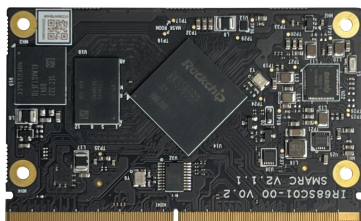


# JSOM-R68C

## Rockchip RK3568J SMARC Module

JSOM-R68C is an Arm-based SMARC 2.1.1 Computer-on-Module 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 offers multiple display options and various high-speed interfaces including 1x GbE, 2x PCIe, 4x USB, 4x UART, 2x CAN. JSOM-R68C is the perfect basis for creating cost-effective edge AI solutions used in AGVs, digital signage, kiosk and medical applications.

JSOM-R68C is paired with the JSOM-SC211 SMARC 2.1.1 development board for faster end-product peripheral integration and time-to-market, offered along with carrier board design support documents and Android/Linux SDK.

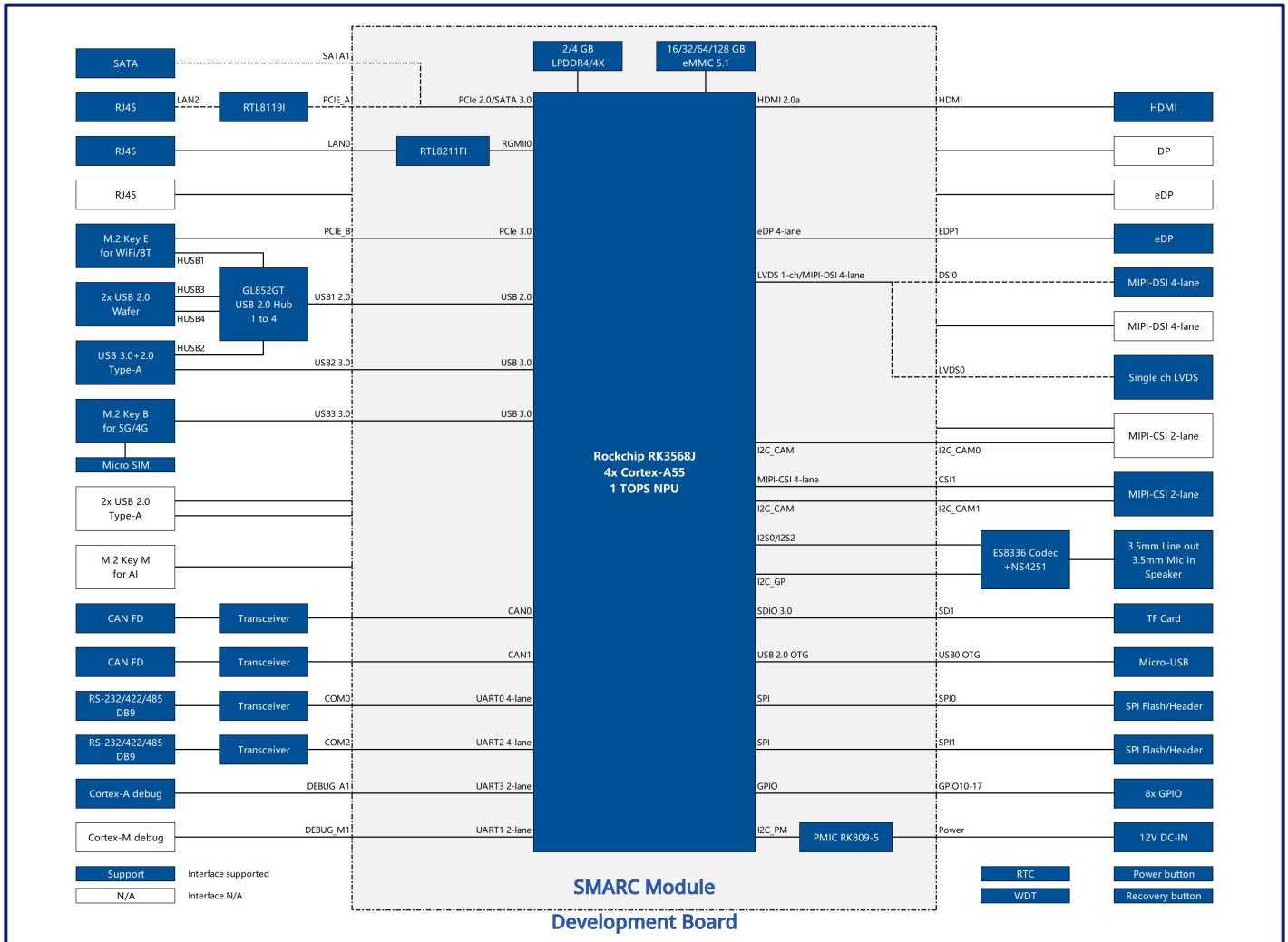


- Industrial-grade Rockchip RK3568J SoC up to 1.8 GHz
- 4x Cortex-A55 + Mali-G52 GPU + 1 TOPS NPU
- Ideal for entry level edge AI applications
- On-board 2/4GB LPDDR4/4X + 16/32/64/128GB eMMC
- Display: 1x HDMI, 1x eDP, 1x LVDS or MIPI-DSI
- I/O: 1x GbE, 2x PCIe, 4x USB, 4x UART, 2x CAN
- Supports 0~60°C/-40~85°C operating temperature

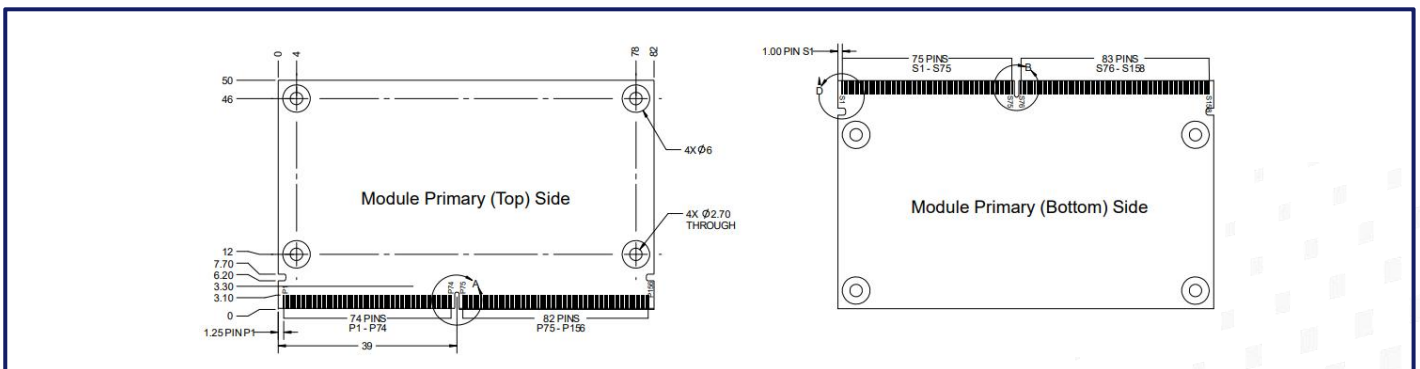
## 01 Specifications

CPU	Rockchip RK3568J/RK3568B2, Quad core Arm Cortex-A55 processors up to 1.8 GHz
NPU	1 TOPS Neural Network performance
GPU	Vivante GC7000UL, supports OpenVG 1.1, Open GL ES 3.1, Vulkan, and Open CL 1.2 FP
H/W Video Codec	H.265/H.264/VP9/VP8 Decoder up to 1080p60, H.265/H.264 Encoder up to 1080p60
Memory	On-board 2GB/4GB LPDDR4/4X
Flash Memory	On-board 16GB/32GB/64GB/128GB eMMC 5.1 for OS
Ethernet	1x 10/100/1000 Mbps
Display	1x HDMI 2.0a up to 4K30 1x 4-lane eDP 1.3 1x 4-lane MIPI-DSI or Single channel LVDS (configured by software) Dual independent display or triple identical display support
Video Input	1x 4-lane MIPI-CSI
Audio	2x I2S
PCIe	1x PCIe 3.0 1-lane, 1x PCIe 2.0 1-lane (shared with SATA)
SATA	1x SATA 3.0 (shared with PCIe 2.0)
USB	2x USB 3.0 Host, 1x USB 2.0 Host, 1x USB 2.0 OTG/Host
Serial Port	2x 4-wire UART, 2x 2-wire UART for debug
Other I/Os	1x SDIO (4 bit, for SD cards), 2x CAN FD, 2x SPI, 5x I2C, 14x GPIO
Board Features	Watchdog Timer, RTC
Power Supply	DC 5V, supports 3.6~5.25V operation from Lithium-ion cells
Form Factor	SMARC 2.1.1 314-pin MXM Connector, 82mm x 50mm
OS Support	Debian 10/11, Android 11
Boot Options	eMMC
Operating Conditions	0~60°C/-20~70°C/-40~85°C, 10%~90% RH non-condensing
Storage Conditions	-40~85°C, 5%~90% RH non-condensing

## 02 Block Diagram



## 03 Dimensions



## 04 Order Information

Part Number	SoC	Memory	Flash	GbE	PCIe	SATA	USB	UART	CAN	Operating Temp.
JSOM-R68C-AQH01	RK3568J	4GB	32GB	1	2	1*	4	4	2	-40~85°C
JSOM-R68C-AQM01	RK3568J	4GB	16GB	1	2	1*	4	4	2	-40~85°C
JSOM-R68C-BQH01	RK3568B2	4GB	64GB	1	2	1*	4	4	2	0~60°C
JSOM-R68C-BQL01	RK3568B2	2GB	16GB	1	2	1*	4	4	2	0~60°C

\* SATA shared with PCIe 2.0