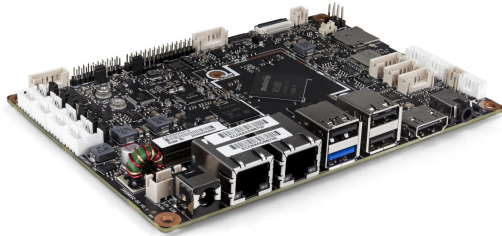


# JES-R68I

## Rockchip RK3568J 3.5-inch Embedded Board

JES-R68I is an Arm-based 3.5" single board computer powered by industrial grade Rockchip RK3568J SoC, which includes 4x Arm Cortex-A55 cores and integrates a 1 TOPS NPU for machine learning acceleration. It supports multiple display options and provides rich I/O resources including 2x GbE, 2x CAN, 5x USB, 6x COM, 7x GPIO. JES-R68I is an ideal platform for integration into a fanless system used in budget-conscious consumer, commercial or industrial applications.

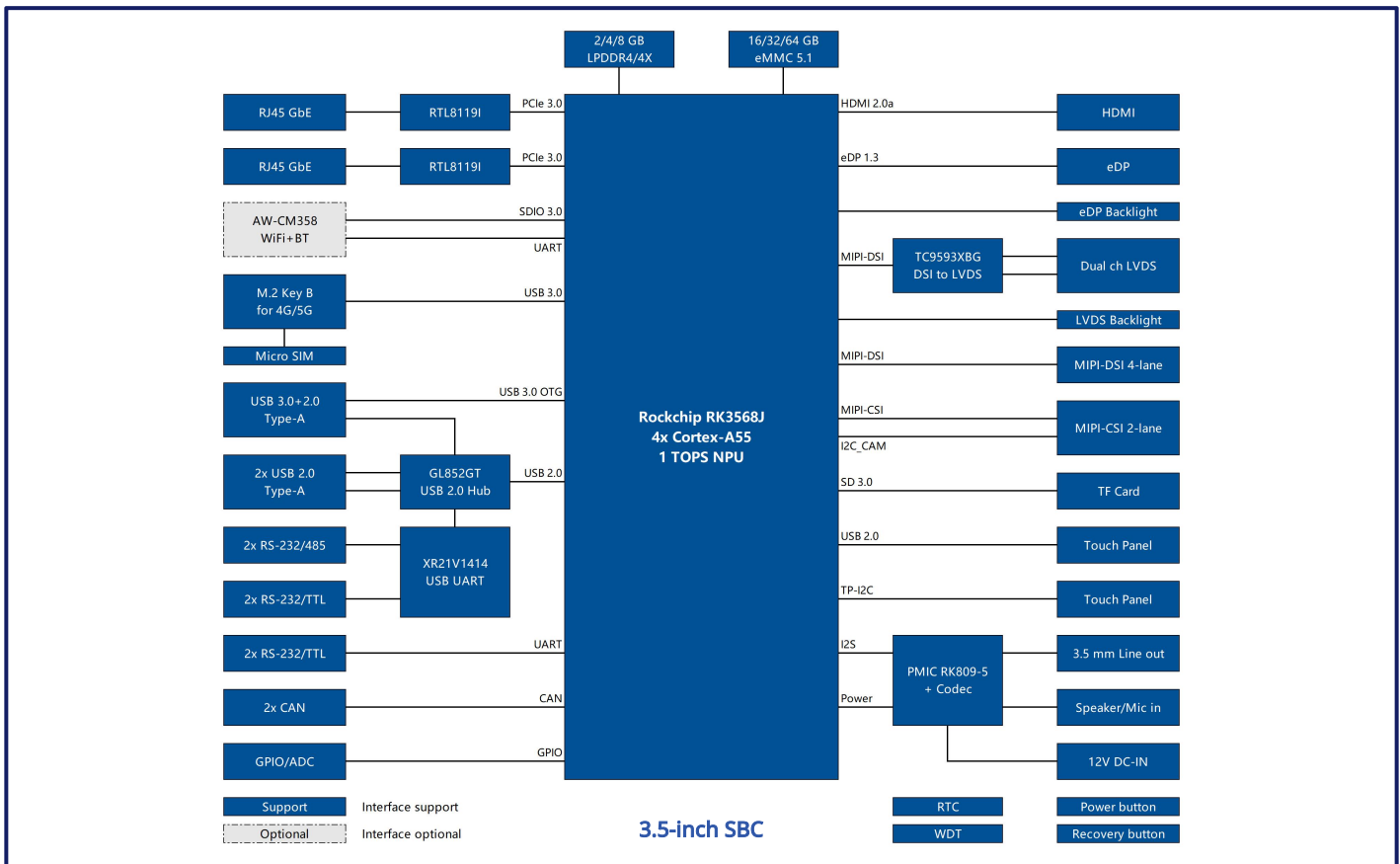


- Industrial-grade Rockchip RK3568J SoC up to 1.8 GHz
- 4x Cortex-A55 + Mali-G52 GPU + 1 TOPS NPU
- On-board 2/4/8GB LPDDR4/4X + 16/32/64GB eMMC
- Display: 1x HDMI, 1x eDP, 1x LVDS, 1x MIPI-DSI
- I/O: 2x GbE, 2x CAN, 5x USB, 6x COM, 7x GPIO
- On-board WiFi+BT module + M.2 Key B for 5G/4G
- Supports 0~60°C/-40~85°C operating temperature

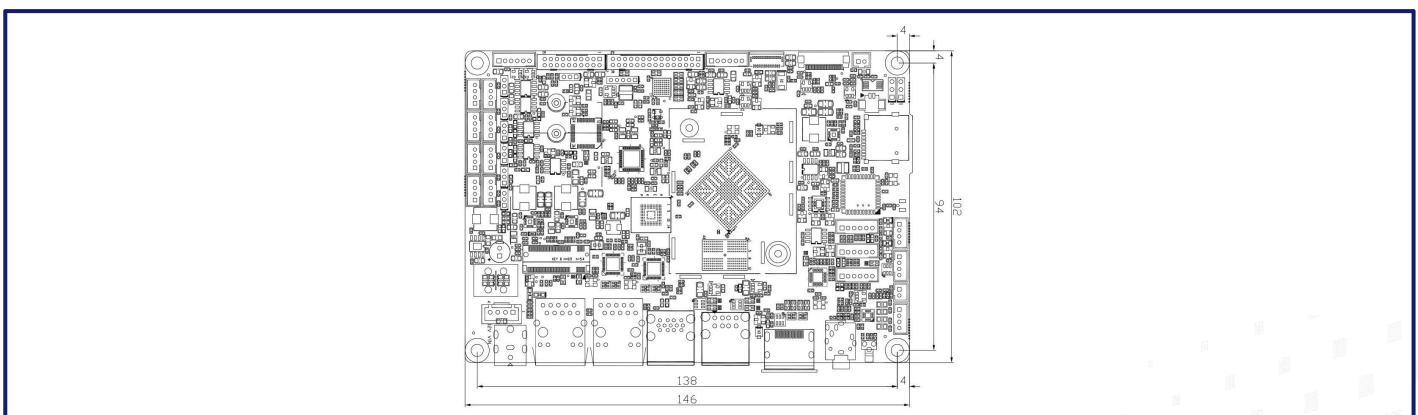
## 01 Specifications

<b>CPU</b>	Rockchip RK3568J/RK3568B2, Quad core Arm Cortex-A55 processors up to 1.8 GHz
<b>NPU</b>	1 TOPS Neural Network performance
<b>GPU</b>	Arm Mali-G52 1-Core-2EE, supports OpenGL ES 1.1/2.0/3.2, Vulkan 1.0/1.1, OpenCL 2.0 FP
<b>H/W Video Codec</b>	H.265/H.264/VP9/VP8 Decoder up to 4K60, H.265/H.264 Encoder up to 1080p60
<b>Memory</b>	On-board 2GB/4GB/8GB LPDDR4/4X
<b>Storage</b>	On-board 16GB/32GB/64GB eMMC 5.1 for OS 1x Micro SD slot for storage expansion
<b>Ethernet</b>	2x RJ45, 10/100/1000 Mbps, 4kV Surge protection
<b>WiFi</b>	On-board AW-CM358 WiFi 5 (802.11ac) + Bluetooth 5.2 module
<b>5G/4G</b>	1x M.2 Key B for 4G/5G (USB 3.0), 1x Micro SIM slot
<b>Display</b>	1x HDMI 2.0a Type-A up to 4K60 1x eDP 1.3 (2x10-pin 2.0mm header), 1x eDP backlight (12V, 1x6-pin 2.0mm wafer) 1x Dual channel LVDS (2x15-pin 2.0mm header), 1x LVDS backlight (12V, 1x6-pin 2.0mm wafer) 1x 4-lane MIPI-DSI (31-pin 0.3mm FPC) Supports HDMI+eDP/LVDS/MIPI-DSI Dual independent display
<b>Video Input</b>	1x 2-lane MIPI-CSI (24-pin 0.5mm FPC)
<b>Audio</b>	1x 3.5mm Line out, 1x Speaker (2x3W) & 1x Mic in via pin headers
<b>USB</b>	1x USB 3.0 OTG Type-A, 3x USB 2.0 Type-A, 1x USB 2.0 via pin header
<b>Serial Port</b>	2x RS-232/485, 4x RS-232/TTL, 1x Debug via pin headers
<b>CAN</b>	2x CAN via pin headers
<b>I2C</b>	1x I2C for touch control
<b>GPIO</b>	7x GPIO (3.3V TTL level) & 1x ADC (0~1.8V input) via pin headers
<b>Board Features</b>	Watchdog Timer, RTC, power button, programmable LEDs
<b>Power Supply</b>	12V DC-IN via 5.5x2.5mm DC Jack or 1x4-pin 2.5mm wafer
<b>Form Factor</b>	3.5 inch, 146mm x 102mm
<b>OS Support</b>	Android 11, Debian 11, Ubuntu 18.04, OpenHarmony 4.0, Preempt-RT Linux
<b>Operating Conditions</b>	0~60°C/-20~70°C/-40~85°C, 10%~90% RH non-condensing
<b>Storage Conditions</b>	-40~85°C, 5%~90% RH non-condensing

## Block Diagram



## Dimensions



## Order Information

Part Number	SoC	Memory	Flash	WiFi	LAN	USB	Serial Port	CAN	GPIO	Operating Temp.
JES-R68I-AQH42	RK3568J	4GB	32GB	WiFi 5	2	5	4x RS232 2xRS485	2	7	-40~85°C
JES-R68I-BQX42	RK3568B2	8GB	64GB	WiFi 5	2	5		2	7	0~60°C
JES-R68I-BQH42	RK3568B2	4GB	32GB	WiFi 5	2	5		2	7	0~60°C
JES-R68I-AQM02	RK3568J	2GB	16GB	WiFi 5	2	5	2x RS232 2x RS485 2x TTL	2	7	-40~85°C
JES-R68I-BQM02	RK3568B2	2GB	16GB	WiFi 5	2	5		2	7	0~60°C
JES-R68I-BQU02*	RK3568B2	2GB	16GB	-	2	5		2	7	0~60°C

\* This spec supports HDMI display option only.