


SBC Product Datasheet (2022-2023)

(ARM Single Board Computer)

Part Number	Descriptions	Page
SBC3300	Cost-effective Single Board Computer (quad-core Cortex-A35 CPU)	Click here
SBC3100	High performance Single Board Computer (dual-core Cortex-A72 CPU)	Click here
SBC3500	High performance Single Board Computer (quad-core Cortex-A55 CPU)	Click here
SBC3800 	Ultra high-performance Single Board Computer (quad-core Cortex-A76 CPU)	Click here
SBC3500-K280	SBC3500 with 2x HDMI-TX interfaces	Click here

Geekbench 5
Scores

 Multi-core Score  Single-core Score

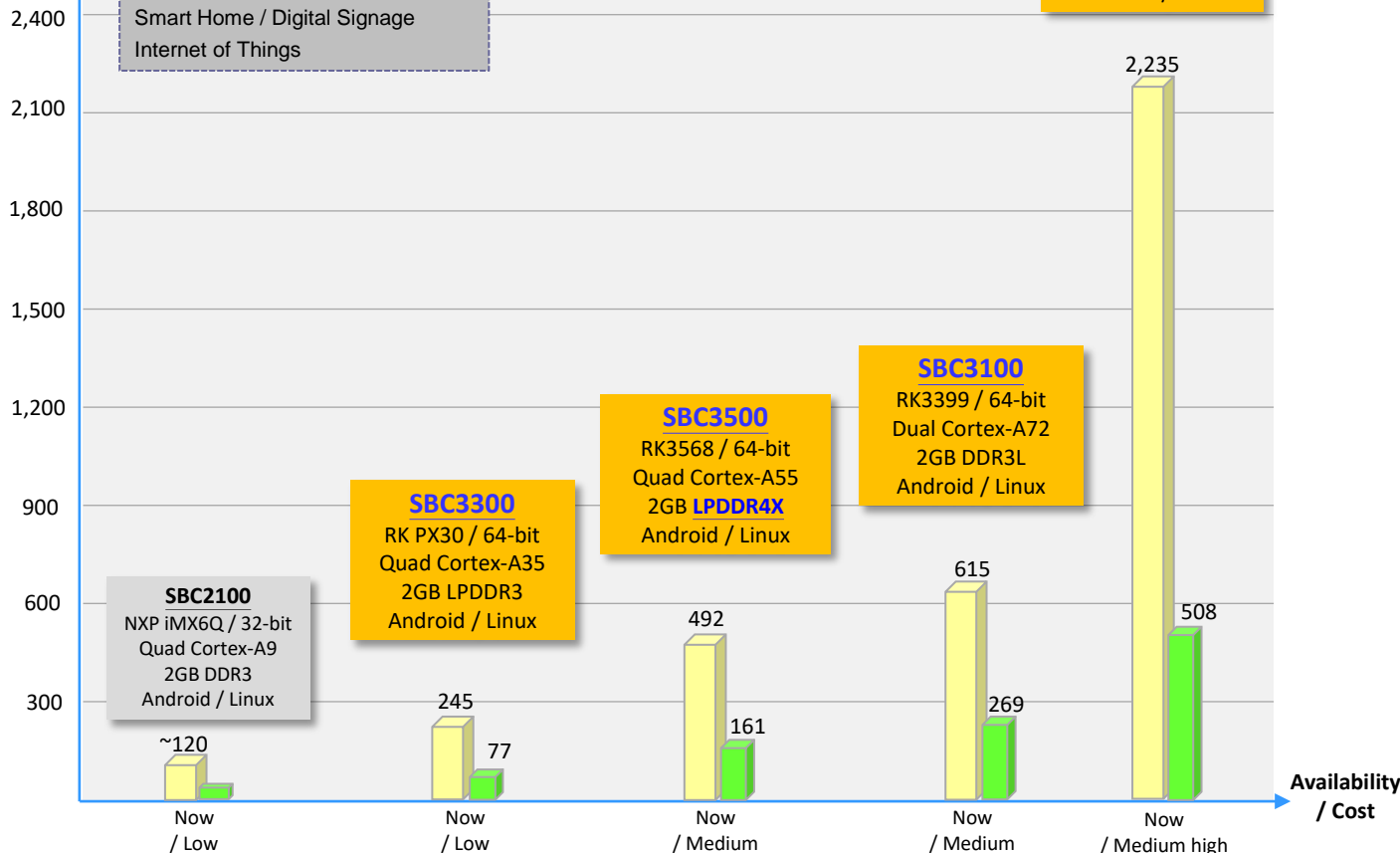
Typical Applications

Industrial Automation
Automotive / Transportation
Vending Machine / Fitness Machine
Smart Home / Digital Signage
Internet of Things

NEW

SBC3800

RK3588 / 64-bit
Quad Cortex-A76
4GB LPDDR4X
Android / Linux



SBC Comparisons

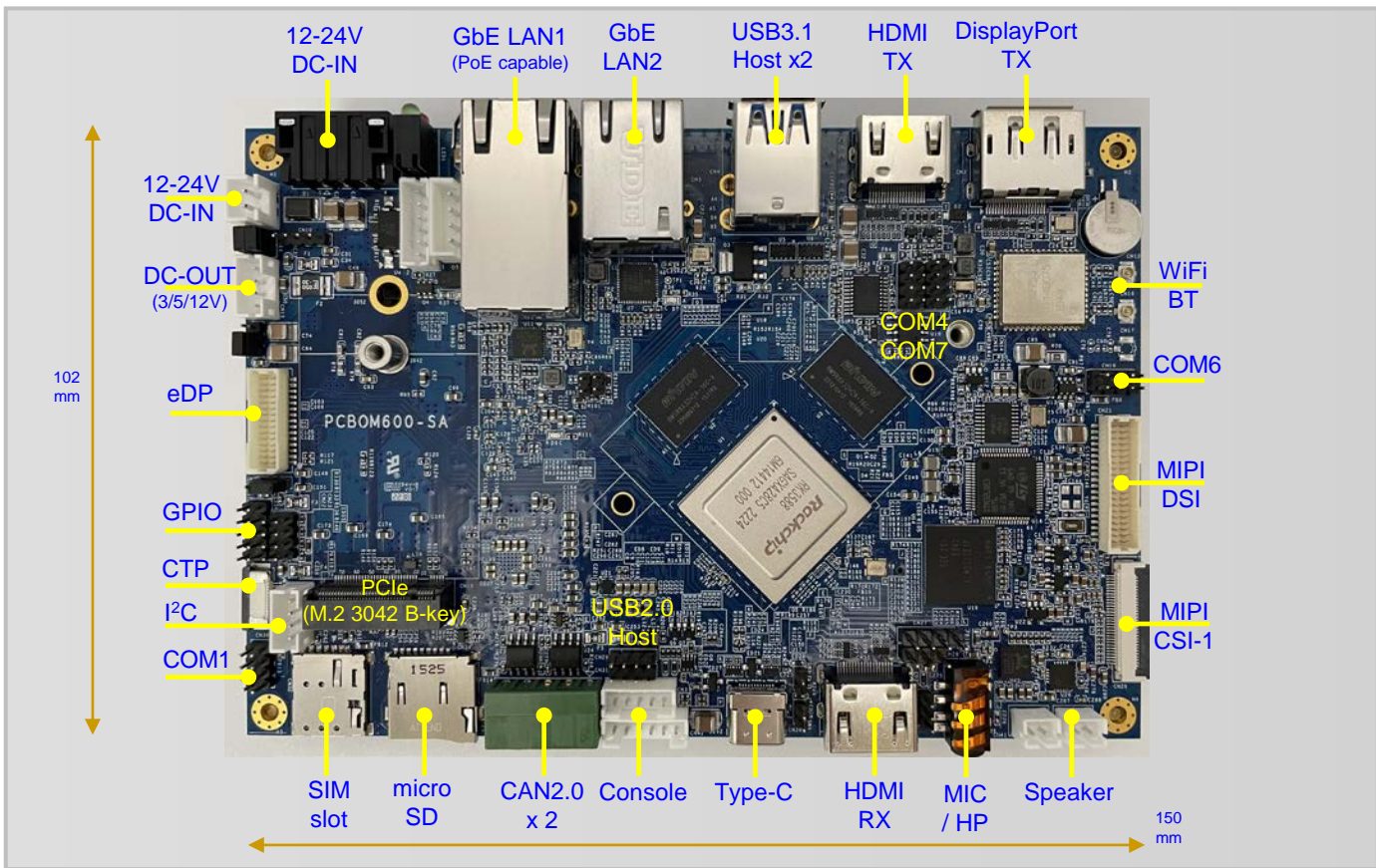


	SBC3800	SBC3100	SBC3500	SBC3300
Processor	Rockchip RK3588	Rockchip RK3399	Rockchip RK3568	Rockchip PX30K
ARM Cores	(64-bit) 4x Cortex-A76 + 4x A55 @2.4Ghz	(64-bit) 2x Cortex-A72 + 4x A53 @2Ghz	(64-bit) 4x Cortex-A55 @2Ghz	(64-bit) 4x Cortex-A35 @1.6Ghz
OS	Android / Debian	Android / Debian	Android / Ubuntu / Debian	Android / Ubuntu / Debian
RAM (DDR)	4GB / 8GB / 16GB LPDDR4X	2GB / 4GB DDR3L	2GB / 4GB / 8GB LPDDR4X	1GB / 2GB LPDDR3
Flash (eMMC)	32GB	8GB	8GB	8GB
NPU	6 Tops	- N/A -	0.8 Tops	- N/A -
Ethernet	LAN1: GbE (*) LAN2: GbE	1x GbE	LAN1: GbE (*) LAN2: GbE	LAN1: 10/100M (*) LAN2: 10/100M
Display Interface	1x HDMI (8K) 1x DP (8K) 1x eDP (4K) 1x MIPI-DSI (4K)	1x HDMI (4K) 1x DP (4K) 1x eDP (2K) 2x MIPI-DSI (2K)	1x HDMI (4K) 1x eDP (2K) [1x LVDS (1280x800) or MIPI-DSI (FHD)]	1x TTL-RGB (FHD) [1x LVDS (1280x800) or 1x MIPI-DSI (FHD)]
Touch I/F	1× Capacitive	1× Capacitive	1x Capacitive	1× Capacitive
Audio Interface	1x MIC/HP + 2x SPK + 1x Line-in	1×MIC/HP + 2×SPK	1x MIC/HP + 1x SPK	1×MIC/HP + 2×SPK
Camera	2x MIPI-CSI	1x MIPI-CSI	1x MIPI-CSI	1x MIPI-CSI
miniPCIe con	1x (M.2 3042 M-key) socket	1x socket	1x (M.2 3042 M-key) socket	- N/A -
LTE socket	(M.2 3042/3052 B-key) LTE/5G + SIM slot	(mPCIe) LTE socket + SIM slot	(M.2 3042/3052 B-key) LTE/5G + SIM slot	(mPCIe) LTE socket + SIM slot
WiFi/BT	(*) WiFi 6 (802.11ax) + BT 5.0	(*) WiFi 802.11 bgn/ac + BT 5.0	(*) WiFi 802.11 bgn/ac + BT 5.0	(*)WiFi 802.11 bgn + BT 4.1
USB 3.0	2x type-A host + 1x OTG (TypeC)	4x type-A host+1xTypeC	2x type-A host + 1x OTG	- N/A -
USB 2.0	2x host pin header	3x host	5x host pin header	5x host + 1x OTG
SD Card	1x microSD	1x microSD	1x microSD	- N/A -
HDD/SSD	1x (M.2) socket for PCIe SSD	- N/A -	1x (M.2) socket for PCIe SSD	- N/A -
COM ports	4x COM (RS232 or RS485)	- N/A -	2x RS232 (or RS485) + 2x RS232	2x RS232 (or RS485)
GPIO	8-bit	8-bit	8-bit	8-bit
CAN Bus	(*) 2x CAN2.0	- N/A -	(*) 2x CAN2.0	- N/A -
I2C port	1x master	1x master	1x master	1x master
SPI	1x SPI	- N/A -	1x SPI	- N/A -
Buzzer	- N/A -	YES	- N/A -	- N/A -
Realtime clock (RTC)	YES	YES	YES	YES
MCU (on/off)	(*) YES	- N/A -	(*) YES	- N/A -
Wake-on-LAN	YES	- N/A -	YES	- N/A -
Power Input	12V-24V	12V-24V	12V-24V / (*) 9V-36V (*) Over-Voltage Protection	12V
PoE module (PD)	(*) YES	- N/A -	(*) YES	(*) YES
Dim (mm)	150 x 102 x H	150 x 102 x H	146 x 102 x H	100 x 72 x H
Operating Temperature	0°C to 70°C -20°C to 70°C	0°C to 70°C -20°C to 70°C	0°C to 70°C -20°C to 70°C	0°C to 70°C -20°C to 70°C

(*) optional function

SBC3800 (Quad ARM Cortex-A76)

(Laptop-class performance with smartphone efficiency)



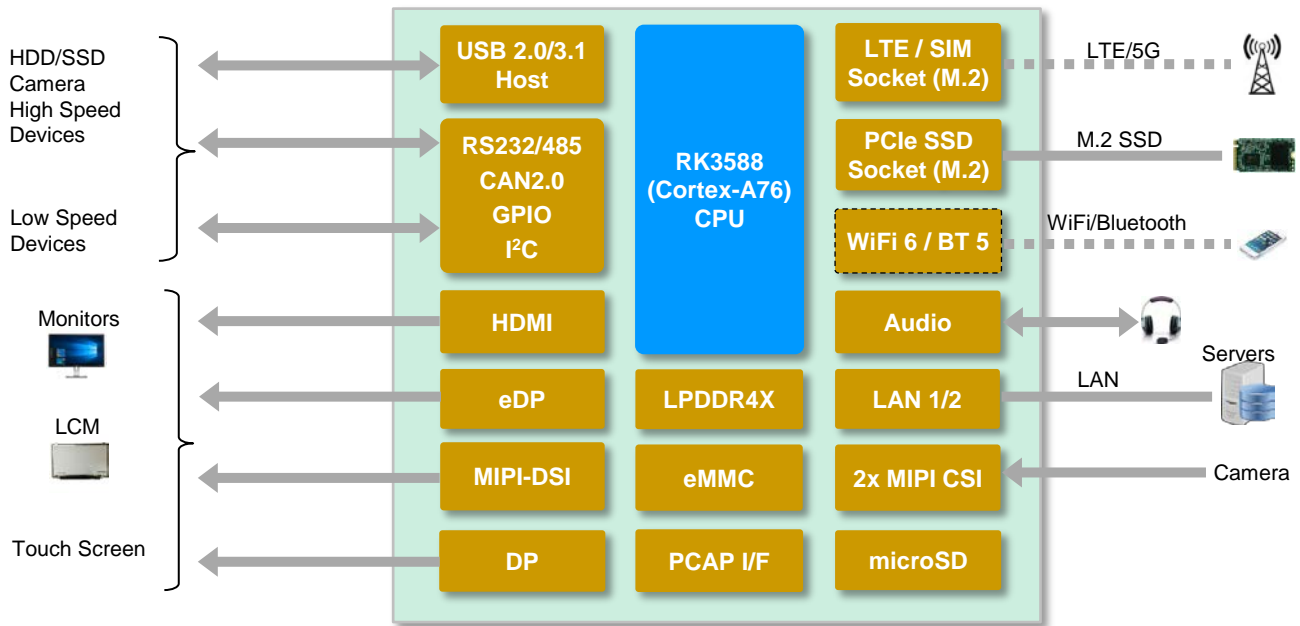
Specifications:

➤ Small size (150mm x102mm)	➤ Android / Debian OS for application development
➤ 12V-24V DC input	➤ PoE (Power over Ethernet) module (optional)
➤ CPU: Quad Cortex-A76 + Quad Cortex-A55	➤ 4GB LPDDR4X (up to 16GB)
➤ NPU: 6 TOPS neural processing unit	➤ 32GB eMMC (up to 128GB)
➤ GPU: ARM Mali G610 MP4 (OpenGL ES 3.2 / OpenCL 2.2 / Vulkan 1.2)	➤ Multiple display interfaces : 1x HDMI (8K) / 1x DP (8K) 1x eDP (4K) / 1x MIPI DSI (4K)
➤ VPU: 8K video decoder and encoder	➤ 1x Capacitive touch interface (I2C)
➤ 1x HDMI 2.0 RX (4K @ 60fps)	➤ 2x LAN interfaces (LAN2 optional)
➤ 2x MIPI-CSI-RX (4-lane) camera interface	➤ 3x USB3.1 Gen 1 (2x Type-A + 1x Type-C)
➤ Audio interfaces (1x mic/headphone + 2x speaker interfaces)	➤ 2x USB2.0 Host (pin header)
➤ 1x microSD / 8x GPIO / 1x I2C / 1x RTC	➤ 1x SPI / 1x PWM (optional)
➤ 4x RS232 port (can be configured to RS485)	➤ 2x CAN2.0 (optional)
➤ M.2 (3042/3052) socket for LTE/5G modem	➤ M.2 (3042) socket for PCIe SSD
➤ Support Wake-on-LAN	➤ WiFi 6 (802.11ax) + Bluetooth 5.0 (optional)

SBC3800 (Quad ARM Cortex-A76)

(Laptop-class performance with smartphone efficiency)

Block Diagram



EC3800

EC3800 is a small size embedded computer based on SBC3800. The light-weight aluminum enclosure enables users to rapidly deploy it in a wide range of applications. Contact us for the availability.

Ordering Information

Part No.	OS	WiFi 6 + BT 5	Common Specifications
SBC3800-D	Debian	---	RK3588 / 4GB LPDDR4X / 32GB eMMC HDMI TX / eDP / DP / MIPI-DSI / Touch IF HDMI RX / Audio / USB 2.0/USB 3.1 / Audio GPIO / 4x RS232 / RTC / mSD / 1x GbE LAN M.2 PCIe Socket / SIM slot / M.2 LTE socket
SBC3800-A	Android		
SBC3800-D-WB	Debian	YES	
SBC3800-A-WB	Android		

* 4x RS232 can be configured as RS485 on purchasing the board. Contact us for more information.

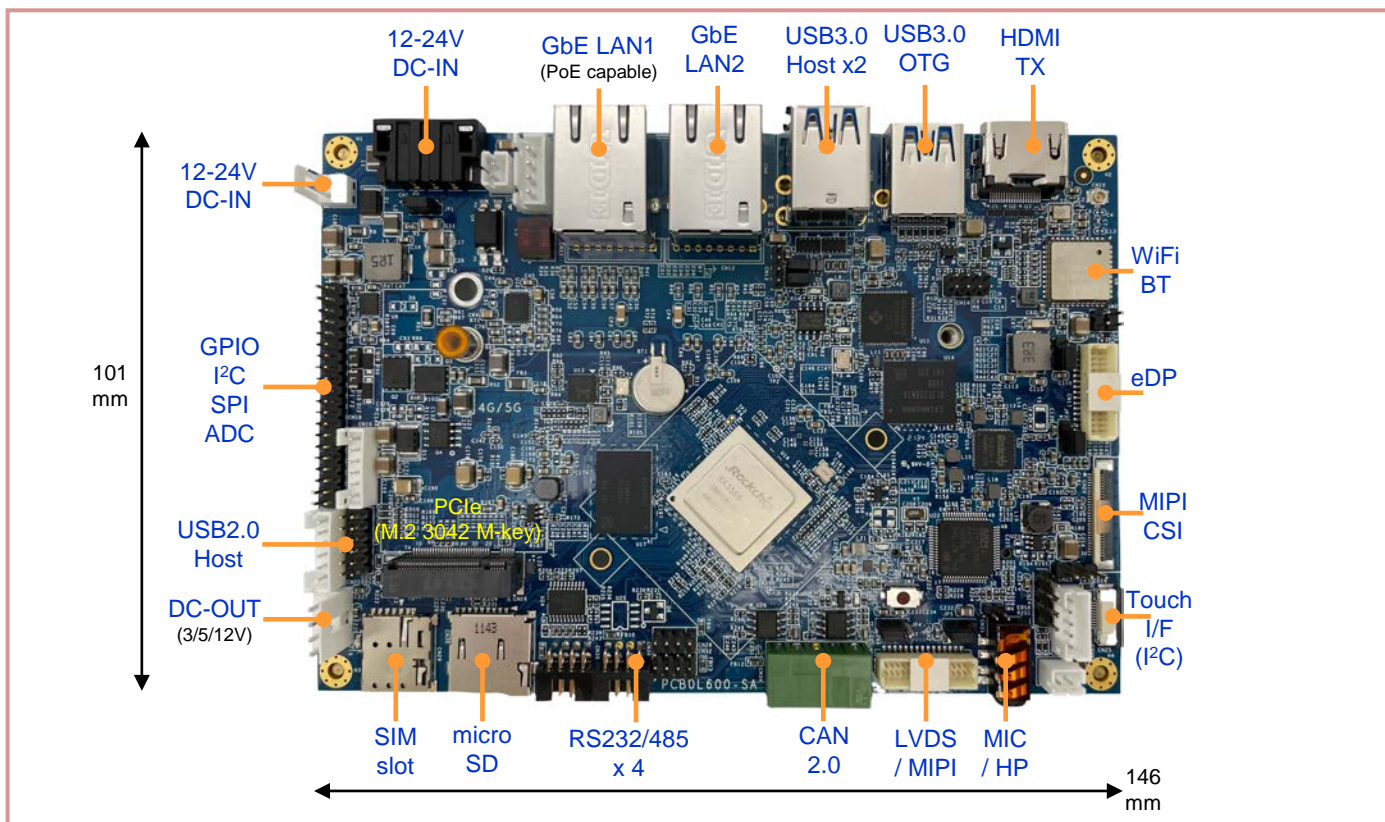
* Contact us for custom requirements: 8GB/16GB RAM, larger eMMC size, 2x LAN, RS485, etc.

Option Modules

Part No.	Description
PWR-008-SBC33	Power Adapter (+12V) + power cord
S76GH-M2	LTE module SIM7600G-H-M2 (Global Bands) / M.2 form factor
K330	MIPI DSI-to-LVDS display module

Part No.	Description
POE-GB-B01	GbE Power over Ethernet Module, RT7402D
WLS-025	(802.11ax WiFi 6275 + BT 5.0) + RF cable +Antenna
M250	HDMI-to-VbyOne display module

SBC3500/EC3500 (Quad ARM Cortex-A55)

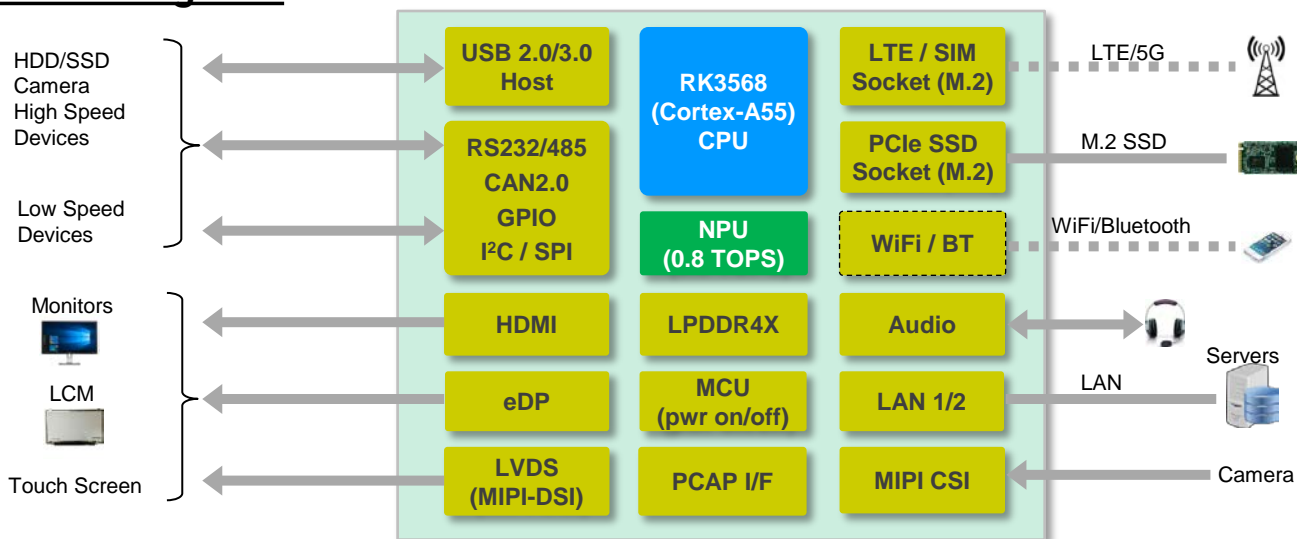


Features:

<ul style="list-style-type: none"> ➤ Small size (146mm x101mm) 	<ul style="list-style-type: none"> ➤ Quad Cortex-A55 @ 2Ghz
<ul style="list-style-type: none"> ➤ 12V-24V DC range (optional voltage protection) SBC3500 operates at 12V-24V DC and offers optional: (1). 9V~36V wide range DC input (2). over-voltage, over-current and reverse-voltage protection 	<ul style="list-style-type: none"> ➤ Android/Ubuntu for application development SBC3500 offers Ubuntu, Android OS, tool chains, device drivers and sample application software. These resources enable users to quickly develop and deploy software for their applications.
<ul style="list-style-type: none"> ➤ Software controlled power on-off (optional) SBC3500 power on/off can be controlled by software. This is for software to ensure data is completely saved before system shutdown. 	<ul style="list-style-type: none"> ➤ 2x LAN Interfaces (LAN2 optional) SBC3500 is built with 1x GbE interface by default. An optional GbE LAN2 can be added. Two LANs are independent ports and provide more communication bandwidth.
<ul style="list-style-type: none"> ➤ Multiple display interfaces : HDMI 2.0 TX / eDP 1.3 / LVDS (MIPI-DSI) 	<ul style="list-style-type: none"> ➤ Capacitive touch interface (I²C)
<ul style="list-style-type: none"> ➤ MIPI-CSI camera interface 	<ul style="list-style-type: none"> ➤ 2x USB3.0 + 5x USB2.0
<ul style="list-style-type: none"> ➤ PoE (Power over Ethernet) (optional) 	<ul style="list-style-type: none"> ➤ 4x COM port (RS232 or RS485)
<ul style="list-style-type: none"> ➤ Neural Processing Unit up to 0.8 TOPS 	<ul style="list-style-type: none"> ➤ microSD / CAN2.0 / GPIO / I²C / SPI / RTC
<ul style="list-style-type: none"> ➤ M.2 socket for LTE/5G modem 	<ul style="list-style-type: none"> ➤ M.2 socket for PCIe SSD
<ul style="list-style-type: none"> ➤ Support Wake-on-LAN 	<ul style="list-style-type: none"> ➤ WiFi 802.11 bgn/ac + Bluetooth 5.0 (optional)

SBC3500/EC3500 (Quad ARM Cortex-A55)

Block Diagram:



EC3500:

EC3500 is a small size embedded computer based on SBC3500. The light weight aluminum enclosure enables users to rapidly deploy it in a wide range of applications. Contact us for the availability.

SBC3500 (op temp: 0°C to 70°C) Ordering Information

Part No.	OS	WiFi /BT	The 2 nd LAN + MCU + CAN Bus	Common Specifications
SBC3500-U-2G	Ubuntu	---	---	OP temp: 0°C to 70°C RK3568 / 2GB DDR / 8GB eMMC HDMI / eDP / LVDS / Touch IF Audio / USB 2.0/3.0 Host / OTG GPIO / 4x RS232 (or RS485) / RTC 1x GbE LAN / LTE Socket / SIM slot M2 PCIe socket
SBC3500-A-2G	Android			
SBC3500-U-2G-WB	Ubuntu	YES	---	
SBC3500-A-2G-WB	Android			
SBC3500-U-2G-MX	Ubuntu	YES	YES	
SBC3500-A-2G-MX	Android			

SBC3500W (op temp: -20°C to 70°C) Ordering Information

Part No.	OS	WiFi /BT	The 2 nd LAN + MCU + CAN Bus	Common Specifications
SBC3500 ^W -U-2G	Ubuntu	---	---	OP temp: -20°C to 70°C RK3568 / 2GB DDR / 8GB eMMC HDMI / eDP / LVDS / Touch IF Audio / USB 2.0/3.0 Host / OTG GPIO / 4x RS232 (or RS485) / RTC 1x GbE LAN / LTE Socket / SIM slot M2 PCIe socket
SBC3500 ^W -A-2G	Android			
SBC3500 ^W -U-2G-WB	Ubuntu	YES	---	
SBC3500 ^W -A-2G-WB	Android			
SBC3500 ^W -U-2G-MX	Ubuntu	YES	YES	
SBC3500 ^W -A-2G-MX	Android			

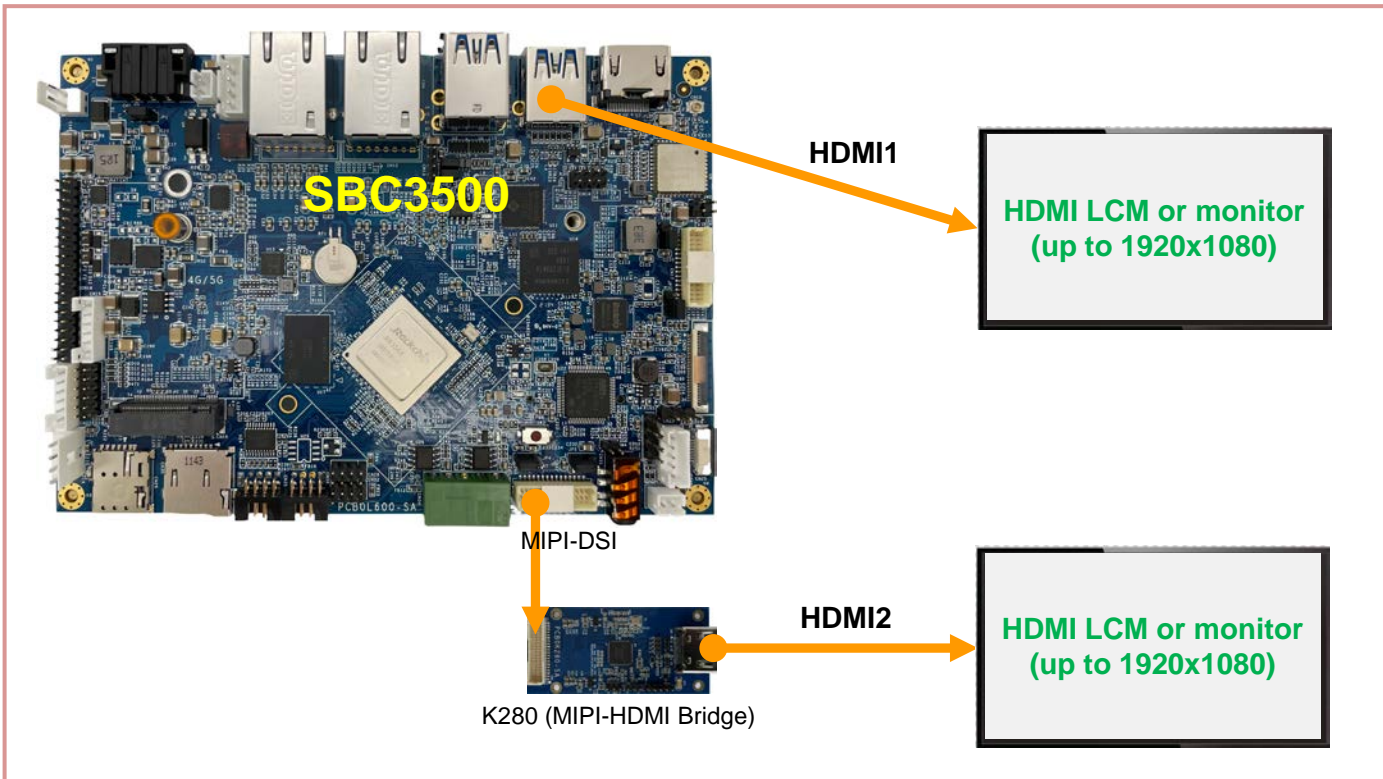
* Not all models are available. Contact us for custom requirements: bigger flash size, LAN2, WiFi/BT, etc.

SBC3500 Option Module

Part No.	Description
PWR-008-SBC33	Power Adapter (+12V) + power cord
S76GH-M2	LTE module SIM7600G-H-M2 (Global Bands)

Part No.	Description
POE-GB-B01	GbE Power over Ethernet Module, RT7402D
WLS-009	(802.11bgn/ac WiFi 6256 + BT 5.0) +RF_cable +Antenna

SBC3500-K280 (SBC with 2x HDMI-TX)



Features:

- SBC3500 is extended to HDMI2 by K280 module
- Max display resolution: 1920x1080
- Support any size of HDMI LCM / Monitor
- The same or different contents on 2x LCM/monitor
- The same or different resolutions on 2x LCM/monitor
- Support Android / Debian

Typical Applications

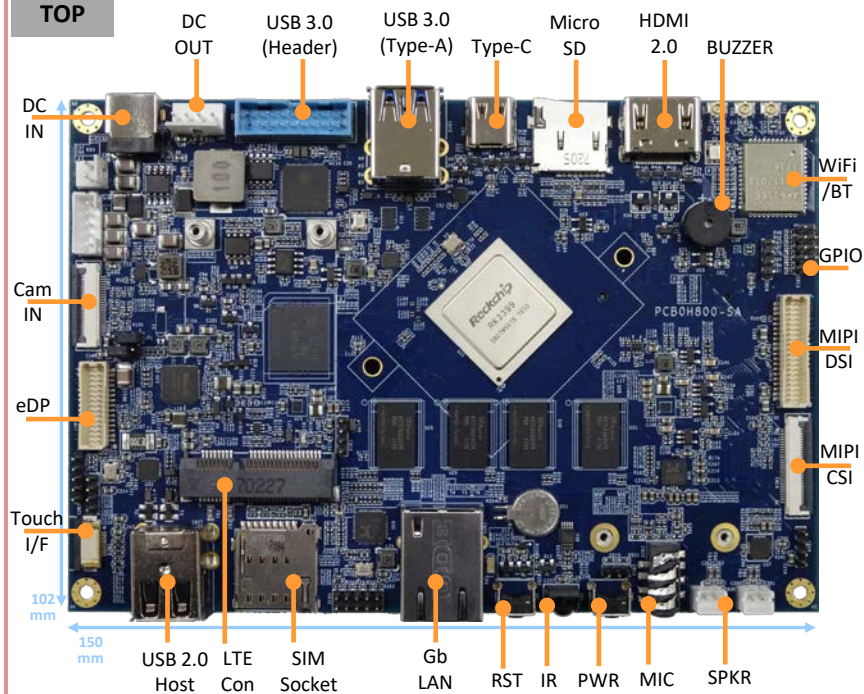
- Vending Machine
- Fitness Machine
- Digital Signage
- POS
- Gaming

SBC3500-K280 Ordering Information

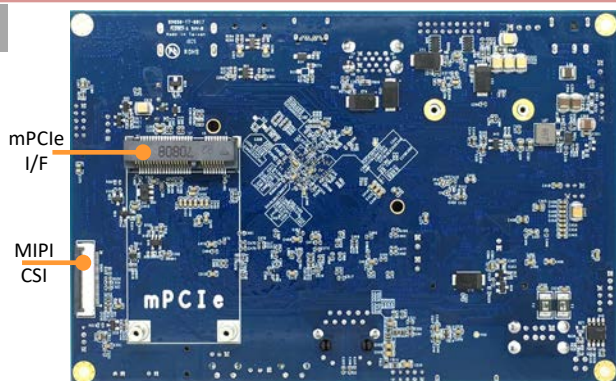
Part No.	OS	WiFi/BT	Common Specifications
SBC3500-U-2G-K280	Ubuntu	---	RK3568 / 2GB DDR / 8GB eMMC HDMI / eDP / LVDS / Touch IF Audio / USB 2.0/3.0 Host / OTG GPIO / 4x RS232 (or RS485) / RTC 1x GbE LAN / LTE Socket / SIM slot M2 PCIe socket / K280 module
SBC3500-A-2G-K280	Android		
SBC3500-U-2G-WB-K280	Ubuntu	YES	
SBC3500-A-2G-WB-K280	Android		

SBC3100/EC3100 (Hexa ARM Cortex-A72/A53)

TOP

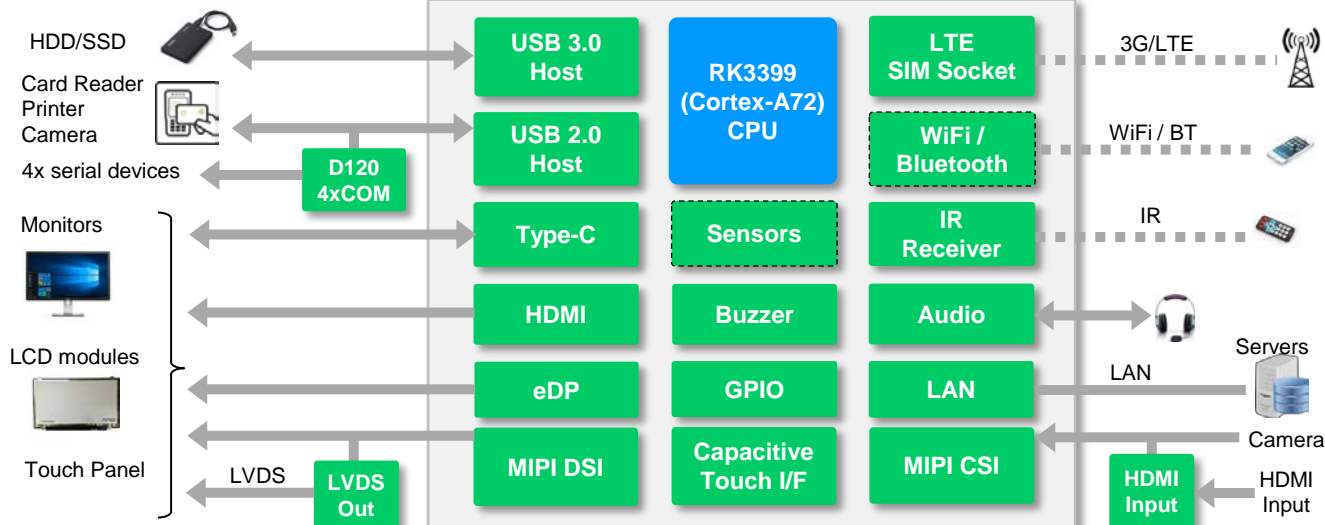


BOTTOM



Features:

- Small size (150mm x102mm)
- 6 cores (2xCortex-A72+4xCortex-A53)
- Powerful ARM Cortex-A72 up to 2Ghz
- Multiple Display Interfaces
 - HDMI / DisplayPort
 - MIPI-DSI / eDP
- Touch screen interface
- 10/100/1000 Mbps Ethernet port
- 4x USB 3.0 Host / Type-C
- MIPI-CSI camera interface
- 12V-24V DC Input
- Support Android / Debian



SBC3100/EC3100 (Hexa ARM Cortex-A72/A53)

- EC3100 is a SBC3100 with aluminum enclosure
- Dimension: 179 x 105 x 33.2 mm (not including antenna jack)



179 mm



33.2 mm

105 mm

SBC3100 Ordering Information

* Not all models are available now. Contact us for any custom requirements.

Part No.	OS	RAM	Common Specifications
SBC3100-D-2G	Debian	2GB DDR3	RK3399 CPU / 8GB eMMC HDMI / eDP / MIPI / Touch IF / Gb Ethernet Audio / GPIO / MicroSD / mPCIe socket / LTE socket RTC / USB2.0 Host / USB 3.0 Host / USB 3.0 Type-C
SBC3100-A-2G	Android		

EC3100 Ordering Information

Part No.	OS	RAM	Common Specifications
EC3100-D-2G	Debian	2GB DDR3	RK3399 CPU / 8GB eMMC USB3.0 Type-C / DP / HDMI / Gb Ethernet / LTE Socket RTC / Audio / GPIO / MicroSD / mPCIe socket / Buzzer
EC3100-A-2G	Android		

Optional Products

Part No.	Description
PWR-007-SBC	Power Adapter (+12V) + power cord
D120-SE	4x RS232/RS422/RS485 card with isolation

Part No.	Description
K330	LVDS Display I/F + MIPI cable
S76GH	LTE module SIM7600G-H (Global Bands)

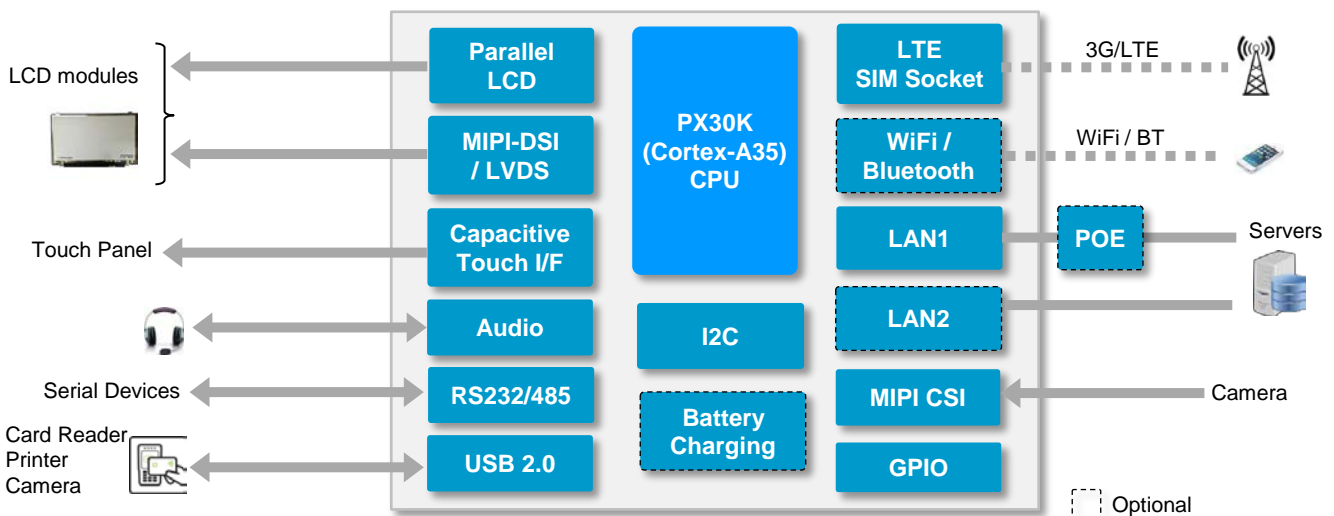
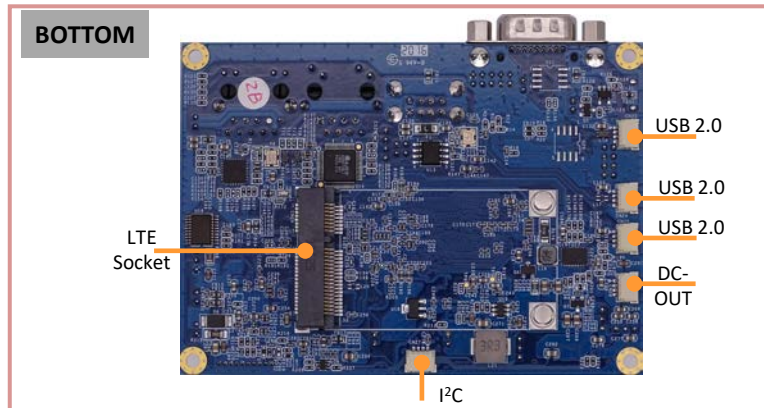
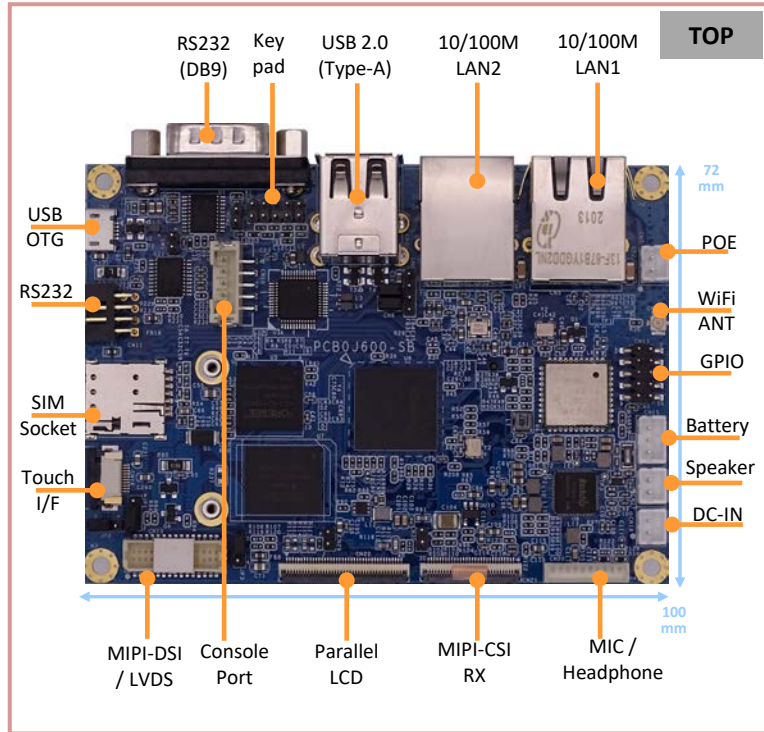
Note:

- (1). Both SBC3100 and EC3100 have 4GB RAM models. Contact us for details.
- (2). D120 and K330 modules are not with standard EC3100 enclosure. Contact us for customized enclosure to include these modules.

SBC3300/EC3300 (Quad ARM Cortex-A35)

Features:

- Tiny size (100mm x72mm)
- Quad (64-bit) Cortex-A35 up to 1.3Ghz
- Dual Display Interfaces
- Touch screen interface
- Dual 10/100Mbps LAN ports (LAN2 optional)
- 5x USB 2.0 Host ports
- 2x RS232 (or RS485) port
- 8-bit GPIO
- 12V DC Input
- Support PoE (Power Over Ethernet) (optional)
- Support Battery Charging (optional)
- Wide Temp Range (-20°C to 70°C)
- Support DIN Rail Mounting (EC3300)



SBC3300/EC3300 (Quad ARM Cortex-A35)

Overview

EC3300 is a tiny size embedded computer based on SBC3300. The light weight aluminum enclosure enables users to rapidly deploy it in a wide range of applications. EC3300 can be mounted on a DIN rail.

Brief Specifications

CPU /RAM /eMMC	SBC3300 specifications	I/O Connectors	8x GPIO connector / 2x RS232 (or RS485)
Power Input	+9V to +36V (with K920)		1x MIC / Headphone
Environment	Operating temperature: -20°C to 70°C		5x USB 2.0 host / 1x USB 2.0 OTG
Dimension	157 x 75 x 36 mm		1x SIM slot / 3x antenna (option)



SBC3300 Ordering Information

Part No.	OS	WiFi /BT	The 2 nd LAN	Battery Charger	Common Specifications
SBC3300-U-2G	Ubuntu	---	---	---	Rockchip PX30K CPU / 2GB LPDDR3 / 8GB eMMC Parallel LCD / LVDS / Touch IF / Audio / RTC GPIO / 2x RS232 (or RS485) / USB 2.0 Host / OTG 1x 100M LAN / LTE Socket / SIM slot
SBC3300-A-2G	Android	---	---	---	
SBC3300-U-2G-MX	Ubuntu	YES	YES	YES	
SBC3300-A-2G-MX	Android	YES	YES	YES	

EC3300 Ordering Information

Part No.	OS	WiFi /BT	The 2 nd LAN	Battery Charger	Common Specifications
EC3300-U-2G	Ubuntu	---	---	---	Rockchip PX30K CPU / 2GB LPDDR3 / 8GB eMMC Audio / GPIO / 2x RS232 (or 485) / RTC USB 2.0 Host / OTG / Aluminum Enclosure 1x 100M LAN / LTE Socket / SIM slot
EC3300-A-2G	Android	---	---	---	
EC3300-U-2G-MX	Ubuntu	YES	YES	YES	
EC3300-A-2G-MX	Android	YES	YES	YES	

* Not all models are available. Contact us for custom requirements: bigger flash size, LAN2, WiFi/BT, etc.

Optional Products

Part No.	Description
PWR-008-SBC33	Power Adapter (+12V) + power cord
K920	9V-36V DC-IN converter board
S76GH	LTE module SIM7600G-H (Global Bands)

Part No.	Description
POE-MB-A01	10/100M Power Over Ethernet Module
WLS-020	(802.11bgnWiFi+BT4.1)+ RF cable + Antenna
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