

JSOM-R88C

Rockchip RK3588J SMARC Module

JWIPC's JSOM-R88C is an Arm-based SMARC 2.1.1 Computer-on-Module powered by industrial tier Rockchip RK3588J SoC, which includes 4x Arm Cortex-A76 cores, 4x Arm Cortex-A55 cores, 6 TOPS NPU and Arm Mali-G610 3D graphics engine. It supports HDMI, DP, eDP, MIPI-DSI display and rich I/O resources such as 1x SATA, 1x GbE, 2x CAN, 3x PCIe, 4x USB, 4x UART. Designed for -40~85°C industrial operating temperature, JSOM-R88C is ideal for high performance edge AI applications such as autonomous mobile robots (AMRs), endoscopy systems, machine vision & edge computing, etc.

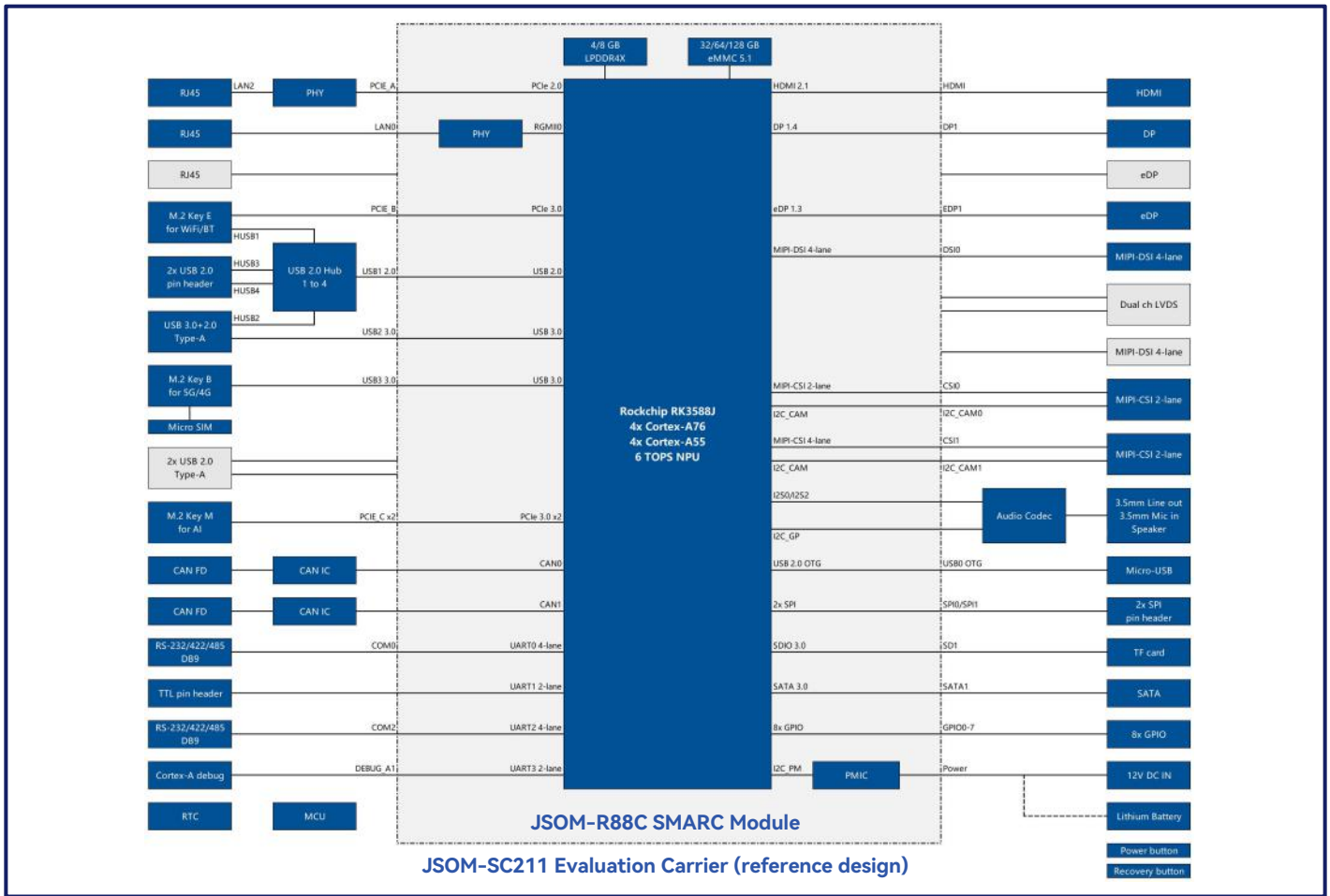


- Arm-based SMARC 2.1.1 Computer-on-Module
- Industrial tier Rockchip RK3588J SoC up to 2.4 GHz
- 4x Cortex-A76 + 4x Cortex-A55 + 6 TOPS NPU
- On-board 4/8GB LPDDR4X + 32/64/128GB eMMC 5.1
- Display: 1x HDMI, 1x DP, 1x eDP, 1x 4-lane MIPI-DSI
- I/O: 1x SATA, 1x GbE, 2x CAN, 3x PCIe, 4x USB, 4x UART
- DC 5V, supports 3.6~5.25V Lithium battery operation
- Supports -40~85°C operating temperature

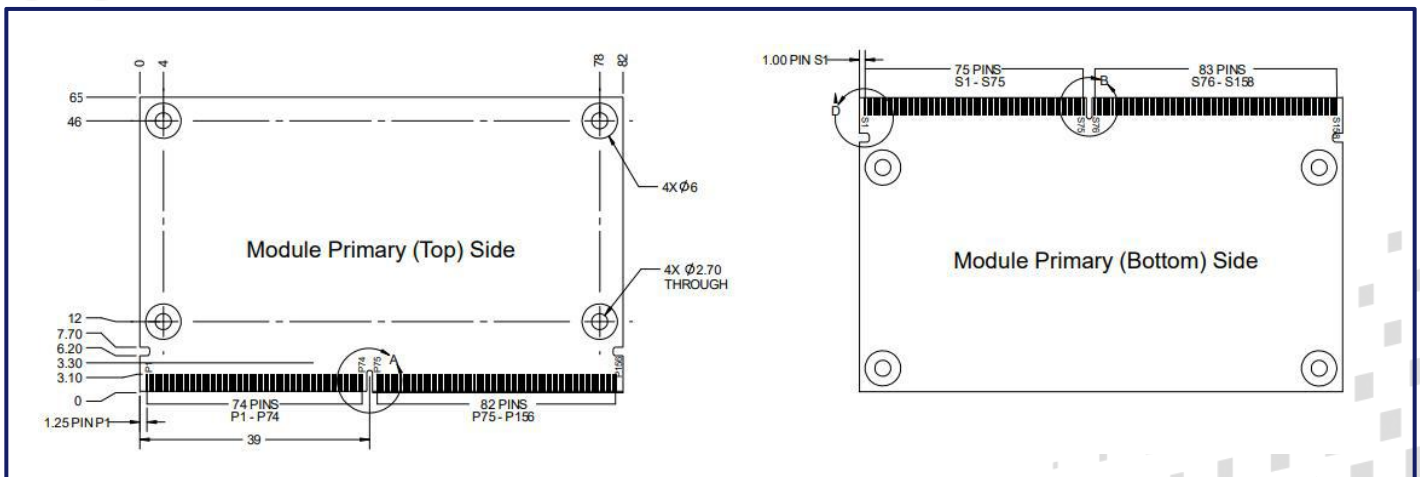
Specifications

CPU	Rockchip RK3588J, Octa core Cortex-A76/A55 processors up to 2.4 GHz, 64-bit Arm® v8.2-A architecture
NPU	6 TOPS Neural Network performance
GPU	Arm Mali-G610 MP4, supports OpenGL ES 1.1/2.0/3.2, OpenCL 2.2, Vulkan 1.2
H/W Video Codec	Decoder: H.265, VP9, AVS2 up to 8K60; Encoder: H.265, H264 up to 8K30
Memory	On-board 8GB LPDDR4X (4GB optional)
Flash Memory	On-board 32GB eMMC 5.1 for OS (64GB/128GB optional)
Ethernet	1x 10/100/1000 Mbps
Display	1x HDMI 2.1, 1x DP 1.4, 1x eDP 1.3, 1x 4-lane MIPI-DSI
Camera Input	1x 4-lane MIPI-CSI, 1x 2-lane MIPI-CSI; 48M ISP with HDR & 3DNR support
Audio	2x I2S
PCIe	1x PCIe 3.0 x2, 1x PCIe 3.0 x1, 1x PCIe 2.0 x1
USB	1x USB 2.0 OTG, 2x USB 3.0, 1x USB 2.0
UART	2x 4-wire UART, 2x 2-wire UART
CAN	2
SATA	1
SDIO	1
SPI	2
I2C	5
GPIO	14
Form Factor	SMARC 2.1.1 MXM 314 pin, 82mm x 65mm
Power Supply	DC 5V, supports 3.6~5.25V Lithium battery operation
Operating System	Ubuntu 22.04, Android 12
Boot Options	eMMC
Operating Conditions	-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 No.	SoC	Memory	Flash	LAN	Display	I2S	PCIe	USB	UART	CAN	SATA	SPI	I2C	GPIO	Operating Temperature
JSOM-R88C-AOH00	RK3588J Octa core	8GB	128GB	1x 1000M	1x HDMI	2	1x PCIe 3.0 x2 1x PCIe 3.0 x1 1x PCIe 2.0 x1	5	4	2	1	2	5	14	-40~85°C
JSOM-R88C-AOM00	RK3588J Octa core	8GB	32GB	1x 1000M	1x DP 1x eDP	2		5	4	2	1	2	5	14	-40~85°C
JSOM-R88C-BOM00	RK3588 Octa core	8GB	32GB	1x 1000M	1x MIPI-DSI	2		5	4	2	1	2	5	14	0~60°C