

# RSB-4710

## Rockchip ARM Cortex-A72 RK3399 3.5" SBC



### Features

- Rockchip RK3399 ARM Dual Cortex-A72 and Quad Cortex-A53 1.8 GHz
- Onboard 2/4GB LPDDR4 memory and 16/32GB eMMC
- Dual HDMI(4K 60fps + 1080P), 1 x eDP, 1 x dual channel LVDS, 1 x MIPI CSI
- Supports 4K H.264/H.265 video decoder
- 6 x serial, 1 x USB3.0, 4 x USB2.0, 1 x USB OTG, 2 x GbE, 1 x SPI, 1 x I2C, 5 x GPIOs
- M.2 for WIFI/BT support, mini-PCIe for 3G/4G support
- Supports Debian9/10 and Android7.1/10.0



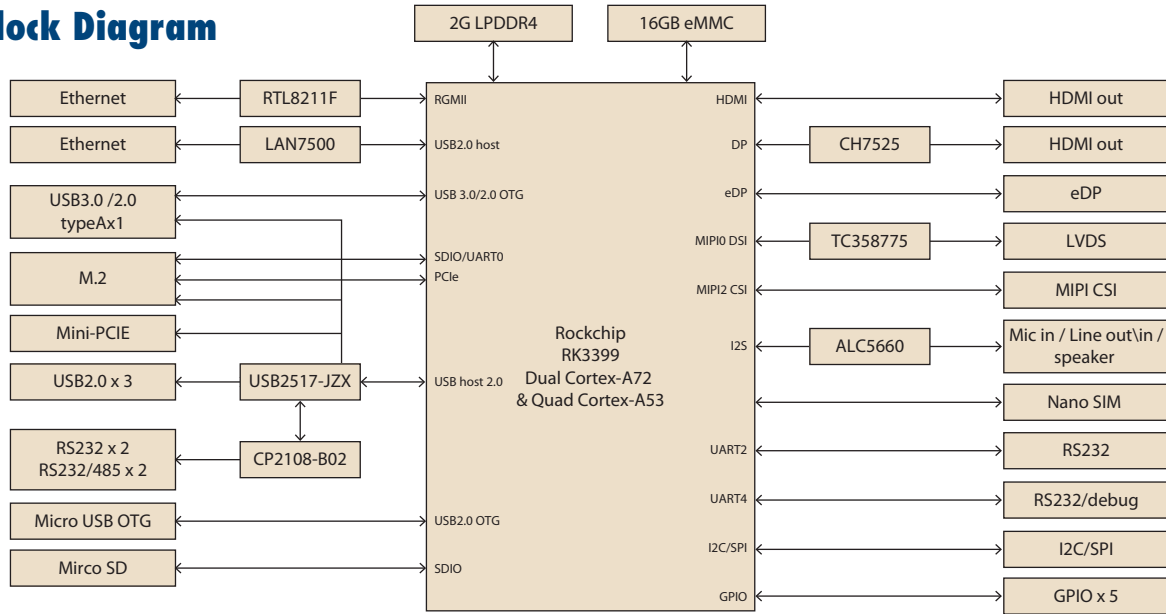
### Introduction

RSB-4710 is a RISC 3.5" single board computer (SBC) powered by a high-performance Rockchip RK3399 ARM dual Cortex-A72 and quad Cortex-A53 high performance processor which supports 4K display from HDMI. It offers both multiple display as dual HDMI/LVDS/eDP and multiple IO as dual GbE/6 x serials/6 x USB/5 x GPIO. RSB-4710 also features Mini-PCIe, M.2, and SIM card slots for integrating Wi-Fi, Bluetooth, and 3G/4G modules. It is an ideal solution for Kiosk, POS, and Vending machine application.

### Specifications

Form Factor		3.5" SBC
Processor	CPU	Rockchip RK3399 ARM dual Cortex-A72 and quad Cortex-A53 1.8 GHz
Memory	Technology	LPDDR4 1333MHz
	Capacity	On-board LPDDR4 2GB
	Flash	16GB of eMMC NAND Flash for OS and Advantech's boot loader
Graphics	LVDS	1 x 18/24-bit LVDS with 1920 x 1200 for dual channels at 60Hz
	HDMI	2
	eDP	1, max 2.7Gbps
	Graphics Engine	OpenGL ES 1.1/2.0/3.1, OpenCL 1.1, DirectX 11
	H/W Video Codec	Decoder: MPEG-1, MPEG-2, MPEG-4, H.263, H.264, AVS, VC-1, VP8, MVC, HEVC/H.265 decoder, 4k@60FPS Encoder: H.264 (BP@level4.0, MP, HP@level4.0), MVC and VP8
Ethernet	Chipset	RTL8211FSI
	Speed	2 x 10/100/1000 Mbps
WatchDog Timer		Yes
I/O	SATA	-
	SATA Power	-
	USB	1 x USB OTG, 1 x USB3.0 & 1 x USB2.0 by TypeA, 3 x USB2.0 by pinheaders
	Audio	1 x Line out, 1 x Mic-in, 1 x line in, 1 x Speaker out via a pin header
	SPDIF	-
	SDIO	-
	Serial Port	1 RS232 w/2wire, by DB9 1 RS232 w/2Wire, by pin header, reused as debug port by jumper 2 RS232 by pin headers 2 RS232/485 by pin headers
	SPI	1, can be config to GPIO by SW
	CAN	-
	GPIO	5 x GPIO via pin header (3.3V TTL level)
	I <sup>2</sup> C	1, can be config to GPIO by SW
	System Bus	-
	Touch	-
	MIPI CSI	1
Button	1 x reset button, 1 x power button via a pin header	
Expansion	Mini PCIe	1 x Mini PCIe slot, w/USB
	SD Socket	1 x Micro SD slot
	SIM Slot	1 x SIM slot
	M.2 Socket	1 x M.2 2230 Key E slot, w/SID0*UART*PCIe*USB
Power	Power Supply Voltage	12 V
	Power Type	DC-in
	Power Consumption	Boost 15W@12V
Environment	Operating Temperature	0 - 60 °C/-20 - 85 °C
	Operating Humidity	5 - 95% relative humidity, non-condensing
Mechanical	Dimensions (W x D)	146 x 102 mm
Operation System		Supports Debian9/10 and Android7.1/10.0
Certifications		CE/FCC Class B

### Block Diagram



### Ordering Information

Part Number	CPU	Memory	Flash	HDMI	eDP	LVDS	LAN	Serial Port	SATA	USB	System Bus	SD	CAN Bus	Operating Temperature
RSB-4710CO-XNA1E	Rockchip RK3399	2GB	16GB	2	1	1	2	6	-	6	-	1	-	0 ~ 60 °C
RSB-4710WO-XNA1E	Rockchip RK3399K	2GB	16GB	2	1	1	2	6	-	6	-	1	-	-20 ~ 85 °C
RSB-4710CO-XLA1E	Rockchip RK3399	2GB	16GB	1	1	-	1	2	-	6	-	1	-	0 ~ 60 °C
RSB-4710WO-XLA1E	Rockchip RK3399K	2GB	16GB	1	1	-	1	2	-	6	-	1	-	-20 ~ 85 °C
RSB-4710CO-ANA1E	Rockchip RK3399	4GB	32GB	2	1	1	2	6	-	6	-	1	-	0 ~ 60 °C

### Packing List

Part Number	Description
RSB-4710	RSB-4710 3.5" SBC with heatsink (PN 1970004538T011)

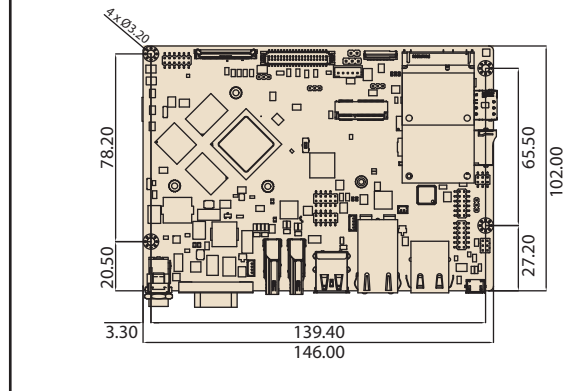
### Optional Accessories

Part Number	Description
96PSA-A36W12W7-5	ADP A/D 100-240V 36W 12V C6 LOCK DC JACK 62368
96PSA-A60W12W7-4	ADP A/D 100-240V 60W 12V LOCK DC PLUG WIDE TEMP
170203183C	Power cord 3P EU 183cm
170203180A	Power cord 3P UK 183cm
1700001524	Power Cord UL 3P 10A 125V 183cm
1700008921	Power Cord 3P PSE 183cm
1700019146	Power Cord CCC 3P 10A 250V 183cm
1700026611-01	Debug cable
1750007965-01	Antenna Cable R/P SMA (M) to MHF4, 300mm
1750008717-01	WiFi Dual band 2.4G and 5G Antenna
EWM-W159M201E	802.11 ac/a/b/g/n, RTL 8822CE-CG, 2T2R, w/ BT5.0
AIW-344FQ-01	AIW-3 series LTE CAT4 mini PCI-e module
968AD00479*	4G module LTE Cat 4 for China
1750006264	Antenna cable SMA(F)/MHF 15cm
1750008303-01	Antenna AN0727-64SP6B5M
SQF-MSDM1-8G-21C	SQF MICRO SD C10 MLC 8G (-25 ~ 85 °C)
IDK-1107WR-40WVA1E	7" LED PANEL 400N with 4WR touch, 800x480(G)
IDK-1121WR-30FHA1E	21.5", 1920x1080, 300nit, Part No. 97.21G01.001-S03
XUTC-B156XTN07.1	AUO 15.6", 1366 x 768, 220nits, for UTC project
1700031071-01	LVDS cable for IDK-1107WR
1700031103-01	DP cable for XUTC-B156XTN
1700031060-01	M cable D-SUB 9P(M)*2/2*6P, RS232/485x2
1700028482-01	F CABLE 2*6P, RS232 X2
1700031092-01	A cable 1*10P-1.0/D-SUB 9P(F), GPIO
1700031093-01	A cable 2*5P-2.0/JACK*2, line out & Mic
1700002172	A Cable 2*5P-2.0/USB-A 4P(F)*2, USBx2

\* Please contact us to get suitable cellular module for your region.

### Dimensions

Unit: mm



### External I/O

