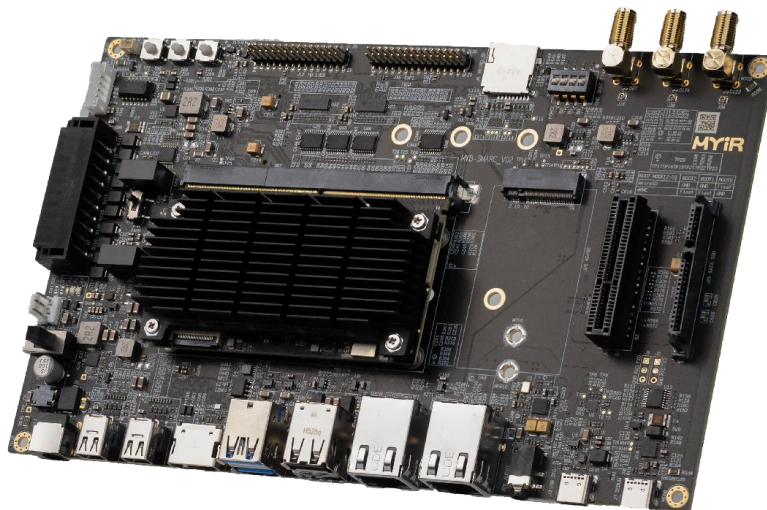
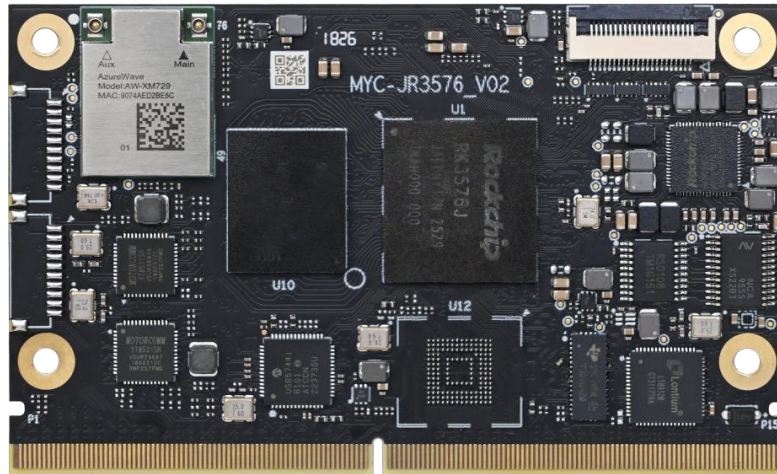


MYD-JR3576 Development Board Overview



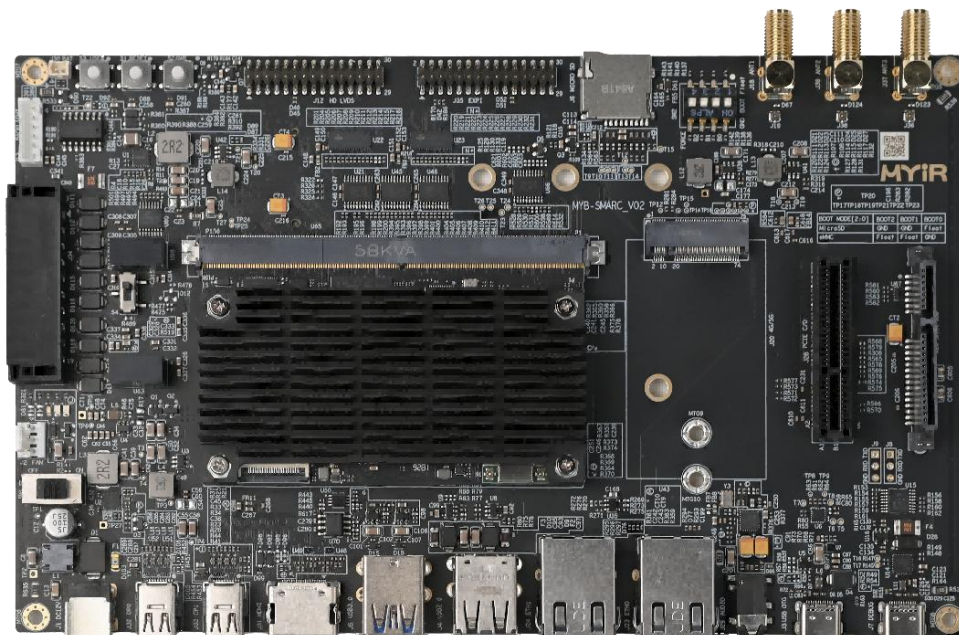
- ✓ MYD-JR3576 Development Board Powered by MYC-JR3576 SMARC SOM
- ✓ Rockchip RK3576 (J) Octa-core Arm Processor with Quad Cortex-A72 Cores at 2.2 GHz and Quad Cortex-A53 Cores at 1.8 GHz, Up to 6 TOPs NPU, 3D GPU, 4K Video Codec
- ✓ 4GB/8GB LPDDR5, 32GB/64GB eMMC, 32Kbit EEPROM
- ✓ 2× USB 3.0 Host, 2× USB 2.0 Host, 1× USB 2.0 OTG, 2× CAN FD, 2× RS232, 1× RS485
- ✓ Dual Gigabit Ethernet, onboard Wi-Fi 6/BT 5.4, 4G/5G via mini PCIe socket with dual Micro SIM
- ✓ 1× M.2-2280 PCIe Slot (NVMe SSD / Computer Card), 1x 22P SATA SSD Interface
- ✓ 1× HDMI, LVDS/MIPI-DSI, 1× DisplayPort (DP), 2× MIPI-CSI, Audio I/O
- ✓ Supports Linux and Android
- ✓ Supports Optional Camera and Display Modules

The MYD-JR3576 kit consists of the MYC-JR3576 System-on-Module (SoM) and the MYB-SMARC baseboard, connected via a standard SMARC interface. At the heart of the module is the high-performance Rockchip RK3576/RK3576J processor, which combines an octa-core CPU (4× Cortex-A72 + 4× Cortex-A53), a 6 TOPS AI NPU, and a 3D GPU, with support for 4K video encoding and decoding. The MYC-JR3576 integrates this processor with LPDDR5 (4GB/8GB), eMMC (32GB/64GB), 32Kbit EEPROM, an onboard Wi-Fi 6 and Bluetooth 5.4 module, an independent TPM 2.0 security chip, and a PMIC, forming a complete minimum system.



MYC-JR3576 System-On-Module

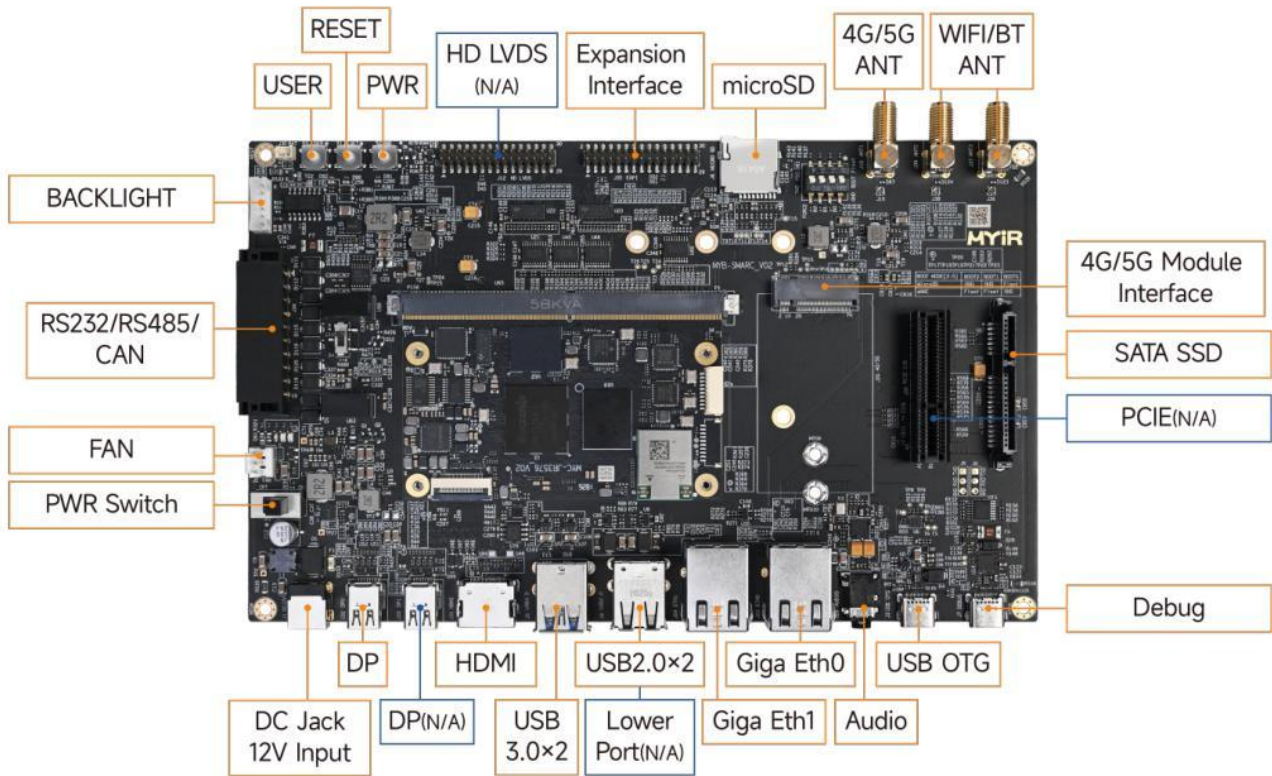
The MYB-SMARC baseboard provides extensive I/O for application development, including dual Gigabit Ethernet, a mini-PCIe socket with dual micro-SIM for 4G/5G modules, display outputs (HDMI, MIPI-DSI/LVDS, DP), two MIPI-CSI camera inputs, audio I/O, an M.2-2280 PCIe slot for NVMe SSD, MicroSD, multiple USB ports (2× USB 3.0 host, 2× USB 2.0 host, and 1× USB 2.0 OTG), and dual CAN FD plus RS-485/RS-232 shared on a single Phoenix connector. It delivers a feature-rich platform for industrial, automotive, and edge AI prototyping.



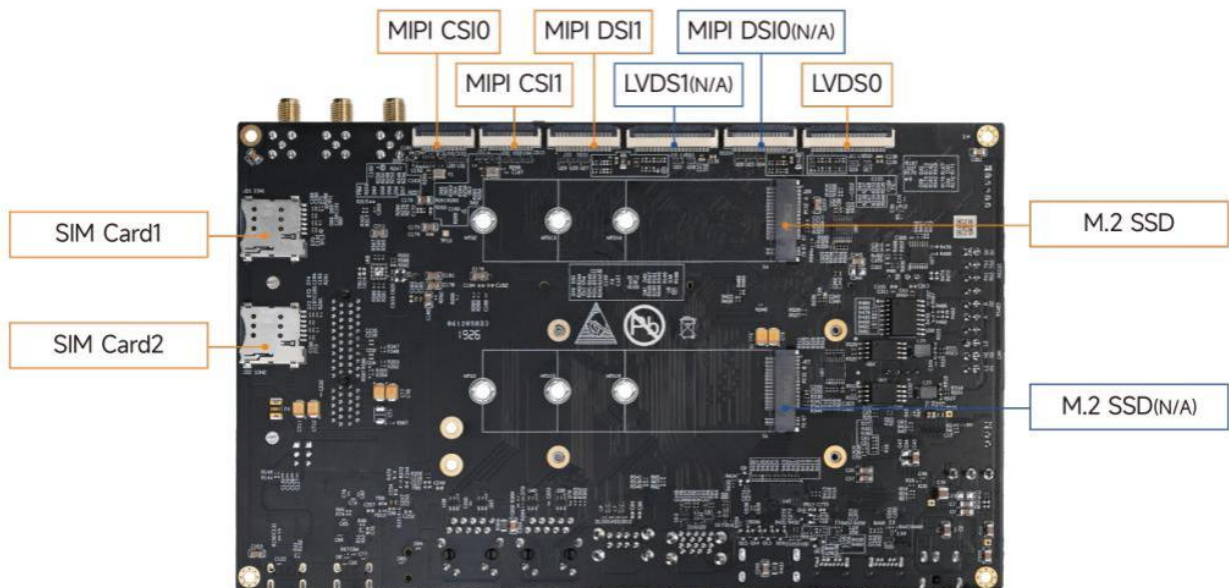
MYD-JR3576 Development Board (supplied with pre-installed heatsink)

To enhance development flexibility, MYIR offers optional display and camera accessories for the MYD-JR3576: the MY-MIPI101C-V2 10.1-inch MIPI display, the MY-LVDS070C 7-inch LVDS display, and the MY-CAM003M (5MP) / MY-CAM005M (13MP) MIPI-CSI camera modules, providing a streamlined, ready-to-use development experience.

The MYD-JR3576 supports Linux and Android OS, and comes with extensive software resources and documentation. Software resources include U-Boot, the Linux kernel, peripheral driver source code, and related development tools. MYIR helps developers improve efficiency, shorten development cycles, improve design quality, and accelerate product R&D and time-to-market.



MYD-JR3576 Development Board (Top-view)



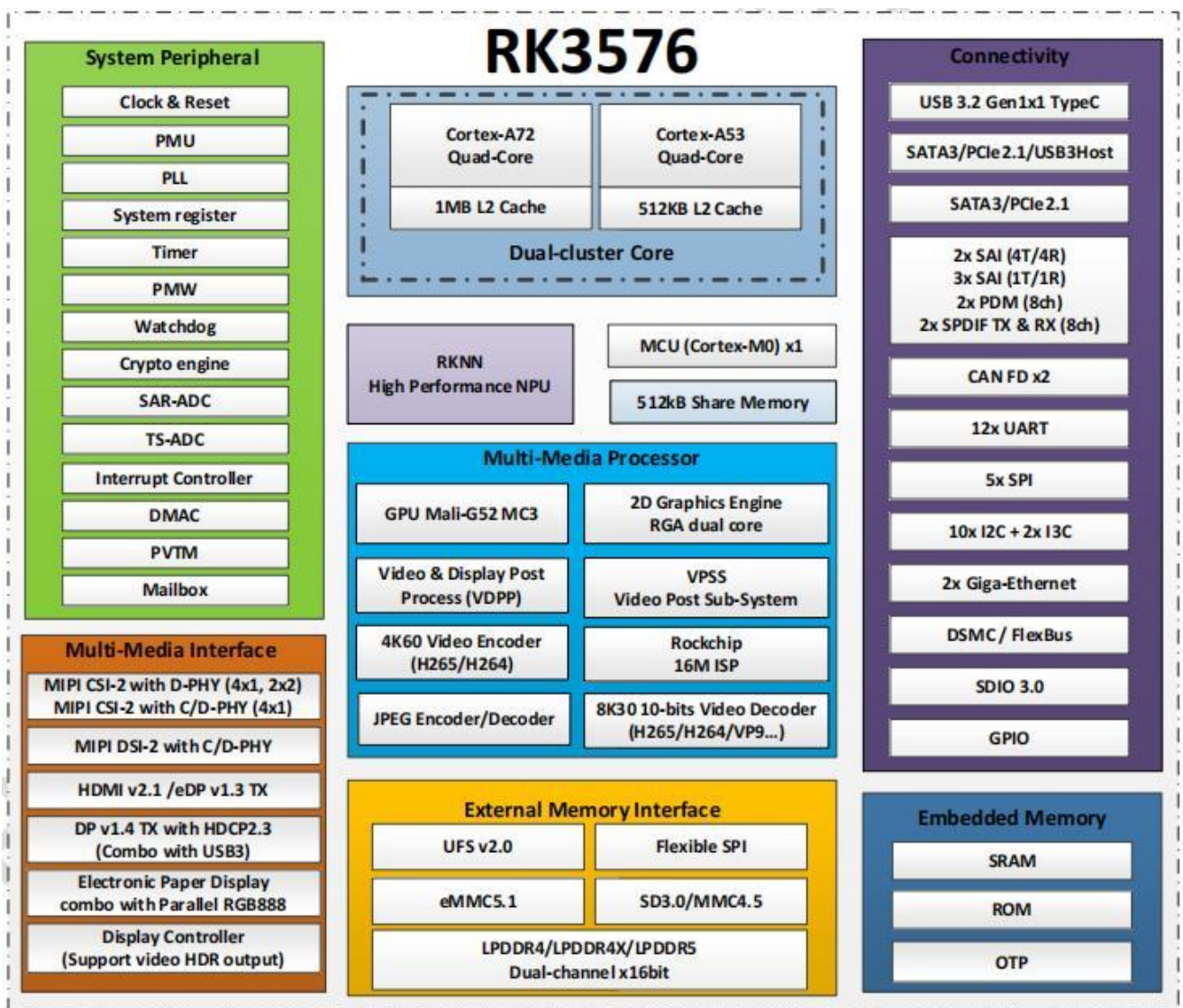
MYD-JR3576 Development Board (Bottom-view)



Hardware Specification

The MYC-JR3576 System-on-Module (SOM) is powered by the Rockchip RK3576 applications processor, which is offered in two grades: the commercial RK3576 and the industrial RK3576J. The processor is built on an octa-core 64-bit CPU combining 4x Cortex-A72 and 4x Cortex-A53 cores with a Cortex-M0 real-time core, and integrates a 6 TOPS NPU for edge AI inference and an Arm Mali-G52 MC3 3D GPU. Its multimedia engine supports 8K@30fps / 4K@120fps video decoding (H.265, VP9, AVS2, AV1) and 4K@60fps encoding (H.265, H.264), together with a rich set of display and camera interfaces including HDMI, eDP, DP, MIPI-DSI, Parallel RGB and MIPI-CSI with 16M ISP.

The processor also provides a comprehensive peripheral set covering dual Gigabit Ethernet, PCIe 2.1, USB 3.2, SATA3, DSMC/Flexbus high-speed interfaces, CAN FD, UART, making the RK3576 well-suited for a broad range of high-end industrial, robotics, medical and AIoT applications requiring intelligent edge-AI features with optimized power consumption.



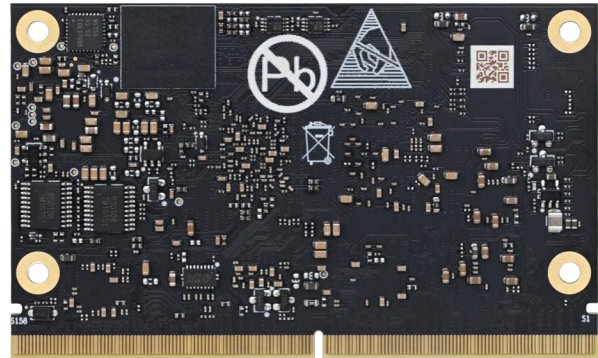
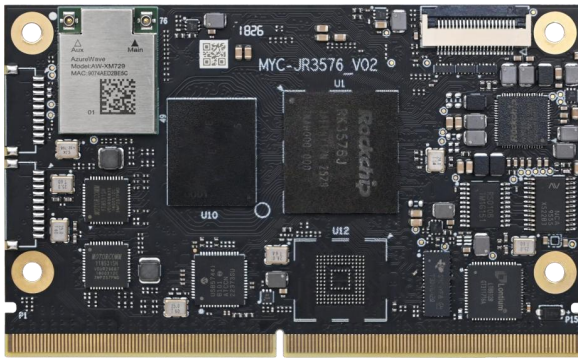
RK3576 Processor Block Diagram

The MYD-JR3576 Development Board is using the MYC-JR3576 SOM as core controller board. It takes full features of Rockchip RK3576 processor and the main features are characterized as below:

Mechanical Parameters

- Dimensions: 206mm x 126mm (base board), 82mm x 50mm (SOM)
- PCB Layers: 6-layer design (base board), 12-layer design (SOM)
- Power supply: +12V/2A (base board), +5V/2A (SOM)
- Working temperature: -40~85 Celsius (industrial grade)
0~70 Celsius (commercial grade)(WiFi Module: -20~70 Celsius)

The MYD-JR3576 Controller Board (MYC-JR3576)



MYC-JR3576 System-On-Module (Top-view and Bottom-view)

Processor

- Rockchip RK3576 processor (RK3576 / RK3576J)
 - 4× Cortex-A72 @2.2GHz + 4× Cortex-A53 @2.0GHz (RK3576, commercial grade)
 - 4× Cortex-A72 @1.6GHz + 4× Cortex-A53 @1.4GHz (RK3576J, industrial grade)
 - Cortex-M0 real-time core @400 MHz
 - Integrated 6 TOPS NPU (INT8) for edge AI inference
 - Arm Mali-G52 MC3 3D GPU
 - Supports up to 8K@30fps or 4K@120fps video decoding (H.265/HEVC, VP9, AVS2, and AV1) and video encoder up to 4K@60fps video encoding (H.265 and H.264)

Memory

- 4GB / 8GB LPDDR5
- 32GB / 64GB eMMC
- 32Kbit EEPROM

Peripherals and Signals Routed to Pins

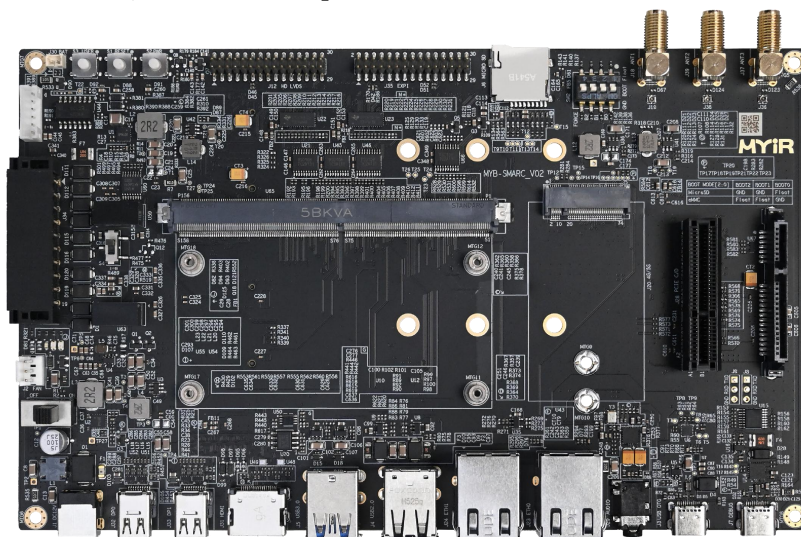
- Onboard WiFi 6 + Bluetooth 5.4 Module
- Independent TPM 2.0 security chip
- Gigabit Ethernet PHY
- USB 3.0 HUB
- 314-pin SMARC 2.2 Expansion Connector
 - 2× GBE MDI
 - 1× USB 2.0 OTG
 - 2× USB 2.0 Host



- 2× USB 3.0 Host
- 1× PCIe 2.1 / 1× SATA3
- 2× CAN FD
- 4× UART
- 2× SPI
- 4× I2C
- 1× SDIO
- 3× PWM
- 6× SARADC, 12-bit resolution, up to 1MS/s (optional)
- 14× GPIO
- 3× MIPI CSI (2× 4-lane, 1× 2-lane)
- 1× MIPI-DSI / 1×LVDS
- 1× HDMI, 1× D×P
- 2× SAI

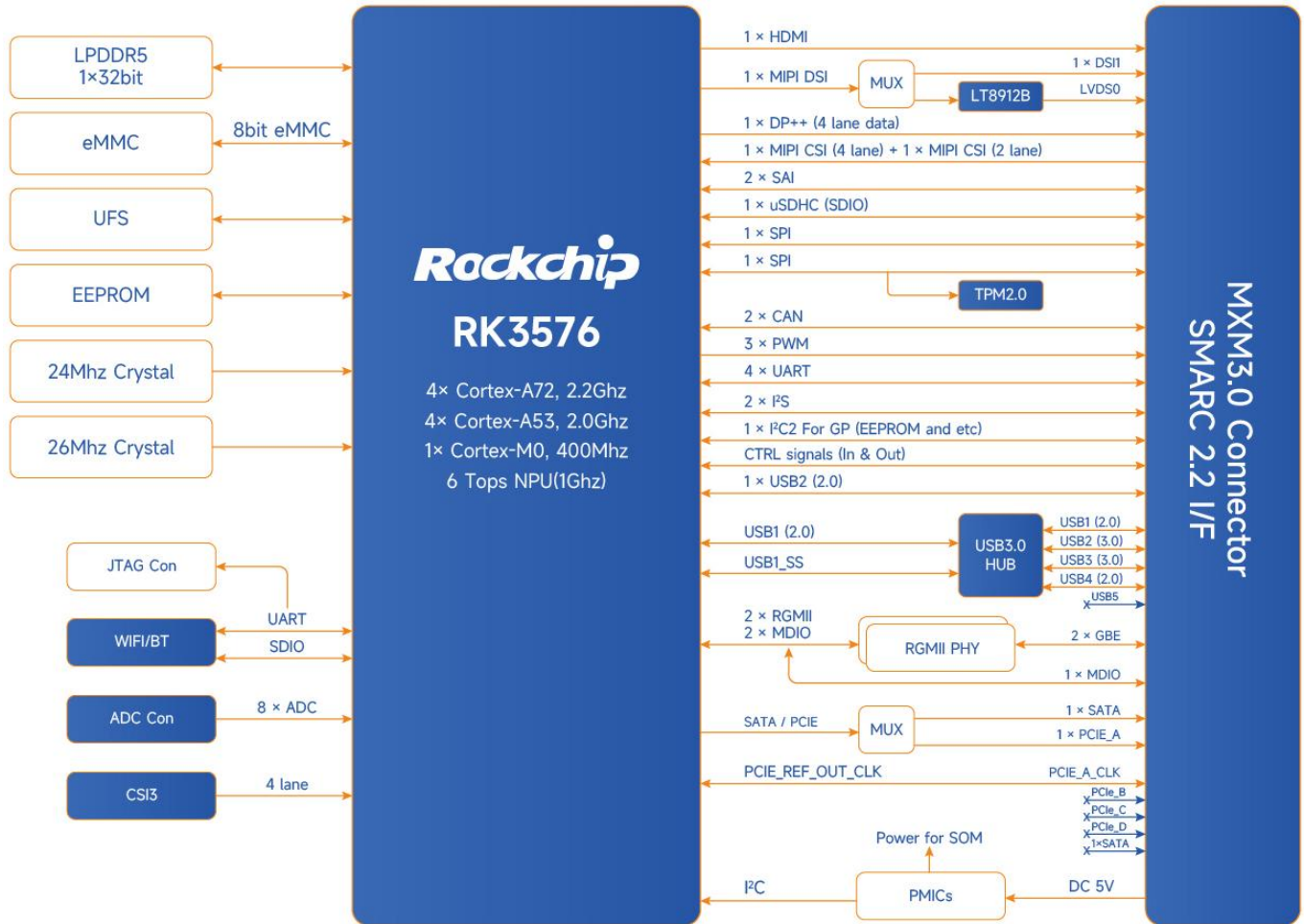
Note: the peripheral signals brought out to the expansion interface are listed in maximum number. Some signals are reused. Please refer to the processor datasheet and the SOM pinout description file.

The MYD-JR3576 Development Board Base Board

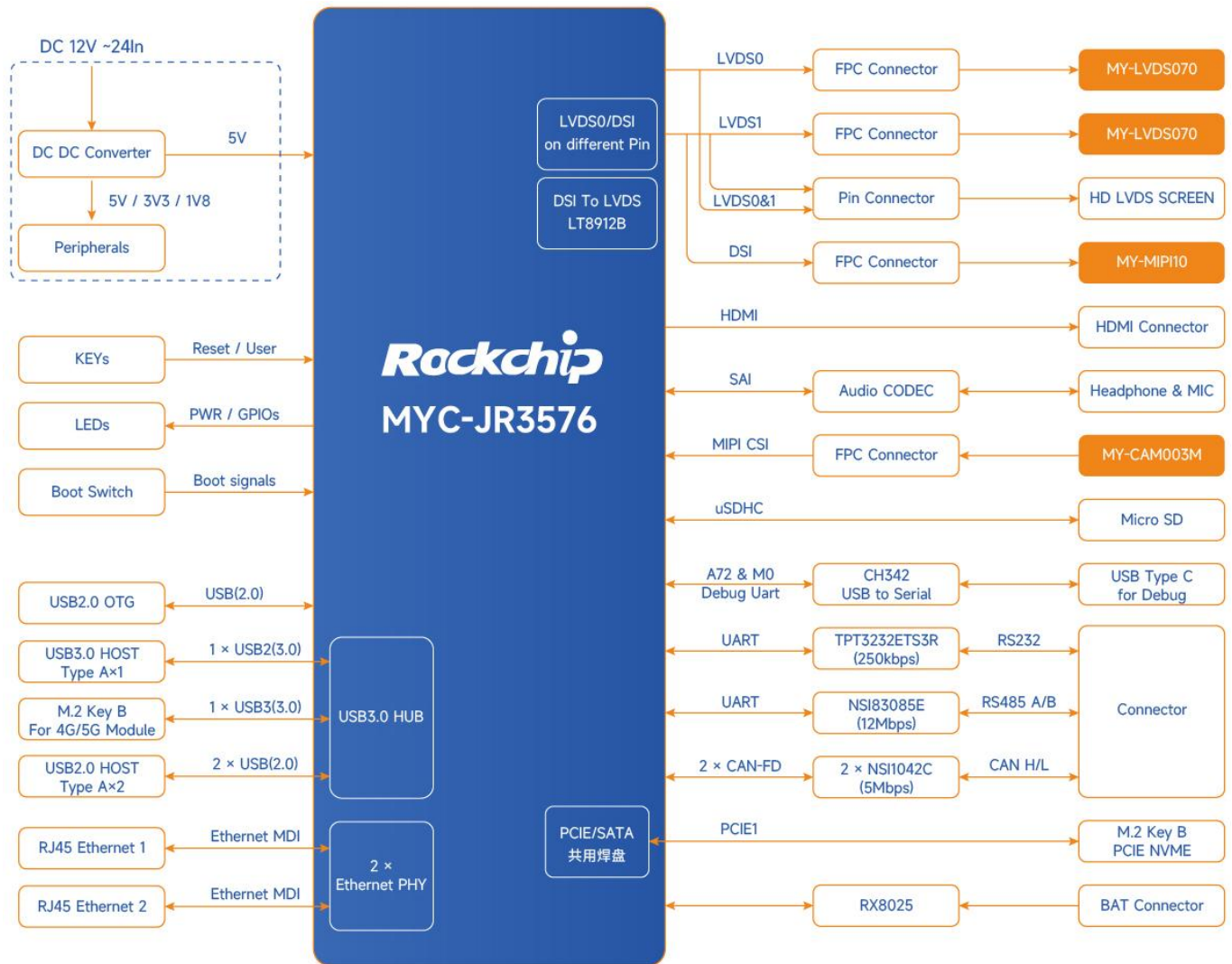


- 1x Power Jack
- 1x Power Switch
- Serial Ports
 - 1x RS232 (Isolated)
 - 1x RS485 (Isolated)
 - 1x Debug Interface (USB Type-C)
- USB
 - 2x USB3.0 Host ports
 - 2x USB2.0 Host ports
 - 1x USB2.0 OTG port
 - 1x M.2 socket for USB based 4G/5G LTE Module
- 2x SIM card slots
- 2x 10/100/1000Mbps Ethernet interfaces
- 2x external antenna connectors (one for WiFi and one 4G/5G)
- 2x CAN FD interfaces (Isolated)

- 1x Micro SD card slot
- 1x HDMI interface
- 1x MIPI-DSI/LVDS display interface
- 1x DP interface
- 2x MIPI-CSI Camera Interfaces
- 1x Audio Input and Output Interface
- 3x Buttons (one for Reset, one for User, one for ON/OFF)
- 3x LEDs (one for Power indicator, one for System status indicator, one for User LED)



MYC-JR3576 Function Block Diagram



MYD-JR3576 Function Block Diagram



Software Features

The MYD-JR3576 development board is fully compatible with Linux and Android OS and comes with a complete set of software packages. To help clients accelerate their projects, the source code for the kernel and various peripheral drivers is included. The main software features are summarized below:

Item	Features	Description	Source Code
Bootloader	U-boot	Boot program uboot_2017.09	YES
Kernel	Linux kernel	Customized based on official kernel_6.1 version	YES
Driver	EEPROM	BL24C32F driver	YES
	Ethernet	YT8531SH driver	YES
	WIFI	AW-XM729 driver	YES
	BT	AW-XM729 driver	YES
	4G	EM05-CE driver	YES
	5G	RM500Q-CN driver	YES
	LVDS	LT8912 driver	YES
	MIPI DSI	MIPI DSI driver	YES
	HDMI	HDMI driver	YES
	DP	DP driver	YES
	MIPI CSI	OV5640 and OV13855 driver	YES
	Audio	ES8390 driver	YES
	RTC	RX-8025T driver	YES
	Micro SD	SD card storage driver	YES
	UART	RS485/RS232 driver	YES
	CAN	CAN driver	YES
	GPIO	GPIO driver	YES
	TPM2.0	TPM driver	-
File system	myir-image-jr3576-android	Images built on Android 15 system	YES
	myir-image-jr3576-yocto	Linux Image built as Yocto	YES

MYD-JR3576 Software Features



Order Information

Product Item	Part No.	Packing List
MYD-JR3576 Development Board	MYD-JR3576-64E8D-220-C	✓ One MYD-JR3576 Board (includes MYC-JR3576 SOM) ✓ One 12V/2A Power Adapter ✓ One USB Type-A to Type-C cable
	MYD-JR3576J-32E4D-160-I	✓ One Quick Start Guide ✓ One Wi-Fi IPEX antenna ✓ One Wi-Fi rod antenna
MYC-JR3576 System-On-Module	MYC-JR3576-64E8D-220-C	✓ One MYC-JR3576 SOM (Heatsink not included)
	MYC-JR3576J-32E4D-160-I	
MY-MIP1101C-V2 10.1-inch LCD Module	MY-MIP1101C-V2	✓ MY-MIP1101C-V2 10.1-inch MIPI LCD Module with Capacitive Touch Screen
MY-LVDS070C 7-inch LCD Module	MY-LVDS070C	✓ MY-LVDS070C 7-inch LVDS Display Module with Capacitive Touch Screen
MY-CAM003M MIPI Camera Module	MY-CAM003M	✓ MY-CAM003M MIPI Camera Module
MY-CAM005M MIPI Camera Module	MY-CAM005M	✓ MY-CAM005M MIPI Camera Module
Note: 1. One MYD-JR3576 Development Board comprises one MYC-JR3576 SOM mounted onto the base board. If you require additional SOMs, you may place order for extras. 2. Bulk discounts are available. Please contact MYIR for inquiries. 3. We accept custom design based on the MYD-JR3576, whether reducing, adding or modifying the existing hardware according to customer's requirement.		



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