

MYD-LR3568-GK-B IPC Box Overview



- ✓ *Rockchip RK3568 Application Processor based on Up to 1.8GHz Quad ARM Cortex-A55 Cores*
- ✓ *Equipped with a 3D GPU and 4K VPU for High-quality Graphics and Video Processing*
- ✓ *Supports NPU Acceleration for AI-driven Applications*
- ✓ *2GB/4GB LPDDR4, 16GB/32GB eMMC, 32KB EEPROM*
- ✓ *2x USB 3.0, 3x USB 2.0, 2x CAN, RS232, 2x RS485, Debug (USB-UART), Micro SD Card Slot*
- ✓ *2x Gigabit Ethernet, WiFi/Bluetooth, PCIe Slot for 4G Module*
- ✓ *Supports Mini-DP and HDMI for High-resolution Displays, along with Audio Input/Output Interface*
- ✓ *Supports Linux and Debian OS*
- ✓ *Rugged and Fanless Enclosure Design*



The MYD-LR3568-GK-B IPC (Industrial Personal Computer) Box offers customers a versatile, industrial-grade solution for IPC and edge computing in a robust design. Powered by Rockchip's RK3568 solution, it incorporates MYIR's MYD-LR3568 development board and the MY-ICEB001 expansion board, all enclosed in a rugged and fanless enclosure. Furthermore, customers can leverage this platform by pairing the MYD-LR3568 development board with a customized expansion board to tailor IPC or edge computing products to their specific needs. MYIR provides SDKs for both Linux and Debian Operating Systems for the device, including u-boot, kernel, driver source code, and related development tools, along with detailed documentation to facilitate customers' secondary development and the creation of their own applications.

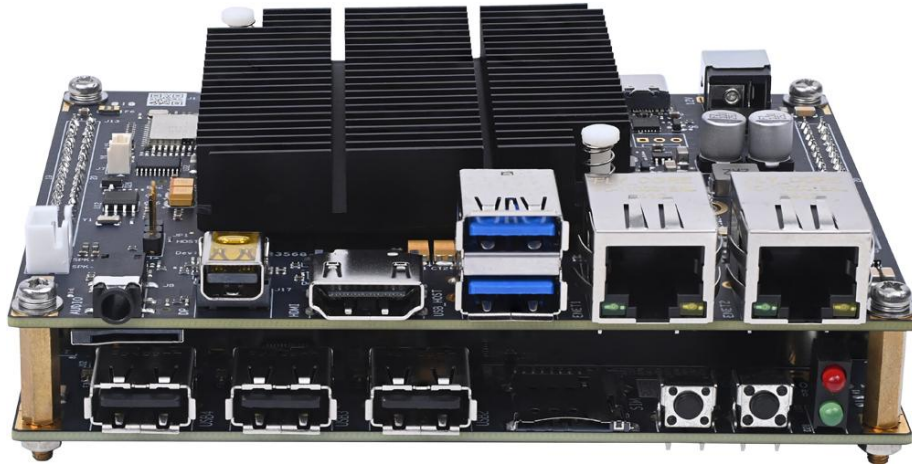


MYD-LR3568-GK-B Front View

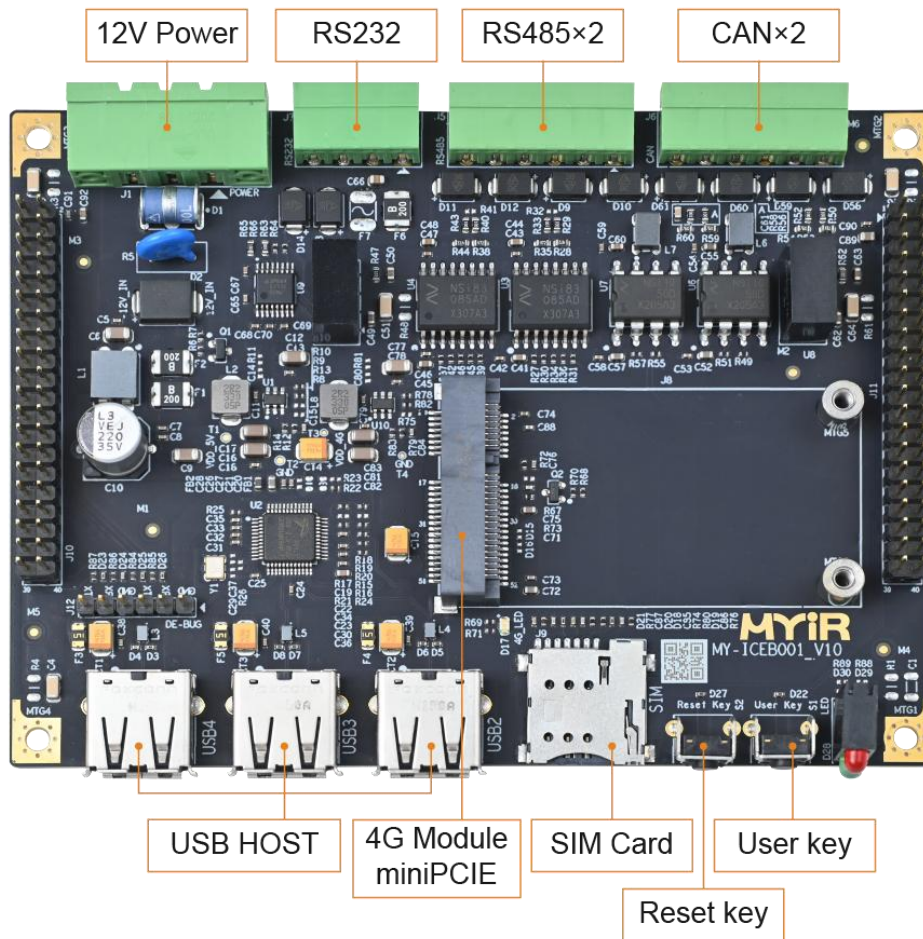


MYD-LR3568-GK-B Rear View

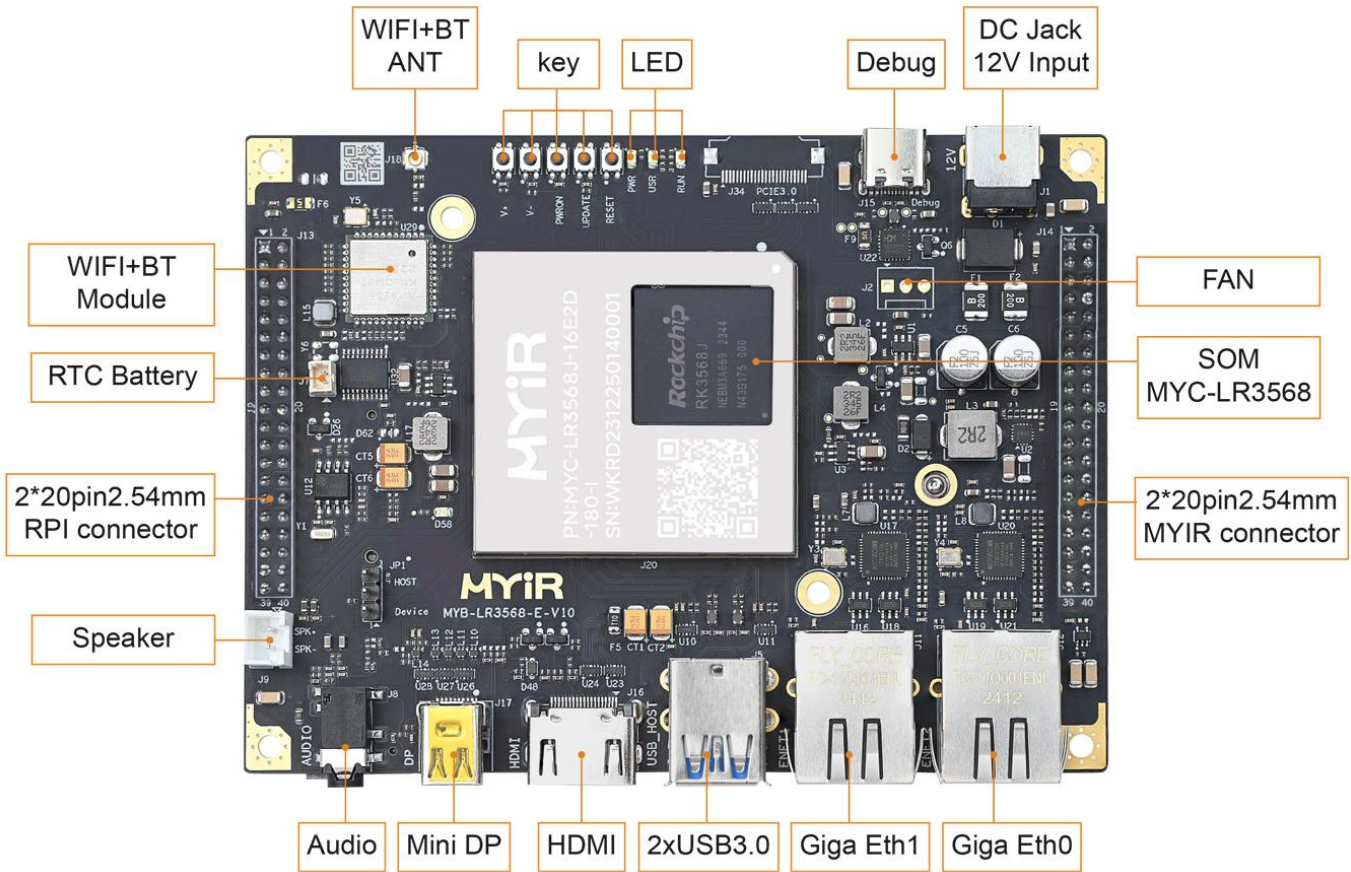
The MYD-LR3568-GK-B IPC Box integrates the MYD-LR3568 development board (featuring RK3568J processor, LPDDR4, eMMC, and EEPROM) with the MY-ICEB001 expansion board through two 40-pin expansion interfaces. This integration, along with the IPC enclosure slot design specifically for the MYD-LR3568-GK-B IPC Box, enables the device to host a variety of peripherals including USB, Ethernet, CAN, RS485, RS232, Debug UART, Micro SD, HDMI, Mini DP, and Audio. The development board also incorporates WiFi/Bluetooth functionality with an external antenna, while the expansion board features an M.2 Socket for a 4G LTE Module, accompanied by a SIM card slot and a reserved antenna hole for enhanced convenience. The MYD-LR3568-GK-B IPC Box is a compact, powerful, and versatile device that boasts a comprehensive range of communication and multimedia interfaces, making it the perfect choice for a diverse range of applications, including edge intelligence, AI video analysis, industrial control, protocol conversion, communication management, and many more.



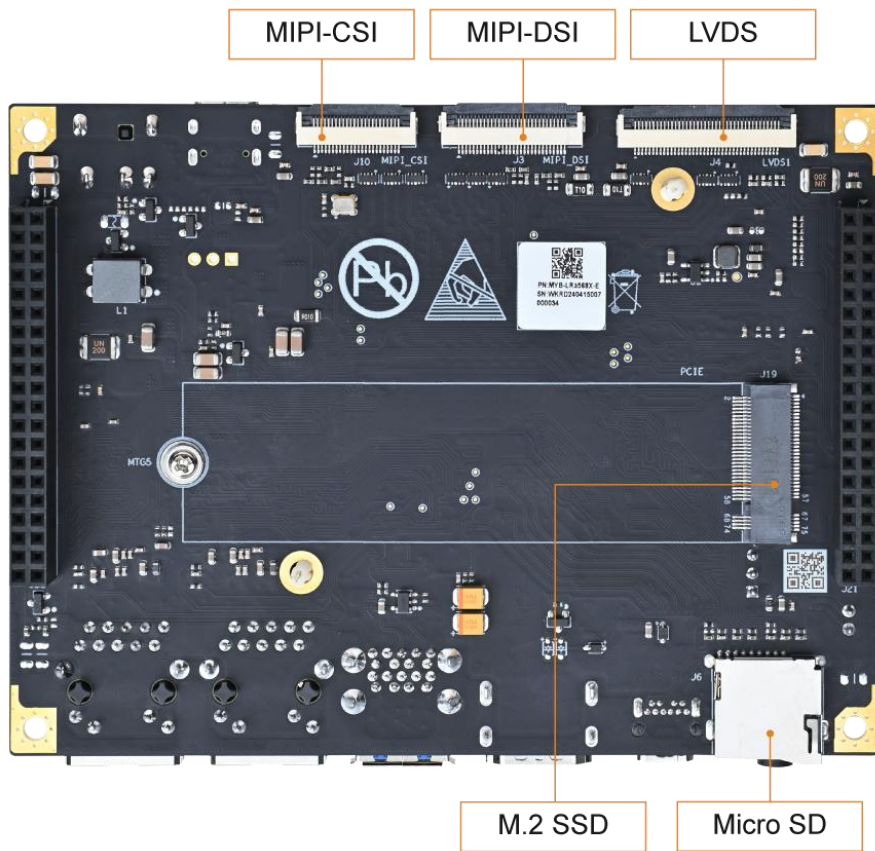
the MYD-LR3568 Development Board (RK3568) version) Integrates with the MY-ICEB001 Expansion Board



MY-ICEB001 Expansion Board



MYD-LR3568 Development Board (RK3568J version) Top-view (delivered with a pre-installed heatsink by default)



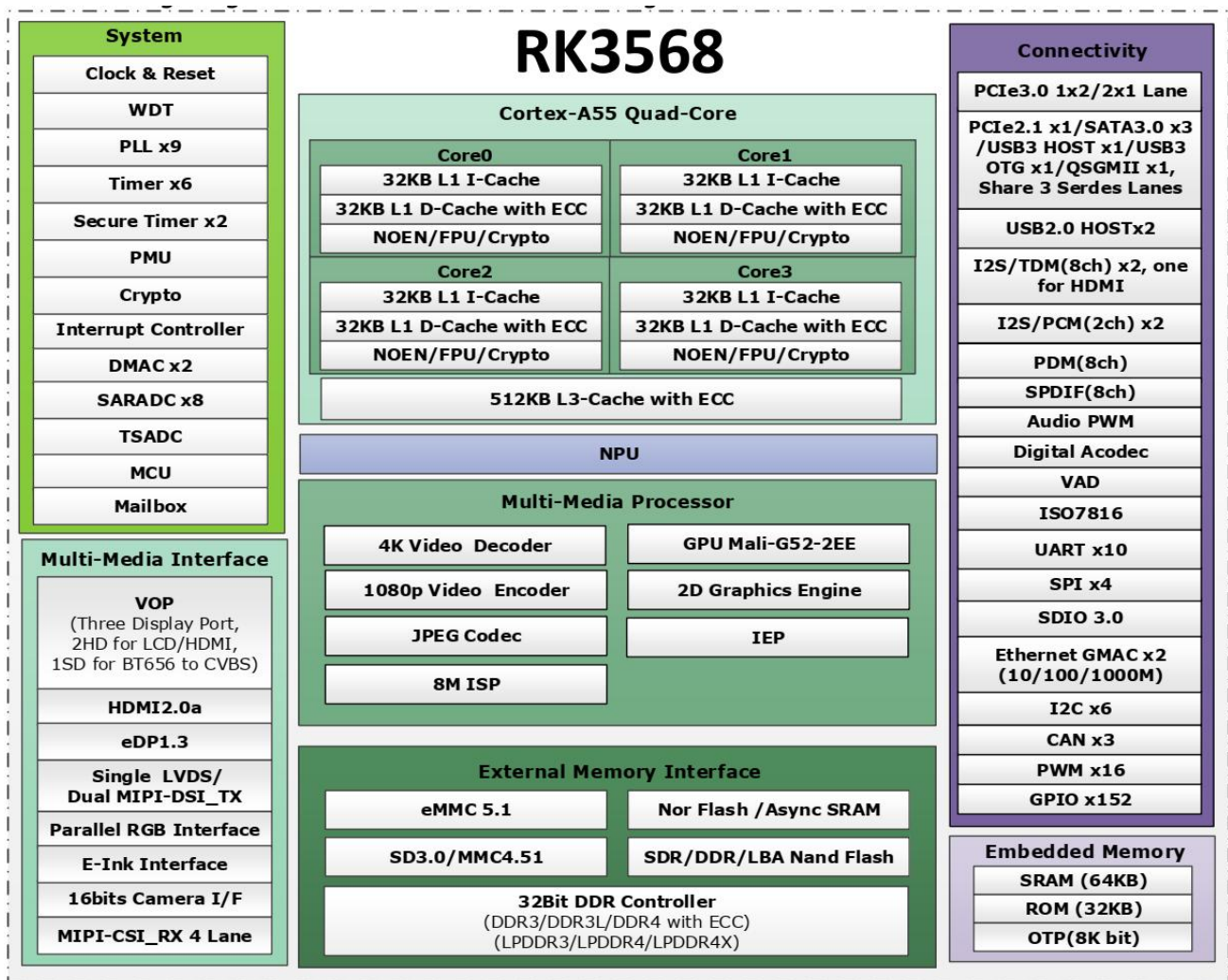
MYD-LR3568 Development Board (RK3568J version) Bottom-view



Hardware Specification

The RK3568 is a high-performance general-purpose SoC produced by Rockchip, which adopts an advanced 22nm process technology and integrates a 4-core ARM A55 processor and an advanced Mali G52 2EE graphics processor. It supports 4K decoding and 1080P encoding. Moreover, the RK3568 supports various types of peripheral interfaces such as SATA/PCIE/USB3.0, and has a built-in independent NPU that can be used for lightweight artificial intelligence (AI) applications. The RK3568 is targeted at a diverse range of applications, including IoT gateways, NVR storage, industrial control, HMI, cloud terminals, central vehicle controllers, and facial recognition systems. Its robust performance and feature set make it a reliable and versatile solution for these demanding applications.

MYiR utilizes the RK3568J for the MYD-LR3568-GK-B IPC Box. It can operate within a temperature range of -40 to 85 degrees Celsius, and its CPU clock speed reaches up to 1.8GHz in overdrive mode.



RK3568 Processor Block Diagram



The MYD-LR3568-GK-B IPC Box takes full advantages of the Rockchip RK3568J processor. The main features are listed in the following table.

Item	Features
SoC	Rockchip RK3568 processor (RK3568J) - Quad-core ARM Cortex-A55@1.4GHz (If you require the RK3568J version at 1.8GHz in overdrive mode, please inquire MYIR.) - Arm Mali-G52 2EE GPU with support for OpenGL ES 1.1/2.0/3.2, OpenCL 2.0, Vulkan 1.1 - Up to 1.0 TOPS NPU - Supports 4K 60fps H.265/H.264/VP9 Decoder and 1080P 60fps H.265/H.264 Encoder
Memory	2GB/4GB LPDDR4
Storage	16GB/32GB eMMC 32KB EEPROM 1x Micro SD card slot 1x M.2 NVME SSD PCIe slot
Communication Interfaces	1x USB-UART Debug Interface 1x RS232 2x RS485 2x USB 3.0 Host Ports 3x USB 2.0 Host Ports 2x 10/100/1000Mbps Ethernet Interfaces 2x CAN WiFi/BT Module (complies with IEEE 802.11a/b/g/n/ac standard and supports BT 5.2) 1x WiFi/BT antenna interface 1x M.2 Socket for a USB-based 4G LTE Module 1x SIM card holder
Multimedia Interfaces	1x HDMI 2.0 Interface (Supports 1920x1080@60Hz by default) 1x Mini DisplayPort (DP) Output Interface (Supports 1920x1080@60Hz by default) 1x 3.5mm Headphone/Mic Audio Jack
Others	2x Buttons (1x Reset Button, 1x User Button) 2x LEDs (1x RUN Status LED, 1x ERR User LED)
Power supply	12VDC \pm 20% 2A (Phoenix terminal)
Dimensions	130mm x 93.5mm x 44mm (without mounting bracket) 160mm x 93.5mm x 44mm (with mounting bracket)
Working Temp.	-40° C ~+85° C (WiFi/BT Module: -30~85 Celsius)
Working humidity	5% ~ 95%, non-condensing

Features of MYD-LR3568-GK-B IPC Box



Software Features

The MYD-LR3568-GK-B offers supports for Linux and Debian OS and is equipped with comprehensive software packages. To assist clients in speeding up their projects, the kernel and numerous peripheral drivers are provided in source code format. Below is a brief overview of the key software feature:

Item	Features	Description	Source Code
Bootloader	ATF	Switching and initialization of secure and non-secure environments	YES
	SPL	Initialize DDR, RTC, PMIC, and load the image into RAM	YES
	U-boot	Boot program uboot_2017.09	YES
Linux kernel	Linux kernel	Customized base on official kernel_5.10.198 version	YES
Device driver	MMC	eMMC driver	YES
	USB Host	USB driver	YES
	I2C	I2C driver	YES
	SPI	SPI driver	YES
	Ethernet	Gigabit Ethernet driver	YES
	UART	RS232/RS485 Driver	YES
	CSI	MIPI Camera driver Support MYIR's MY-CAM003M camera module (OV5640)	YES
	RTC	RTC driver	YES
	GPIO Key	Key driver	YES
	GPIO LED	LED driver	YES
	HDMI	HDMI driver	YES
	Touch	Touch screen driver	YES
	WIFI/Bluetooth	WIFI/BT driver	YES
	SOUND	Audio driver	YES
LVDS	LVDS driver	YES	
File system	myir-lr3568-core	Full-featured Linux image without GUI, built by buildroot	YES
	myir-image-debian	Compiled and constructed based on Debian 11 SDK	YES

MYD-LR3568-GK-B Software Features



Order Information

Item	Packing List
MYD-LR3568-GK-B IPC Box (Part No.: MYD-LR3568J-16E2D-180-I-GK-B)	<ul style="list-style-type: none"> ✓ One MYD-LR3568-GK-B IPC Box (2GB LPDDR4+16GB eMMC) ✓ One Quick Start Guide ✓ One 5.08mm pitch 3-pin Phoenix connector ✓ One 3.81mm pitch 4-pin Phoenix connector ✓ Two 3.81mm pitch 6-pin Phoenix connectors ✓ One WiFi antenna ✓ One USB Type-A to Type C cable
MYD-LR3568-GK-B IPC Box (Part No.: MYD-LR3568J-32E4D-180-I-GK-B)	<ul style="list-style-type: none"> ✓ One MYD-LR3568-GK-B IPC Box (4GB LPDDR4+32GB eMMC) ✓ One Quick Start Guide ✓ One 5.08mm pitch 3-pin Phoenix connector ✓ One 3.81mm pitch 4-pin Phoenix connector ✓ Two 3.81mm pitch 6-pin Phoenix connectors ✓ One WiFi antenna ✓ One USB Type-A to Type C cable
MYD-LR3568 Development Board (Part No.: MYD-LR3568J-16E2D-180-I-GK)	<ul style="list-style-type: none"> ✓ One MYD-LR3568 Board (for RK3568J) ✓ One MY-ICEB001 Expansion Board ✓ One USB cable ✓ One 12V/3A Power adapter ✓ One Quick Start Guide



MYIR Electronics Limited

Headquarter Address: Room 04, 6th Floor, Building No.2, Fada Road, Yunli Smart Park, Bantian, Longgang District, Shenzhen, Guangdong, China 518129

Factory Address: Room 201, Block C, Shengjianli Industrial Park, Dafu Industrial Zone, Guanlan, Longhua District, Shenzhen, 518110, China

Website: en.myir.cn

Email: sales@myir.cn

Tel: +86-755-22984836