

Embedded Touch Screen

ODM Manufacturing Solutions



Smart Devices Solution

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

TOOLING

ID Design
MD Design

HARDWARE

Schematic Diagrams Design
PCB Layout
Specific components design
Bill of Materials output
Gerber Files
RF Design and Verification
Assembly Drawings
Test Specifications output

SOFTWARE

Drivers Debugging
System Customization
Debug Pre-installed applications

ACCESSORIES

Smart Cover
Docking Charging Station
Charging Bracket/Dock
Magnetic Back Clip
Wall Mount
Stylus Pen
And more...

Smart Devices Solution

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

01

IOT HOME

- Wall-mounted Tablet with POE
- Wall-mounted Panel Gateway
- Smart Gateway Hub with Cellular Network
- Tablet PC with Docking Station for Smart Air Conditioner
- Smart Wall Panel Monitor
- Door Control System Tablet
- Meeting Conference Schedule Display

02

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 Use
- Senior Care Tablet PC
- Door Tablet for Clinics, Private and Public Hospitals
- Therapeutic device for kids
- Smart Display with AR for Kids

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 solution

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

06

Multi-media Device

- Portable Translation Equipment
- Smart Audio Guide
- Portable Translation Equipment

07

Education

- Tablet PC with stylus for Students Learning
- Tablet PC for Students Learning with charging docking

08

Network Security

- Security & Privacy Focused Phone

09

SBC & SOM

- RK3588
- RK3588S
- RK3576
- RK3568
- RK3566
- RK3562

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



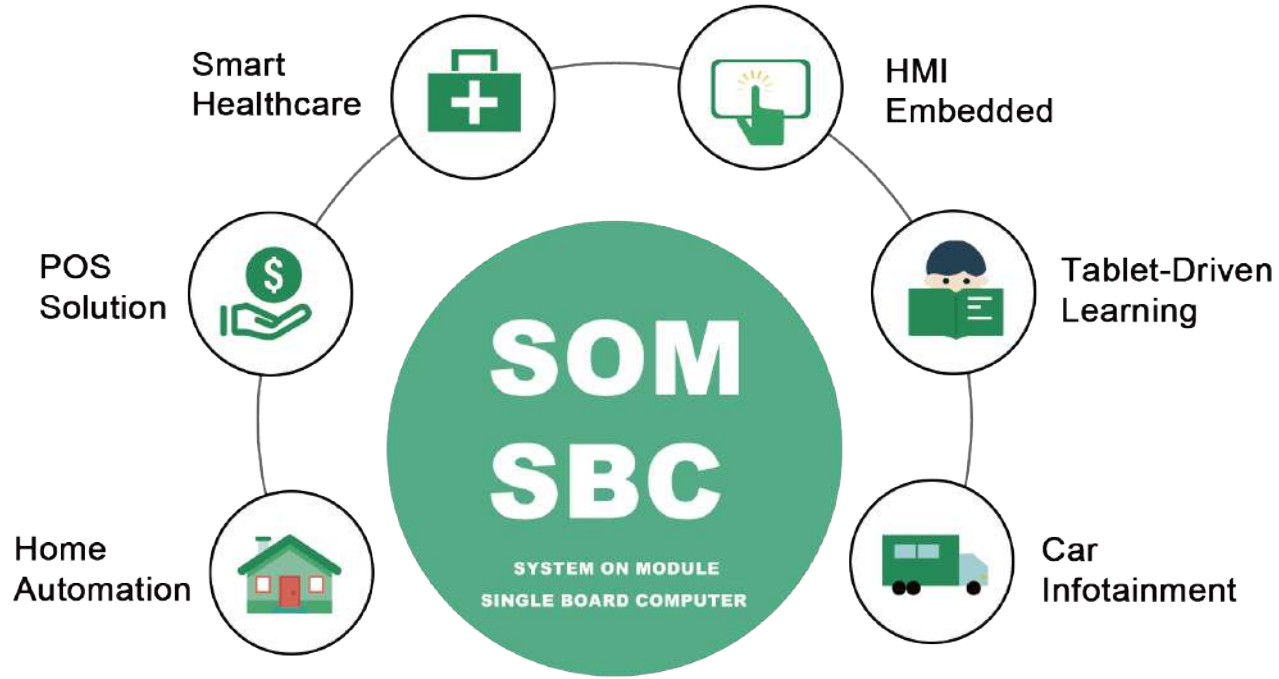
Multi-media Device

NFC RFID WiFi
BT FM GPS
Docking Charging



SOM & SBC

ROCKCHIP



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

SOM Rockchip

SOM3588

RK3588

SOM3576-F

RK3576

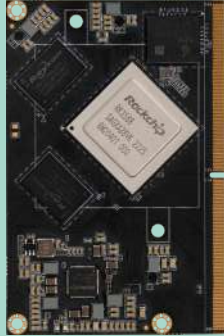
SOM3588S

RK3588S

SOM3568-F

RK3568

ROCKCHIP SOM SOLUTIONS



SOM3588

RK3588

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



SOM3588S

RK3588S

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

SOM3588			SOM3588S		
SOC	RK3588, 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		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		Android/Linux		
RAM + ROM	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.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		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 MIPICSI (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 (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--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 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)		
Audio	Can be customized		Can be customized		
Interface	PCIe3.0(2 x 2lanes,1 x 4lanes,4 x 1lanes) PCIe2.1(1 1anes) x 3 SATA3.0 x 3 4lane Mipi--CSI UART/I2C/SPI/PCM/PWM/ADC/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		
PCB	Size: 54 x 82 x 1.2mm Process: 8-layer HDI Immersion Gold Package:MXM3.0(314PIN-0.5mm)		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		

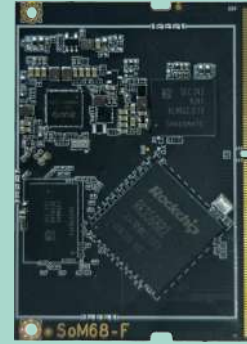
ROCKCHIP SOM SOLUTIONS



SOM3576-F

RK3576

RK3576, 4 x Cortex-A72 +
4 x Cortex-A53 2.3GHz
8nm
6.0TOPS NPU



SOM3568-F

RK3568

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

SOM3576-F

SOM3568-F

SOC	RK3576, 4 x Cortex-A72 + 4 x Cortex-A53 2.3GHz, 8nm GPU ARM Mali-G52 MC3 OpenGL ES3.2/OpenCL 2.0/Vulkan1.1 6.0TOPS NPU, INT4/INT8/INT16, float16, Bfloat 16 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
OS	Android14	Android/Linux
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
Media	Decode: 4K@60fps H.264/AVC 8K@30fps or 4K@120fps H.265/HEVC/VP9/AVS2/AV1 1080@60fps H264/MVC 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
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
Ethernet	1000M Ethernet x 2 (The carrier board)	1000M Ethernet x 2 (The carrier board)
Connectivity	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2 (The carrier board)	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2 (The carrier board)
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)
Micro SD Card	Micro SD card, up to 128GB (The carrier board)	Micro SD card, up to 128GB
Audio	Can be customized	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 UART1/I2C/SPI/PCM/PWM/ADC/SDMMC/GPIO CAN FD x 2	SATA3.0/UART/SPI/PWM/I2C/ADC/PWR/RESET/3.3V etc.
Input Power	The carrier board can be customized	LI-Battery Supply, 5V/12V Charger
PCB	/	Size: 50 x 69.6 x 1.2mm Process: 8-layer HDI Immersion Gold Package: PC DDR4
Environment	Operating temperature -20°C ~ 60°C	Operating temperature -20°C ~ 60°C

SOM+ CARRIER BOARD Rockchip

V58

RK3588

H3588S

RK3588S

ROCKCHIP SOM CARRIER BOARD SOLUTIONS



V58

RK3588

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



H3588S

RK3588S

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

V58		H3588S
SOC	RK3588, 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	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	Android
RAM + ROM	LPDDR4 4GB/8GB/16GB/32GB EMMC5.1 64G/128G	LPDDR4 4G/8G EMMC5.1 64G/128G
Media	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-channel 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	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	1 x MIPI, 1920x1200@60fps 1 x eDP, 2-Lane, 1920*1080@60fps 1 x eDP, 4-Lane, eDP1.3, 4K@60fps / HDMI-OUT (8K@60fps (4K@120fps) 1 x DisplayPort(4K@120fps) AltMode on Type-C 1 x Dual-LVDS, 1080@60fps
LTE/WCDMA/GSM	/	/
Ethernet	100Mbps Ethernet	100Mbps Ethernet
Connectivity	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.3, 2T2R	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2
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	3 x USB Host 2.0, PH2.0-4Pin 1 x USB3.0, Type-A 1 x USB3.0, Type-C with OTG & DP-out
Micro SD Card	/	/
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	Speaker x 2 Microphone x 1
Interface	2 x RS485 for motor control Key interface	Key Interface (PAIR/VOL+/VOL-/RST), PH1.25-4Pin 2 x Speaker Interfaces (PH2.0-4Pin), 1 x Mic Interface (PH2.0-2Pin) 2 x UART, PH2.0-4Pin 3 x USB 2.0, PH2.0-4Pin TP-COF Interface, FPC-0.5mm-10Pin NFC Module Interface, FPC-0.5mm-10Pin RTC Battery, PH1.25-2Pin, supports scheduled power on/off LED or GPIO Expansion Interface, PH2.0-6Pin LVDS Screen Backlight Interface, PH2.0-6Pin BAT-IN-12V Interface, PH2.0-6Pin DC-IN-12V Interface, PH2.0-4Pin
Input Power	DC-12V via 8pin-PH2.54	DC 12V @ 2-5A / 5.5 mm DC connector (surge voltage below 18V; ripple voltage below 100 mV)
PCB	Size: 180 x 180 x 1.6mm Process: 4-layer Immersion Gold	Size: 81.5 x 130 x 1.6 mm, 6-layer through-hole integrated PCB with ENIG surface finish; mounting holes: 93.5 mm x 4.
Environment	Operating temperature -20°C ~ 60°C	Operating temperature -20°C ~ 70°C

SBC Rockchip

SOD3588S-M

RK3588S

SOD3576-M

RK3576

F76

RK3576

H3576

RK3576

M3576S

RK3576S

SOD3566-M

RK3566

E6

RK3566

AIOT

RK3566

M3562

RK3562

ROCKCHIP SBC SOLUTIONS



SOD3588S-M

RK3588S

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



SOD3576-M

RK3576

4 x Cortex-A72 2.2GHz +
4 x Cortex-A53 2.0GHz
8nm
6.0TOPS NPU
Support INT4/INT8/INT16



F76

RK3576

4 x Cortex-A72 +
4 x Cortex-A53 2.3GHz
8nm
6.0TOPS NPU
Support INT4/INT8/INT16

SOD3588S-M		SOD3576-M		F76
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	RK3576, 4 x Cortex-A72 + 4 x Cortex-A53 2.3GHz, 8nm GPU ARM Mali-G52 MC3 OpenGL ES3.2/OpenCL 2.0/Vulkan1.1 6.0TOPS NPU, INT4,INT8,INT16, float16, Bfloat 16 and tf32 operation Supports deep learning framework: TensorFlow, Caffe, Tflite, Pytorch, Onnx NN, Android NN, etc.	RK3576, 4 x Cortex-A72 + 4 x Cortex-A53 2.3GHz, 8nm GPU ARM Mali-G52 MC3 OpenGL ES3.2/OpenCL 2.0/Vulkan1.1 6.0TOPS NPU, INT4,INT8,INT16, float16, Bfloat 16 and tf32 operation Supports deep learning framework: TensorFlow, Caffe, Tflite, Pytorch, Onnx NN, Android NN, etc.	
OS	Android/Linux	Android	Android 14	
RAM + ROM	LPDDR4 4G/8G/16G EMMC5.1 64G/128G/256G	LPDDR5 4G/8G/16G EMMC5.1 64G/128G	LPDDR4 2G/4G/6G/8G EMMC5.164G/128G (Optional)	
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	Decode: 4K@60fps H.264/AVC 8K@30fps or 4K@120fps H.265/HEVC/VP9/AVS2/AV1 1080@60fps H264/MVC Encoded: Dual video encoders which support H.265 and H.264 H.264 and H.265 up to 4K@60fps Supports multi-stream encoding	Decode: 4K@60fps H.264/AVC 8K@30fps or 4K@120fps H.265/HEVC/VP9/AVS2/AV1 1080@60fps H264/MVC Encoded: Dual video encoders which support H.265 and H.264 H.264 and H.265 up to 4K@60fps Supports multi-stream 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)	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)	1 x MIPI (2560x1600@60fps) 1 x EDP (1920*1080@60fps) 1 x LVDS (1920x1080@60fps) 1 x HDMI-OUT (8K@60fps, either 4K@120fps)	
Ethernet	1000M Ethernet x 1	1000M Ethernet x 1	1000M Ethernet(supports PoE with add-on PoE HAT)	
Connectivity	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.0	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2	
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)	1 x Type-C,USB3.0, 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)	2 TYPE-A USB3.0, 2 USB2.0 docks	
Micro SD Card	/	/	Mic SD Card Slot x1	
Audio	Speaker x 2 Microphone x 1	Speaker x 2 Microphone x 1	Speaker x 2 Microphone x	
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)	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-CoFconnector (10Pin-FPC-0.5mm) 1 x NFC connector (10Pin-FPC-0.5mm) 1 x RTC Battery connector (2Pin-PH1.25)	1 x Key connector (PWR/VOL+/VOL-, 4Pin-PH1.25) 2 x Speaker Interface (10W, 2Pin-PH1.25) 1 x Mic connector (2Pin-PH1.25) 3 x UART (Default function, PH1.25) 1 x MIPI-CSL Camera connector (FPC-0.5mm) 1 x TP-CoF connector (FPC-0.5mm, 10Pin)	1 x NFC module connector (FPC-0.5mm, 10Pin) 1 x RTC Battery connector (Scheduled power on/off, 2Pin-PH1.25) 1 x GPIO Extension header (PH1.25) 1 x PIR Sensor interface (Motion detection, 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.)	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.)	Input: AC100-240V.50-60Hz, Output: DC12V/5.5mm DC head 2A-5A (surge voltage less than 18V, ripple voltage less than 100mV)	
PCB	Size: 63 x 93 x 1.2mm Process: 8-layers HDI-2 Immersion Gold	Size: 63x 93 x 1.2mm Process: 6-layer HDI Immersion Gold	Size: 80x142x1.6mm Process: 8-layer through-hole immersion gold Mounting holes: Ø3.5mm x4	
Environment	Operating temperature -20°C ~ 60°C	Operating temperature-20°C ~ 70°C	Operating temperature-20°C ~ 70°C	

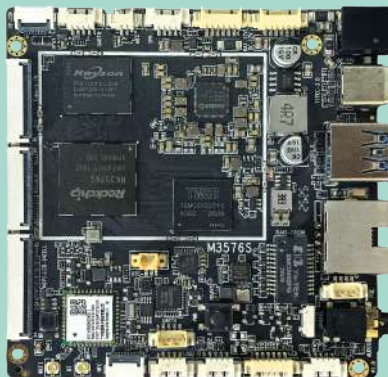
ROCKCHIP SBC SOLUTIONS



H3576

RK3576

4 x Cortex-A72 +
4 x Cortex-A53 2.3GHz
8nm
6.0TOPS NPU
Support INT4/INT8/INT16



M3576S

RK3576

4 x Cortex-A72 +
4 x Cortex-A53 2.3GHz
8nm
3.0TOPS NPU
Support INT4/INT8/INT16



SOD3566-M

RK3566

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

H3576		M3576S		SOD3566-M
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, Bfloat 16 and tf32 operation Supports deep learning framework: TensorFlow, Caffe, Tflite, Pytorch, Onnx NN, Android NN, etc.	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 3.0TOPS NPU, INT4,INT8,INT16, float16, Bfloat 16 and tf32 operation Supports deep learning framework: TensorFlow, Caffe, Tflite, Pytorch, Onnx NN, Android NN, etc.	RK3566, 4 x Cortex-A55, 1.8G, 22nm GPU ARM G52 2EE, 0.8 TOPS NPU	
OS	Android 14	Android/Linux	Android	
RAM + ROM	LPDDR4 4G/8G EMMC5.1 32G/64G/128G	LPDDR5 4G/8G EMMC5.1 32G/64GB	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 8GB/16G/32G/64G/128G	
Media	Decode: 4K@60fps H.264/AVC 8K@30fps or 4K@120fps H.265/HEVC/VP9/AVS2/AV1 1080@60fps H264/MVC Encoded: Dual video encoders which support H.265 and H.264 H.264 and H.265 up to 4K@60fps Supports multi-stream encoding	Decode: 4K@60fps:H.265/HEVC、VP9、AVS2、AV1,4K@60fps:H.264/AVC Encoded: 4K@30fps:H. 265/HEVC、 H. 264/AVC	4K 60fps H.265/H.264/VP9 decode 1080P 100fps H.265/H.264 codec	
Display	1 x MIPI-DSI (2560x1600@60fps) 1 x eDP1.4 (1920x1080@60fps) 1 x LVDS (1920x1080@60fps) 1 x DisplayPort 1.4 (4K@120fps, Alt Mode via Type-C) 1 x HDMI 2.1 (8K@60fps / 4K@120fps) — OR — 1 x eDP1.4b (3840x2160@60fps)	1 x MIPI (2560x1600@60fps) 1 x EDP (1920x1080@60fps)	1 x MIPI-DSI (1920x1200@60fps) 1 x eDP1.3 (4K@60fps) 1 x HDMI2.0 (4K@60fps)	
Ethernet	1000M Ethernet(supports PoE with add-on PoE HAT)	1000M Ethernet(supports PoE with add-on PoE HAT)	1000M Ethernet x 1	
Connectivity	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2 Support Mini-PCIe 4G data communication module	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2	WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.0	
USB	1 TYPE-C USB (OTG), 1 TYPE-A USB3.0, 3 USB2.0 docks	USB3.0, Type-C, OTG USB3.0, Type-A 2 x USB2.0,PH1.25-4Pin	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)	
Micro SD Card	1 x microSD card slot (Shared tray with SIM card: Supports either SIM or microSD, but not both simultaneously)	1 x Mic SD Card Slot	/	
Audio	Speaker x 2 (Class D built-in amplifier, 10W 24Ω) Microphone x 1 (2Pin-PH2.0 connector)	3 W x 2, 4 Ω 3.5 mm headphone jack Microphone input, 2-pin PH1.25 connector	Speaker x 2 Microphone x 1	
Interface	1 x Key connector (PWR/VOL+/VOL- /RST, 4Pin-PH2.0) 2 x Speaker Interface (10W, 2Pin-PH2.0) 1 x Mic connector (2Pin-PH2.0) 2 x UART (PH2.0-4Pin) 1 x MIPI-CSI Camera connector (FPC-0.5mm-30pin) 1 x TP-COF connector (FPC-0.5mm-10pin) 1 x NFC module connector (FPC-0.5mm-10pin)	1 x Key connector (PWR/VOL+/VOL- /RST, 4Pin-PH1.25) 2 x UART (PH1.25-4Pin) 1 x MIPI-LCD connector (FPC-0.5mm-40pin) 1 x eDP-LCD connector (FPC-0.5mm-30Pin) 1 x MIPI-CSI Camera connector (FPC-0.5mm-30Pin) 1 x TP-COF connector (FPC-0.5mm-10Pin) 1 x NFC module connector (FPC-0.5mm-10Pin)	1 x RTC Battery connector (supports scheduled power on/off) 1 x LED or GPIO Expansion connector (PH1.25-6Pin) 1 x SAT-IN 12V connector (PH1.25-6Pin) 1 x DC-IN 12V connector (PH1.25-6Pin)	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	Input: AC100-240V.50-60HZ, DC12V/5.5mm DC head 2A-5A (surge voltage less than 18V, ripple voltage less than 100mV)	Input: AC100-240V.50-60HZ, Output: DC12V/5.5mm DC head 2A-5A (surge voltage less than 18V, ripple voltage less than 100mV)	VSYS+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: 81.5 x 130 x 1.6mm Process: 6-layers Immersion Gold Mounting holes: Φ3.5mm x4	Size: 83.8 x 84 x 1.2mm Process: 6-layers Through-hole Immersion Gold Mounting holes: Φ2.5mm x4	Size: 63 x 93 x 1.2mm Process: 6-layers Immersion Gold	
Environment	Operating temperature~-20℃ ~ 70℃	Operating temperature~-20℃ ~ 70℃	Operating temperature -20℃ ~ 60℃	

ROCKCHIP SBC SOLUTIONS



E6

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



M3562

RK3562

4 x Cortex-A53, 2.0G
22nm
GPU ARM G52 2EE
1 TOPS NPU

E6		AIOT		M3562
SOC	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		RK3562, 4 x Cortex-A53, 2.0G, 22nm GPU ARM G52 2EE, 1 TOPS NPU
OS	Android/Debian/Buildroot	Android		Android 13
RAM + ROM	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 16G/32G/64G	LPDDR4 2G/3G/4G/6G/8G EMMC5.1 32G/64GB		DDR4 2G EMMC5.1 32G/64G
Media	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@30fps: H.265/HEVC、VP9、AVS2、AV1, 1080P@60fps: H. 264/AVC 1080P@60fps:H. 265/HEVC、H. 264/AVC
Display	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	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 (2048x1080@60fps) EDP (1920*1080@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)
Connectivity	WiFi5 802.11a/b/g/n/ac Bluetooth 5.2,1T1R	WiFi5 802.11a/b/g/n/ac Bluetooth 5.2,1T1R Support Mini-PCIE 4G data communication module		WiFi6 802.11a/b/g/n/ac/ax, Bluetooth5.2
USB	USB Type C 2.0 (OTG) x 1 USB Type A 3.0 x 1 USB Type A 2.0 x 2	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		1 TYPE-C USB (OTG), 1 TYPE-A USB3.0, 2 USB2.0 docks
Micro SD Card	Micro SD card,up to 128GB	TF-Card Slot x1		Mic SD Card Slot x1
Audio	Speaker: / Headset: 3.5mm Earphone Mic: MIC Input	D class extra large built-in speaker amplifier, support 10W x 2 4R 3.5mm headphone jack output MIC input		3W*2 4R Headset: 3.5mm Earphone Mic: MIC Input
Interface	40Pin GPIO extension: UART/I2C/SPI/PCM/PWM/ADC/GPIO etc.	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		2 X UART (PH1.25-4Pin, one configurable as debug) 1 X NFC Interface (FPC-0.5mm-10pin) 1 X RTC Battery (Scheduled power on/off) 4 X GPIO (Expansion via PH1.25-6Pin) 1 X DC Power Input (12V, PH1.25-6Pin) 1 X Battery Input (12V, PH1.25-6Pin)
Input Power	5V DC via USB-C connector 5V DC via GPIO header Power over Ethernet (requires separate PoE HAT)	Input: AC100-240V.50-60HZ, Output: DC12V/5.5mm DC head 2A-5A (surge voltage less than 18V, ripple voltage less than 100mV)		Input: AC100-240V.50-60HZ, Output: DC12V/5.5mm DC head 2A-5A (surge voltage less than 18V, ripple voltage less than 100mV)
PCB	Size: 56 x 85 x 1.6mm Process: 6-layers Immersion Gold Hole: \$2.5mm x 4			Size: 83.8 x 84 x 1.2mm Process: 4-layers SOP Hole: \$2.5mm x 4
Environment	Operating temperature'-20°C ~ 60°C	Operating temperature'-20°C ~ 60°C		Operating temperature'-20°C ~ 60°C



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