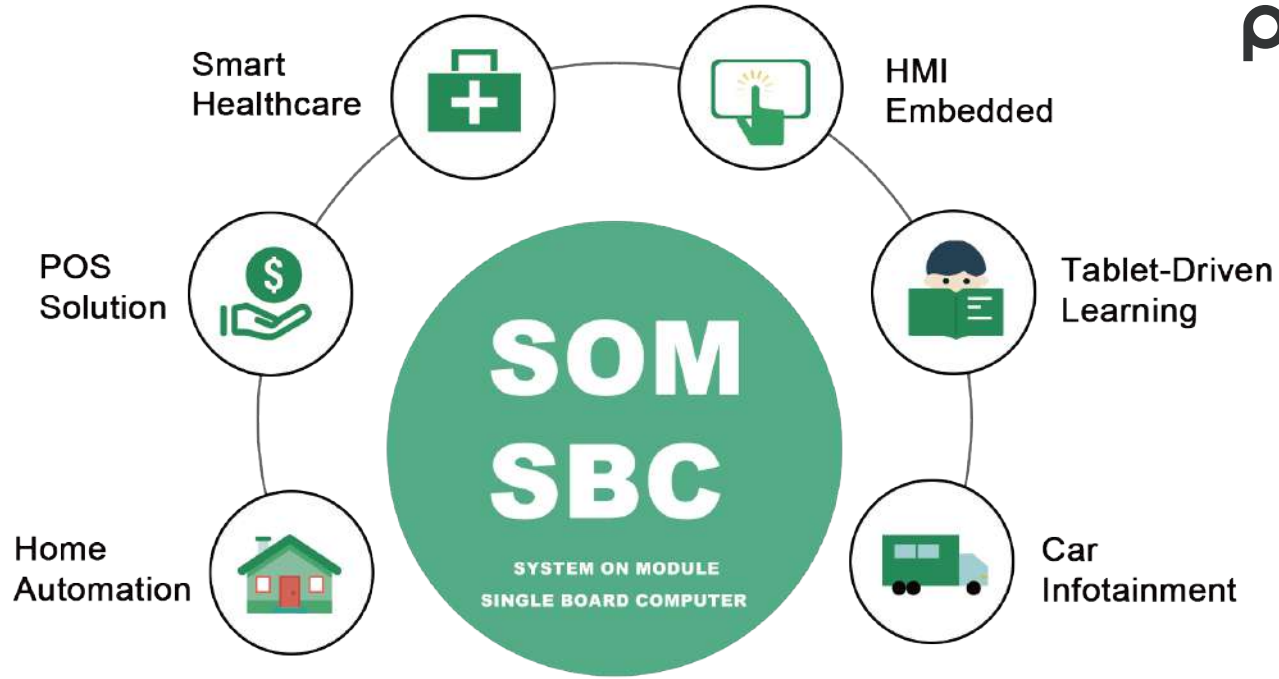
Multi-media Device

NFC RFID WiFi
BT FM GPS
Docking Charging



SOM & SBC

ROCKCHIP MEDIATEK SOLUTIONS



Interface

MIPI, eDP, LVDS, VB1, DP, HDMI, BT.1120

PCIe 3.0, GMAC, SDIO 3.0, USB3.0, SATA3.0, RJ45 RS232, RS485

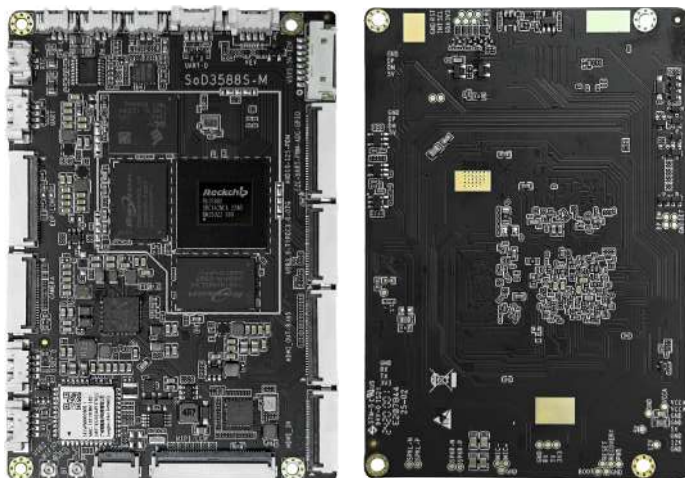
SPI, UART, I2C, ADC, PWM, ADMMMC, GPIO

SOD

Rockchip

SoD3588S-M

RK3588S



Features

Built-in motherboard, external interface board can be designed flexibly according to product requirements:

1. The power supply scheme of the motherboard, DC power supply voltage wide range, whether the battery, single and double battery, fast charging, etc., can be designed flexibly on the interface board according to product requirements
2. Audio amplifier and voice mic can be designed on the interface board.
3. A wealth of UART / PWM / ADC / RS485 / I2C / GPIO interfaces, flexible expansion of external devices on the interface board
4. Standard WiFi6/Ethernet/HDMI output/HDMI input/mipi screen/EDP screen/Type-C 3.0 DP output/USB3.0/NFC and other key features

SOC

RK3588S, 4 x Cortex-A76 + 4 x Cortex-A55 2.4GHz, 8nm
GPU ARM Mali-G610 MP4 Quad-Core
OpenGL ES3.2/OpenCL 2.2/Vulkan1.1,450 GFLOPS
6.0TOPS NPU, Support INT4/INT8/INT16

OS

Android/Linux

RAM

EMMC5.1 64G/128G/256G

ROM

EMMC5.1 64G/128G/256G

Media

Decode:

8K 60fps H.265NP9/AVS2
8K 30fps H.264AVC/MVC
4K 60fps AV1
1080P 60fps MPEG-2/-1/C-1P8

Encoded:

8K 30fps encoding,
Support H.265/H.264 Up to 32-channel
1080P 30fps decoding and 16-channel
1080P 30fps encoding

Display

1 x MIPI-DSI (1920x1200@60fps)
1 x eDP1.3 (4K@60fps)
1 x HDMI2.1 (8K@60fps or 4K@120fps, either HDMI output or eDP display)
1 x DP1.4 (4K@60fps, multiplexed with Type-C USB 3.0)

LTE

External 4G module

Ethernet

1000M Ethernet x 1

Connectivity

WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.0

USB

1 x Type-C,USB3.2 gen1, with OTG & DP-out (30Pin-FPC-0.5mm)
1 x USB3.0 /SATA3.0 (30Pin-FPC-0.5mm)
2 x USB Host 2.0(2 x 4Pin-PH1.25)

Audio

Speaker x 2
Microphone x 1

Interface

2 x UART, one for debug (4Pin-PH1.25)
2 x Speaker Interface, 10W (2Pin-PH1.25)
1 x Mic connector (2Pin-PH1.25)
1 x Key connector (4Pin-PH1.25)
1 x TP-CoF/NFC connector (10Pin-FPC-0.5mm)
1 x RTC Battery connector (2Pin-PH1.25)

Input Power

VSYS-4V+5V+12V Power Supply (Interface board can be flexibly designed according to the demand for power supply solutions, DC supply voltage wide voltage, whether the battery, single and double battery, fast charging, etc.)

PCB

Size: 63 x 93 x 1.2mm
Process: 8-layers HDI-2 Immersion Gold

Environment

Operating temperature -20°C ~ 60°C

SOM

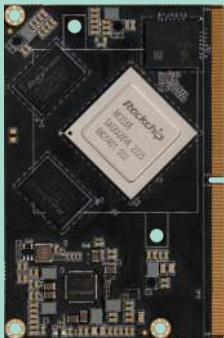
Rockchip

SOM58	RK3588
SOM58H	RK3588
SOM58S	RK3588S
SOM3576	RK3576
SOM68	RK3568
SOM66	RK3566

Mediatek

SOM81	MT8781
SOM78	MT8788
SOM76	MT8768

ROCKCHIP SOM SOLUTIONS



SOM58

RK3588

4 x Cortex-A76 +
4 x Cortex-A55 2.4GHz
8nm
6.0TOPS NPU
Support INT4/INT8/INT16



SOM58H

RK3588

4 x Cortex-A76 +
4 x Cortex-A55 2.4GHz
8nm
6.0TOPS NPU
Support INT4/INT8/INT16



SOM58S

RK3588S

4 x Cortex-A76 +
4 x Cortex-A55 2.4GHz
8nm
6.0TOPS NPU
Support INT4/INT8/INT16

SOM58		SOM58H		SOM58S	
SOC	RK3588, 4 x Cortex-A76 + 4 x Cortex-A55 2.4GHz, 8nm GPU ARM Mali-G610 MP4 Quad-Core OpenCL ES3.2/OpenCL 2.2/Vulkan1.1,450 GFLOPS 6.0TOPS NPU, Support INT4/INT8/INT16	RK3588, 4 x Cortex-A76 + 4 x Cortex-A55 2.4GHz, 8nm GPU ARM Mali-G610 MP4 Quad-Core OpenCL ES3.2/OpenCL 2.2/Vulkan1.1,450 GFLOPS 6.0TOPS NPU, Support INT4/INT8/INT16		RK3588S, 4 x Cortex-A76 + 4 x Cortex-A55 2.4GHz, 8nm GPU ARM Mali-G610 MP4 Quad-Core OpenCL ES3.2/OpenCL 2.2/Vulkan1.1,450 GFLOPS 6.0TOPS NPU, Support INT4/INT8/INT16	
OS	Android	Android/Linux		Android/Linux	
RAM + ROM	LPDDR4 4GB/8GB/16GB/32GB EMMC5.1 64G/128G/256G	LPDDR4 4GB/8GB/16GB/32GB EMMC5.1 64G/128G/256G		LPDDR4 4G/8G/16G EMMC5.1 64G/128G/256G	
Media	Decode: 8K@60fpsH.265/VP9/AVS2 8K@30fpsH.264 AVC/MVC 4K@60fpsAV1 1080P@60fps MPEG-2/-1/VC-1/VP8 Encoded: 8K@30fps encoding, support H.265/H.264 Up to 32 channels 1080P@30fps decoding and 16channel 1080P@30fps encoding	Decode: 8K 60fps H.265/VP9/AVS2 8K 30fps H.264 AVC/MVC 4K 60fps AV1 1080P 60fps MPEG-2/-1/VC-1/VP8 Encoded: 8K 30fps encoding, Support H.265/H.264 Up to 32 channels 1080P 30fps decoding and 16 channels 1080P 30fps encoding		Decode: 8K 60fps H.265NP9/AVS2 8K 30fps H.264AVC/MVC 4K 60fps AV1 1080P 60fps MPEG-2/-1/C-1P8 Encoded: 8K 30fps encoding, Support H.265/H.264 Up to 32-channel 1080P 30fps decoding and 16-channel 1080P 30fps encoding	
Display	HDMI out, HDMI2.1 up to 8K@60Hz HDMI in, HDMI 2.0 RX PHY,4-lanes, up to 4K@60Hz eDP1.4, 4Lane, 4K@60Hz DP1.4 output, 4-Lane x 2 2 x 4-Lane or 1 x 8-Lane MIPI-DSI, LCD Interface	2 x HDMI2.1 (8K@60fps or 4K@120fps, HDMI and eDP multiplexed) 2 x MIPI-DSI (4K@60fps) 2 x DP1.4 (8K@30fps, multiplexed with USB 3.0) 1 x BT.1120 (1080P@60fps) 1 x HDMI-IN (4K@60fps), supports HDCP 2.3 1 x MIPI CSI (4 Lane) or 2 x MIPI CSI (2 Lane) 2 x MIPI DC (4-channel DPHY v2.0 or 3-channel CPHY V1.1) 1 x DVP camera interface (up to 150MHz input data) Supports multiple 8K video outputs and 4K video inputs, Up to seven screens of different displays		1 x HDMI2.1 (8K@60fps or 4K@120fps, HDMI multiplexed with eDP) 2 x MIPI-DSI (4K@60fps) 1 x xDP1.4 (8K@30fps, multiplexed with USB3.0) 1 x MIPI/CSI (4 Lane) or 2xMIPI CS2 Lane) 1 x DVP camera interface (up to 150MH input data) Supports multiple 8K video outputs and 4K video inputs, Up to 3 screens with different displays	
Ethernet	1000M Ethernet x 2 (The carrier board)	1000M Ethernet x 2 (The carrier board)		1000M Ethernet (The carrier board)	
Connectivity	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.0, 2T2R (The carrier board)	Integrated PCIe3.0/GMAC/SDIO3.0/USB3.0, Expandable Multi-Gigabit Ethernet WiFi6/Bluetooth, 5G/4G LTE		Integrated PCIe3.0/GMAC/SDIO3.0/USB3.0, Expandable multi-channel dry megabit Ethernet WiFi6/Bluetooth, 5G/4G LTE	
USB	USB 3.1 OTG x 2 USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 3/USB 2.0 Host x 2, OTG		USB OTG 3.1/2.0/Type C 2x USB Host 2.0	
Micro SD Card	Micro SD card up to 128GB (The carrier board)	Micro SD card up to 128GB (The carrier board)		Micro SD card up to 128GB (The carrier board)	
Audio	Can be customized	Can be customized		Can be customized	
Interface	PCIe3.0(2 x 2lanes,1 x 4lanes,4 x 1lanes) PCIe2.1(1 lanes) x 3 SATA3.0 x 3 4-lane Mipi-CSI UART1/i2C/SPI/PCM/PWM/ADC/SDMMC/GPIO	High-Speed Interfaces: PCIe3.0 (2 x 2lanes,1x4lanes,4x1lanes)/3 x PCIe2.1(1 lanes) SATA3.0 x 3 USB3.0 x 3/USB2.0 Host x 2, OTG Other Interfaces: 9 x I2C/10 x UART/5 x SPI/7 x ADC/16 x PWM / 1 x SDMMC/GPIO		High-Speed Interfaces: USB OTG 3.1/2.0/Typec 2x USB Host 2.0 SATA3/PCIe2.1 SATA3/PCIe2.1/USB3Host Other Interfaces: 9 x 12C/10 x UART/5 x SPI/7 x ADC/1 6 x PWM/1 X SDMMC/GPIO	
Input Power	The carrier board can be customized	The carrier board can be customized		The carrier board can be customized	
PCB	Size: 54 x 82 x 1.2mm Process: 8-layer HDI Immersion Gold Package:MXM3.0(314PIN-0.5mm)	Size: 54 x 78 x 1.2mm Process:8-layers HDI Immersion Gold Package:LCC+LGA (302Pin, 1.0mm)		Size: 50 x 60 x 1.2mm Process :8-layers HDI-2 Immersion Gold Package:LCC+LGA(246Pin, 1.0mm)	
Environment	Operating temperature -20°C ~ 60°C	Operating temperature -20°C ~60°C		Operating temperature -20°C ~ 60°C	

ROCKCHIP SOM SOLUTIONS



SOM3576

RK3576

4 x Cortex-A72 +
4 x Cortex-A53 2.4GHz
8nm
6.0TOPS NPU
Support INT4/INT8/INT16



SOM68

RK3568

4 x Cortex-A55 2.0GHz
22nm
ARM G52 2EE
1.0 TOPS NPU



SOM66

RK3566

4 x Cortex-A55 1.8GHz
22nm ARM G52 2EE
0.8 TOPS NPU

SOM3576		SOM68	SOM66
SOC	RK3576, 4 x Cortex-A72 + 4 x Cortex-A53 2.3GHz, 8nm GPU ARM Mali-G52 MC3 OpenCL ES3.2/OpenCL 2.0/Vulkan1.1 6.0TOPS NPU, INT4,INT8,INT16, float16, Bfloat16 and tf32 operation Supports deep learning framework: TensorFlow, Caffe, TFlite, Pytorch, Onnx NN, Android NN, etc.	RK3568, 4 x Cortex-A55, 2.0GHz, 22nm GPU ARM G52 2EE, 1 TOPS NPU	RK3568, 4 x Cortex-A55, 1.8G, 22nm GPU ARM G52 2EE, 0.8 TOPS NPU
OS	Android	Android/Linux	Android
RAM + ROM	LPDDR4 4G/6G/8G LPDDR5 4G/6G/8G/12G/16G EMMC5.1 64G/128G	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 32G/64G/128G	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 8GB/16G/32G/64G/128G
Media	Decoded: 4K@60fps H.264/AVC 8K@30fps or 4K@120fps 1080@60fps H264/MVC H.265/HEVC/VP9/AVS2/AV1 Encoded: Dual video encoders which support H.265 and H.264 H.264 and H.265 up to 4K@60fps Supports multi-stream encoding	4K 60fps H.265/H.264/VP9 decode 1080P 100fps H.265/H.264 codec	4K 60fps H.265/H.264/VP9 decode 1080P 100fps H.265/H.264 codec
Display	1 x HDMI2.1/eDP1.3 Combo TX, up to 4K@120Hz 1 x 4-Lane MIPI-DSI-2 TX with C/D-PHY up to 2560x1600@60hz 1 x DisplayPort 1.4@ 4K60/USB3.2 gen1x1 Combo TX 1 x E-Ink EPD (Electronic Paper Display) TX @ 2560x1920 1 x Parallel interface (RGB888) TX @ 1080P60 1 x MIPI CSI-2 with D-PHY (4x1, 2x2) 1 x MIPI CSI-2 with C/D-PHY (4x1) 1 x DVP 8/10/12/16-bit 16M Pixel ISP with HDR (up to 120dB)	MIPI, 2 x 4-Lane MIPI-DSI, 2560 x 1600@60fps EDP, 4-lane EDP1.3, 3000 x 2000@60fps Dual-LVDS, 1920 x 1080@60fps HDMI-out, HDMI2.0, 1080p@60fps, upto 4K@60fps 4-lane/2x2-lane, Camera ISP, 8MP@30fps HDR	MIPI, 4-Lane MIPI-DSI, 1920 x 1200@60fps EDP, 4-lane EDP1.3, 3000 x 2000@60fps Dual-LVDS, 1920 x 1080@60fps HDMI-out, HDMI2.0, 1080p@60fps, upto 4K@60fps 4-lane/2x2-lane, Camera ISP, 8MP@30fps HDR
Ethernet	1000M Ethernet x 2 (The carrier board)	1000M Ethernet x 2 (The carrier board)	1000M Ethernet x 1 (The carrier board)
Connectivity	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2 (The carrier board)	WiFi 802.11b/g/n or 802.11a/b/g/n/ac Bluetooth 4.2 or 5.0 GMACx1(10/100/1000M)	WiFi6 802.11a/b/g/n/ac, Bluetooth5.0
USB	USB3.1 OTG x 1 USB 3.0 x 1 USB2.0 x n (The carrier board)	USB3.0 HOST x 1 USB2.0 HOST x 3 (One port with OTG)	USB3.0 x 1 USB2.0 x 3(One port with OTG)
Micro SD Card	Micro SD card,up to 128GB (The carrier board)	Micro SD card, up to 128GB	Micro SD card,up to 128GB (The carrier board)
Audio	Can be customized	Speaker x 2 Headphone x 1 Microphone x 1 HDMI audio out	Can be customized
Interface	USB 3.2 Gen1 supports type-C AltMode with DP PCIe 2.1/SATA 3.0/USB 3.0 combo port PCIe 2.1/SATA 3.0 combo port UART/I2C/SPI/PCM/PWM/ADC/SDMMC/GPIO CAN FD x 2	SATA3.0/UART/SPI/PWM/I2C/ADC/PWR/RESET/3.3V etc.	4-lane/2x2-lane,Camera ISP,8MP@30fps HDR UART/SPI/PWM/I2C/ADC/KEY/3.3V etc
Input Power	The carrier board can be customized	LI-Battery Supply, 5V/12V Charger	The carrier board can be customized
PCB	Size: 45 x 55 x 1.0mm Process: 6-layer HDI Immersion Gold Package:LCC+LGA(246PIN-1.0mm)	PCB Size: 50 x 63 x 1.0mm Process:6-layers HDI Immersion Gold Package:LCC(210Pin, 1.0mm)	Size: 45 x 60 x 1.0mm Process: 6-layer HDI Immersion Gold Package:LCC134
Environment	Operating temperature -20°C ~ 60°C	Operating temperature -20°C ~ 60°C	Operating temperature -20°C ~ 60°C

MEDIATEK SOM SOLUTIONS



SOM81

MT8781

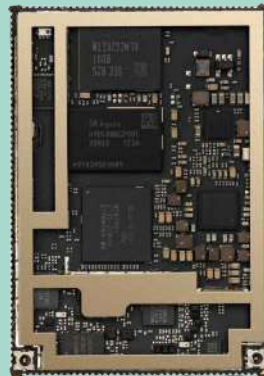
2 x Cortex-A76 2.2GHz +

6 x Cortex-A55 2.0GHz

6nm

GPU ARM@Mali-G57 MC2, 3D Graphics

OpenGL ES3.2/OpenCL 2.x/Vulkan1.0



SOM78

MT8788

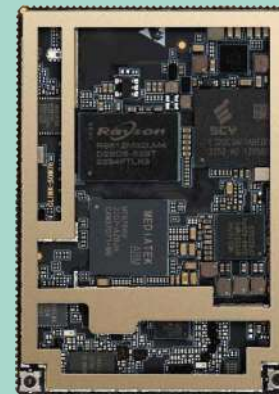
4 x Cortex-A73 +

4 x Cortex-A53 2.0GHz

12nm

GPU ARM@Mali-G72 MP3 800MHz, 3D Graphics

OpenGL ES3.2/OpenCL 2.x/Vulkan1.0



SOM76

MT8768

4 x Cortex-A53 2.0GHz +

4 x Cortex-A53 1.5GHz

12nm

GPU IMG GE8320@650MHz

MT8766

4 x Cortex-A53 2.0GHz

12nm

GPU IMG GE8300@660MHz

SOM81		SOM78		SOM76	
SOC	MT8781, 2 x A76 2.2GHz + 6 x A55, 2.0GHz,6nm GPU ARM@Mali-G57 MC2, 3D Graphics OpenGL ES3.2/OpenCL 2.x/Vulkan1.0	MT8788, 4 x A73 + 4 x A53, 2.0GHz,12nm GPU ARM@Mali-G72 MP3 800MHz, 3D Graphics OpenGL ES3.2/OpenCL 2.x/Vulkan1.0	MT8768, 4 x A53 2.0GHz + 4 x A53, 1.5GHz,12nm GPU IMG GE8320@650MHz MT8766, 4 x A53 2.0GHz,12nm GPU IMG GE8300@660MHz		
OS	Android	Android	Android		
RAM + ROM	UMCP 6G+128G	LPDDR4 4G/6G/8G EMMC5.1 64G/128G	LPDDR4 4G/6G EMMC5.1 64G/128G		
Media	Decode:2K 30fps/40Mbps, H.264/H.265/VP9 Encoded:2K 30fps/40Mbps, H.264/H.265	Decode:1080P 30fps/40Mbps, H.264/H.265/MP4 Encoded:1080P 30fps/40Mbps, H.264	Decode:1080P 30fps H.264/H.265/MP4 Encoded:1080P 30fps H.264		
Display	MIPI, 4-Lane MIPI-DSI, up to 1200 x 2000@90fps or 1600 x 2560@60fps	MIPI, 4-Lane MIPI-DSI, 2400 x 1080@60fps MIPI-DPI, 1080@60fps	MIPI, 4-Lane MIPI-DSI 1920 x 1200@60fps		
LTE	TDD/FDD, LTE Cat14, L+L DSDS	TDD/FDD, LTE Cat7, L+L DSDS	TDD/FDD, LTE Cat7, L+L DSDS		
WCDMA	WCDMA	WCDMA	WCDMA		
GSM	GSM	GSM	GSM		
Ethernet	/	/	/		
Connectivity	MT6631 Wifi,02.11a/b/g/n/ac Bluetooth 5.2 GPS+Glonass+Beidou+Galileo FM Receiver	WiFi8 02.11a/b/g/n/ac Bluetooth 5.0 GPS+Glonass+Beidou+Galileo FM Receiver RAM	WiFi6 02.11a/b/g/n/ac Bluetooth 5.0 GPS+Glonass+Beidou+Galileo FM Receiver		
USB	USB2.0 OTG	USB2.0 OTG	USB2.0 OTG		
Micro SD Card	/	/	/		
Audio	/	/	/		
Interface	I2C/UART/SPI/ADC/PWM/SDMMC/GPIO	I2C/UART/SPI/ADC/PWM/SDMMC/GPIO	/		
Input Power	Li-Battery Supply, PD Charger, 15W	Li-Battery Supply,5V/12V Charger	Li-Battery Supply,5V/12V Charger		
PCB	Size: 41.5 x 48 x 1.0mm Process:10-layers HDI-2 Immersion Gold Package:LCC(202Pin,1.0mm)+LGA	Size: 41.5 x 59 x 1.0mm Process:10-layers HDI-2 Immersion Gold Package:LCC(188Pin,1.0mm)	Size: 41.5 x 57.5 x 1.0mm Process:10-layers HDI-2 Immersion Gold Package:LCC (163Pin, 1.0mm)		
Environment	Operating temperature'-20°C ~60°C	Operating temperature'-20°C ~ 60°C	Operating temperature -20°C ~ 60°C		

SOM + CARRIER BOARD

Rockchip

V58

GF3588S

T68S

RK3588

RK3588S

RK3568

Mediatek

W68

MT8788

ROCKCHIP & MEDIATEK SOM CARRIER BOARD SOLUTIONS



V58

RK3588

4 x Cortex-A76 +
4 x Cortex-A55 2.4GHz
8nm
6.0TOPS NPU
Support INT4/INT8/INT16



GF3588S

RK3588S

4 x Cortex-A76 +
4 x Cortex-A55 2.4GHz
8nm
GPU ARM Mali-G610 MP4 Quad-Core
OpenGL ES3.2/OpenCL 2.2/Vulkan1.1,450 GFLOPS



T68S

RK3568

4 x Cortex-A55 2.0GHz
22nm
ARM G52 2EE
1.0 TOPS NPU



W68

MT8788

4 x Cortex-A73 +
4 x Cortex-A53 3.0GHz
12nm
GPU ARM Mali-G72 MP3 800MHz, 3D Graphics
OpenGL ES3.2/OpenCL 2.x/Vulkan1.0



	V58	GF3588S	T68S	W68
SOC	RK3588, 4 x Cortex-A76 + 4 x Cortex-A55 2.4GHz, 8nm GPU ARM Mali-G610 MP4 Quad-Core OpenCL ES3.2/OpenCL 2.2/Vulkan1.1, 450 GFLOPS 6.0TOPS NPU, Support INT4/INT8/INT16	RK3588S, 4 x A76 + 4 x A55, 8nm, 2.4GHz GPU ARM Mali-G610 MP4 Quad-Core OpenCL ES3.2/OpenCL 2.2/Vulkan1.1, 450 GFLOPS 6.0TOPS NPU, Support INT4/INT8/INT16	RK3588, 4 x Cortex-A55, 2.0GHz, 22nm GPU ARM G52 2EE, 1 TOPS NPU	MT8788, 4 x A73 + 4 x A53, .0GHz, 12nm GPU ARM Mali-G72 MP3 800MHz, 3D Graphics OpenCL ES3.2/OpenCL 2.x/Vulkan1.0
OS	Android	Android	Android/Linux	Android
RAM + ROM	LPDDR4 4GB/8GB/16GB/32GB EMMC5.1 64G/128G	LPDDR4 2G/4G/8G EMMC5.1 64G/128G	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 32G/64G/	EMMC5.1 64G/128G
Media	Decode: 8K@60fpsH.265/VP9/AVS2 8K@30fpsH.264 AVC/MVC 4K@60fpsAV1 1080P@60fps MPEG-2/-1/VC-1/VP8 Encoded: 8K@30fps encoding, support H.265/H.264 Up to 32 channels 1080P@30fps decoding and 16-channel 1080P@30fps encoding	Decode: 8K@60fpsH.265/VP9/AVS2 8K@30fpsH.264 AVC/MVC 4K@60fpsAV1 1080P@60fps MPEG-2/-1/VC-1/VP8 Encoded: 8K@30fps encoding, support H.265/H.264 Up to 32 channels 1080P@30fps decoding and 16-channel 1080P@30fps encoding	4K 60fps H.265/H.264/VP9 decode 1080P 100fps H.265/H.264 codec	Decode:1080P@30fps/40Mbps, H.264/H.265/MP4 Encoded:1080P@30fps/40Mbps, H.264
Display	Supports up to 5 screens with different displays, tactile sensations and sounds. HDMI2.1 out or HDMI convert to VbyOne 4K@60fps DP1.4 convert to Dual-LVDS 1080@60fps DP1.4 convert to Dual-LVDS 1080@60fps 4-Lane MIPI-DSI convert to Dual-LVDS 1080@60fps 4-Lane MIPI-DSI convert to Dual-LVDS 1080@60fps	EDP, 4-lane EDP1.4, 4K@60fps, HDCP1.3 Dual-LVDS, 1080P@60fps HDMI-IN, 1080P@60fps	MIPI, 2 x 4-lane MIPI-DSI, 1920x1200@60fps EDP, 4-lane EDP1.3, 3000x2000@60fps Dual-LVDS, 1080P@60fps HDMI-out, HDMI2.0, 1080p@60fps, upto 4K@60fps Camera, 4-lane/2 x 2-lane, Camera ISP, 8MP@30fps HDR	MIPI, 4-Lane MIPI-DSI, 2400 x 1080@60fps
LTE/WCDMA/GSM	/	/	/	TDD/FDD, LTE Cat7; WCDMA; GSM
Ethernet	100Mbps Ethernet	/	1000M Ethernet (supports PoE with add-on PoE HAT)	/
Connectivity	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.3, 2T2R	WiFi6/BT5.3,1T1R	WiFi5,802.11a/b/g/n/ac, Bluetooth 5.0	Wifi,802.11a/b/g/n/ac Bluetooth 5.0 GPS+Glonass+Beidou+Galileo FM Receiver
USB	USB 2.0 x 5 for USB-TP USB 2.0 (with OTG) x 1 for update USB 2.0 x 1 for 4G module USB 2.0 x 3 host	USB 2.0-C x 1,with OTG USB3.0-A x 2 USB 2.0-PH2.0 x 3 (For USB-TP/USB-Camera)	USB 3.0 HOST x 1 USB 2.0 HOST x 3 (One port with OTG)	/
Micro SD Card	/	/	Micro SD card, up to 128GB	Micro SD card, up to 128GB
Audio	Speaker: 10 speaker total 10W x 2 Stereo 3W x 2 Stereo 3W x 2 Stereo 3W x 2 Stereo 3W x 2 Stereo	stereo speaker 10W x 2 Mic * 1	speaker 2 x 10W headphone x 1 Microphone x 1 HDMI audio out	Camera: 4-Lane MIPI CSI x 2,MIPI转AHD Camera ISP,32MP@30fps,AE/AWB/AF, PIP(16MP+16MP)@30fps
Interface	2 x RS485 for motor control Key Interface	UART x 2 GPIO TP-COF KEY	SATA3.0/PCIE3.0/RS485/GPIO etc.	Other Interfaces Can-bus
Input Power	DC-12V via 8pin-PH2.54	12V Power Supply	DC 12V@2A or PoE power supply	Li-Battery Supply,12V Charger
PCB	Size: 180 x 180 x 1.6mm Process: 4-layer Immersion Gold	Size: 82 x 130x 1.6mm Process:4-layers Immersion Gold Package:SoM +Carrier Board	Size: 80 x 142 x 1.6mm Package:SoM+Carrier board	Size: 54 x 82 x 1.2mm Process:8-layers HDI Immersion Gold Package:MXM3.0 (314 PIN, 0.5mm pitch)
Environment	Operating temperature -20°C ~ 60°C	Operating temperature-20°C ~ 60°C	Operating temperature-20°C ~ 60°C	Operating temperature -20°C ~ 60°C

SBC

Rockchip

T10

RK3568

E6

RK3566

PMDP3566

RK3566

AIOT

RK3566

ESOP

RK3566

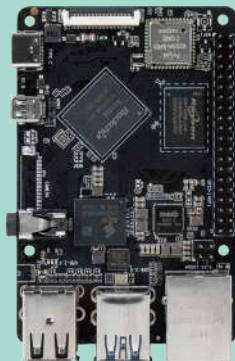
ROCKCHIP SBC SOLUTIONS



T10

RK3568

4 x Cortex-A55 2.0GHz
22nm
ARM G52 2EE



E6

RK3566

4 x Cortex-A55
1.8GHz, 22nm
ARM G52 2EE
0.8 TOPS NPU



PMDP3566

RK3566

4 x Cortex-A55 1.8GHz
22nm ARM G52 2EE
0.8 TOPS NPU



AIOT

RK3566

4 x Cortex-A55 1.8GHz
ARM G52 2EE
0.8 TOPS NPU



ESOP

RK3566

4 x Cortex-A55 1.8GHz
22nm ARM G52 2EE
0.8 TOPS NPU

T10		E6		PMDP3566		AIOT		ESOP	
SOC	RK3568, 4 x A55, 2.0GHz, 22nm ARM G52 2EE With OpenGL ES 1.1/2.0/3.2 support, Vulkan 1.1, embedded high performance 2D acceleration hardware	RK3566, 4 x Cortex-A55, 1.8G, 22nm GPU ARM G52 2EE, 0.8 TOPS NPU	RK3566, 4 x Cortex-A55, 1.8GHz, 22nm GPU ARM G52 2EE, 0.8 TOPS NPU	RK3566, 4 x Cortex-A55, 1.8G, 22nm GPU ARM G52 2EE, 0.8 TOPS NPU	RK3566, 4 x Cortex-A55, 1.8G, 22nm GPU ARM G52 2EE, 0.8 TOPS NPU				
OS	Android	Android/Debian/Builroot	Android	Android	Android/Linux Connecting to the MAS server				
RAM + ROM	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 32G/64G	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 16G/32G/64G	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 32G/64G	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 32G/64GB	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 32G/64G				
Media	4K 60fps H.265/H.264/VP9 decoding 1080P 100fps H.265/H.264 encoding	4K 60fps H.265/H.264/VP9 decode 1080P 100fps H.265/H.264 codec	4K 60fps H.265/H.264/VP9 decode 1080P 100fps H.265/H.264 codec	4K 60fps H.265/H.264/VP9 video decoding 1080P 100fps H.265/H.264 video encoding	4K 60fps H.265/H.264/VP9 decode 1080P 100fps H.265/H.264 codec				
Display	MIPI, 4-lane MIPI-DSI, 1920 x 1200@60fps EDP, 2-lane edp1.3, 1080@60fps	MIPI, 2-lane MIPI-DSI, 1920 x 1200@60fps HDMI-out, HDMI2.0, 1080p@60fps, upto 4K@60fps Camera, 4-lane MIPI CSI, Camera interface	EDP1.3, 1080@60fps	MIPI, 4-Lane MIPI-DSI, 1920 x 1200@60fps EDP, 4-lane EDP, 3000 x 2000@60fps Dual-LVDS , 1920 x 1080@60fps HDMI-out, HDMI2.0, 1080p@60fps, upto 4K@60fps	MIPI, 4-Lane MIPI-DSI, 1920 x 1200@60fps EDP, 2-lane EDP, 1920 x 1080@60fps Dual-LVDS , 1920 x 1080@60fps HDMI-out, HDMI2.0, 1080p@60fps, upto 4K@60fps				
Ethernet	1000M Ethernet (supports PoE with add-on PoE HAT)	1000M Ethernet (supports PoE with add-on PoE HAT)	/	1000M Ethernet (supports PoE with add-on PoE HAT)	100Mbps Ethernet port				
Connectivity	WiFi5 802.11a/b/g/n/ac Bluetooth 5.2,1T1R	WiFi5 802.11a/b/g/n/ac Bluetooth 5.2,1T1R	WiFi5,802.11a/b/g/n/ac Bluetooth 5.0	WiFi5 802.11a/b/g/n/ac Bluetooth 5.2,1T1R Support Mini-PCIe 4G data communication module	/				
USB	USB Type A 3.0 (OTG), USB Type A 3.0, 2 way USB 2.0 (PH2.0 cradle)	USB Type C 2.0 (OTG) x 1 USB Type A 3.0 x 1 USB Type A 2.0 x 2	TP Incell-tp or usb-tp	Type C USB (OTG) x 1, Type A USB 3.0 x 1, Type A USB 2.0 x 1, USB 2.0 docks x 4	USB3.0 HOST x 1 USB2.0 HOST x 3 (One port with OTG)				
Micro SD Card	/	Micro SD card,up to 128GB	/	TF-Card Slot x1	Micro SD card, up to 128GB				
Audio	Support 3W x 2 4R,2Pin PH2.0 MIC Input, 2Pin PH2.0	Speaker: / Headset: 3.5mm Earphone Mic: MIC Input	Speaker,2 x 1W headphone x 1	D class extra large built-in speaker amplifier, support 10W x 2 4R 3.5mm headphone jack output MIC input	speaker x 2 headphone x 1 Microphone x 1				
Interface	1 Channel TTL(Debug TYPE-A USB connector) + 1 Channel TTL 4Pin/PH1.25 1 x ADC key button 1 x I2C (TP-COF 6pin-FPC) 4 x GPIO	40Pin GPIO extension: UART/I2C/SPI/PCM/PWM/ADC/GPIO etc.	2 x Type-C (PD-Power, DP-IN for PortableMonitor Mode, OTG/ADB for Android Mode) 1 x HDMI-IN, mini-hdmi 1 x Menu button 1 x Wave Wheel Button 1 x 3.5mm Headphone	2 X UART (one debug); 1 X Wiegand, 2 X RS232; 2 X RS485. 1 X ADC 1 X PWM 1 X I2C 4 X GPIO Infrared Remote Control Interface	Extend interface: NFC Reader/Static Module/Video Surveillance Light Alarm / Diffuse Light Type Electric Switch / Tricolour Light + Buzzer GPIO -24pin: UART/SPI/PWM/I2C/ADC/PWR/RESET/3.3V etc.				
Input Power	Input: AC100-240V/50-60HZ, Output: DC12V/5.5mm DC head 2A-5A (surge voltage less than 18V, ripple voltage less than 100mV). Ripple voltage less than 100mV)	5V DC via USB-C connector 5V DC via GPIO header Power over Ethernet (requires separate PoE HAT)	DC=5V3A(default) PD=5V3A/9V3A/12V3A/15V3A (optional)	Input: AC100-240V.50-60HZ, Output: DC12V/5.5mm DC head 2A-5A (surge voltage less than 18V, ripple voltage less than 100mV)	DC 12V/3A				
PCB	Size: 80 x90 x 1.6mm Process:6-layers HDI Immersion Gold Screw hole specification: Ø3.5MM x 4	Size: 56 x 85 x 1.6mm Process: 6-layers Immersion Gold Hole: Ø2.5mm x 4			Size: 85 x 200 x 1.6mm Package: SoM + Carrier Board				
Environment	Operating temperature'-20°C ~ 60°C	Operating temperature'-20°C ~ 60°C	Operating temperature'-20°C ~ 60°C	Operating temperature'-20°C ~ 60°C	Operating temperature'-20°C ~ 60°C				



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