

MYD-LT527-GK-B IPC Box Overview

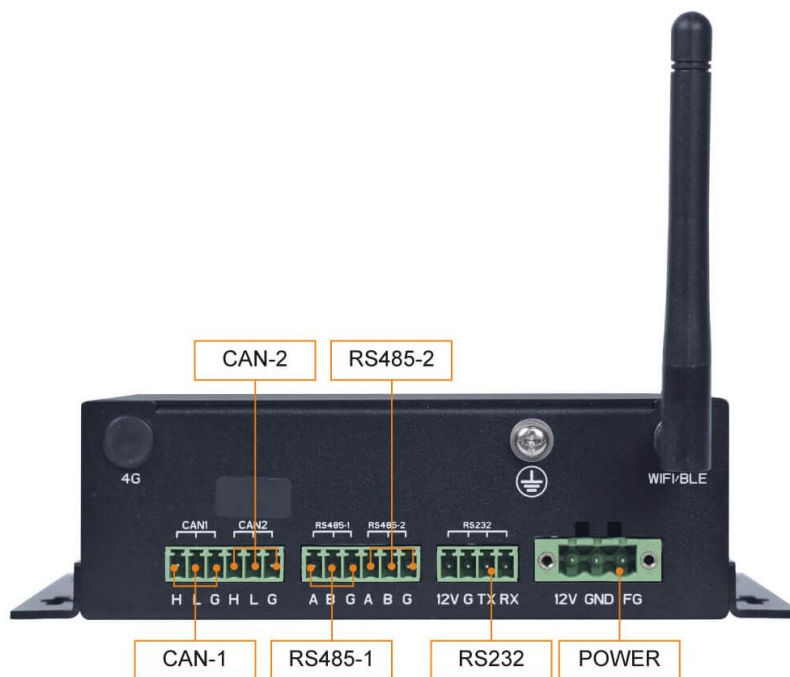


- ✓ Up to 1.8GHz Allwinner T527 Octa-core ARM Cortex-A55 MPU
- ✓ Up to 6 TOPs NPU, G57 MC1 GPU
- ✓ 2GB/4GB LPDDR4, 16GB/32GB eMMC Flash, 32Kbit EEPROM
- ✓ 1x USB 3.0, 4x USB 2.0, 2x CAN, RS232, 2x RS485, Micro SD Card Slot
- ✓ 2x Gigabit Ethernet, WiFi/Bluetooth, PCIe Slot for 4G Module
- ✓ Supports Mini-DP and HDMI for High-resolution Displays, along with Audio Input/Output Interface
- ✓ Supports Working Temperature Ranging from -40°C to 85°C
- ✓ Supports Linux and Ubuntu OS
- ✓ Rugged and Fanless Enclosure Design

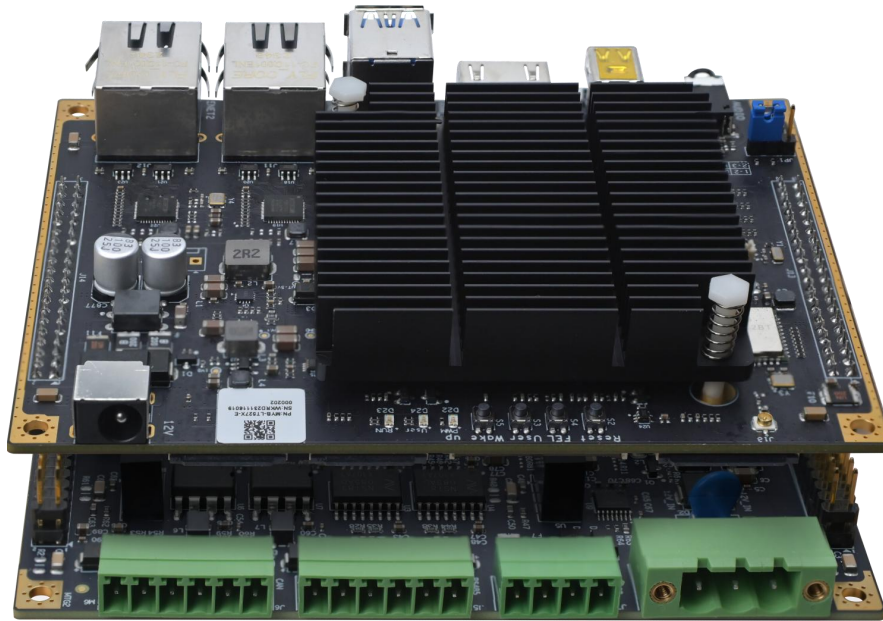
The [MYD-LT527-GK-B Industrial PC \(IPC\) Box](#) offers a versatile solution, ideal for edge computing applications. It combines the [MYD-LT527 development board](#) with the MY-ICEB001 expansion board inside a rugged, fanless enclosure, powered by the Allwinner T527 SoC. This SoC boasts an Octa-core ARM Cortex-A55 CPU operating at up to 1.8GHz and includes a 2TOPs NPU for enhanced performance. The device is equipped with dual Gigabit Ethernet ports, four USB 2.0 interfaces, one USB 3.0 port, two RS232, two RS485, two CAN ports, and a microSD card slot. Additionally, it features integrated WiFi/Bluetooth for wireless communication and supports 4G LTE connectivity via an onboard USB-based Mini-PCIe interface. For display and audio, it provides HDMI and Mini DisplayPort (Mini DP) outputs. MYIR offers SDKs for Linux and Ubuntu operating systems, including u-boot, kernel, driver source code, and related development tools. This IPC Box is well-suited for a wide range of applications, such as industrial controllers, edge computing, integrated gateways, power measurement and control terminals, new energy management servers, artificial intelligence, and more.



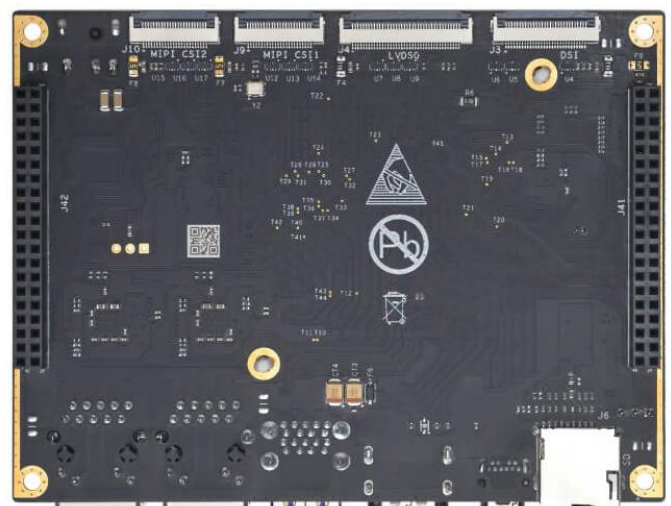
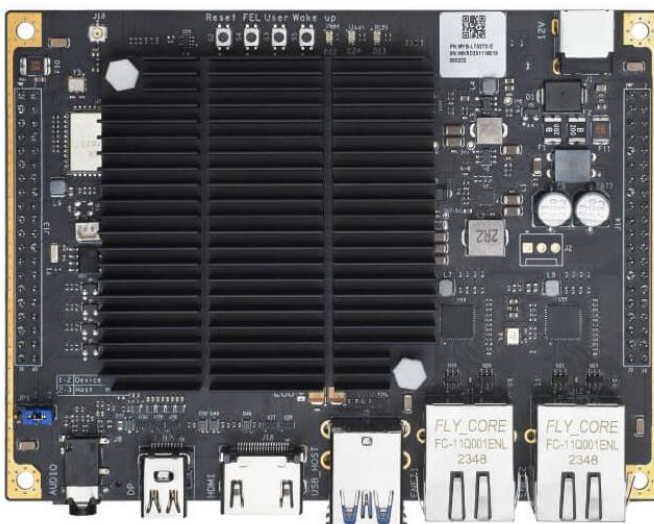
MYD-LT527-GK-B Front View



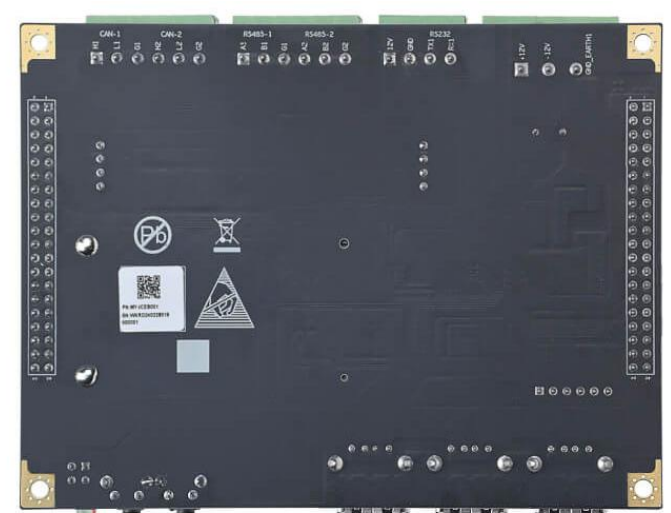
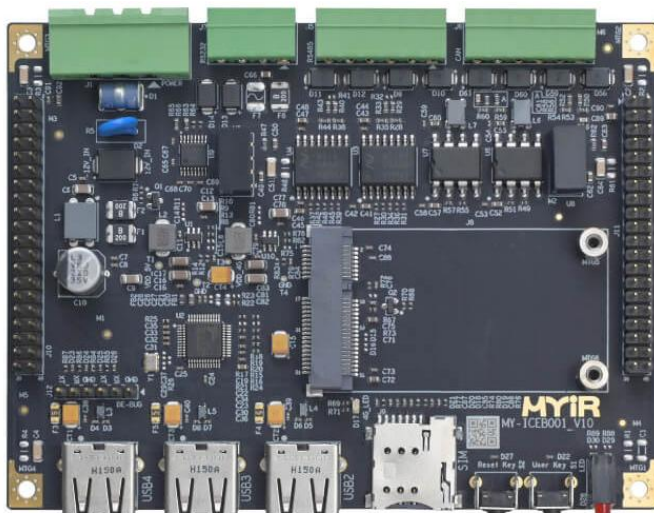
MYD-LT527-GK-B Back View



MYD-LT527-GK Development Board Integrates with the MY-ICEB001 Expansion Board



MYD-LT527-GK Development Board Top-view and Bottom-view

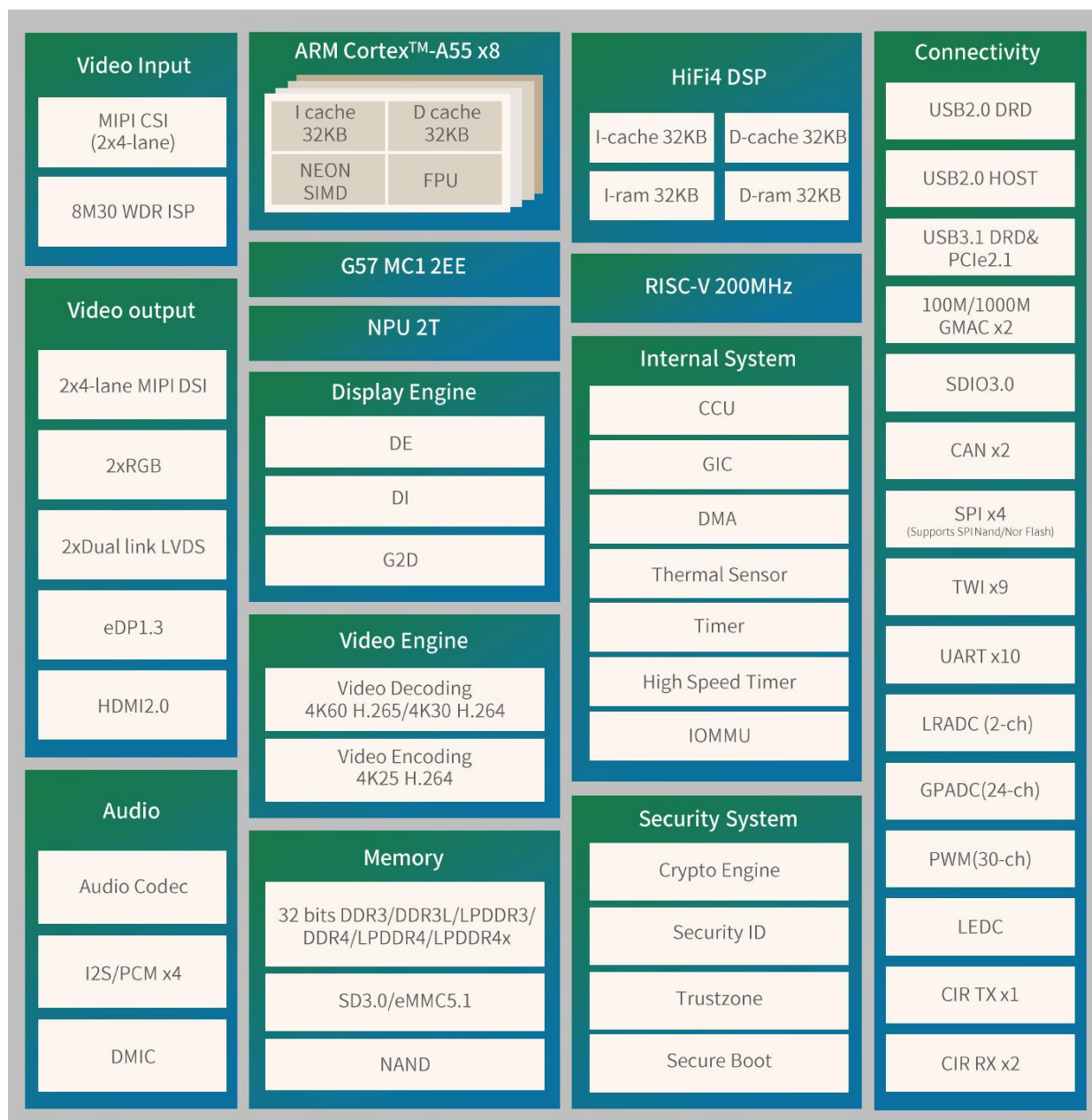


MY-ICEB001 Expansion Board Top-view and Bottom-view

Hardware Specification

Allwinner T527 series features high-performance octa-core Cortex-A55 AI platform SoCs for the electronic commercial, industrial, and automotive fields. The chip family integrates octa-core Cortex-A55 CPU, a HiFi4 DSP, 2 TOPS NPU, G57 MC1 GPU, 32-bit DDR3/DDR3L/DDR4/LPDDR3/LPDDR4/LPDDR4X DRAM, high-speed interfaces (PCIe2.1 and USB3.1), automotive interface (CAN), multi video output interfaces (2*RGB/2*Dual-LVDS/2*MIPI DSI/HDMI/eDP), and video input interfaces (MIPI CSI). The chip family supports 4K@60fps H.265 decoder, 4K@30fps H.264 decoder, 1080p@60fps H.264 encoder, DI, and SmartColor system, which provides users with smooth experience and professional AI visual effect. T527 series can be used in Content sharing and self-service interactive terminals, Smart manufacturing, and other electronic commercial and industrial devices.

MYIR utilizes the T527 (T527M02X0DCH) for the MYD-LT527-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 with up to 2 TOPS NPU for enhanced AI computing.



T527 Processor Block Diagram



The MYD-LT527-GK-B IPC Box takes full advantages of the Allwinner T527 processor. The main features are listed in the following table.

Item	Features
SoC	Allwinner T527 processor ((T527M02X0DCH)) - Octa-core ARM Cortex-A55, up to 1.8GHz - 600MHz HIFI4 Audio DSP - ARM G57 MC1 GPU - Up to 2 Tops NPU
Memory	2GB/4GB LPDDR4
Storage	16GB/32GB eMMC 32Kbit EEPROM 1x Micro SD card slot
Communication Interfaces	1x RS232 2x RS485 1x USB 3.0 Host Port 4x USB 2.0 Host Ports 2x 10/100/1000Mbps Ethernet Interfaces 2x CAN 1x WiFi/BT Module (complies with IEEE 802.11a/b/g/n/ac standard and supports BT 5.2) 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 2.5K@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)

Features of MYD-LT527-GK-B IPC Box



Software Features

The MYD-LT527-GK-B offers supports for Linux and Ubuntu 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 features:

Item	Features	Description	Source Code
Bootloader	U-boot	Boot program uboot_2018.02	YES
Linux kernel	Linux kernel	Customized base on official kernel_5.15 version	YES
Device driver	MMC	eMMC driver	YES
	SPI	SPI driver	YES
	I2C	I2C driver	YES
	USB Host	USB Host driver	YES
	Ethernet	Gigabit Ethernet driver	YES
	UART	RS232/RS485/UART driver	YES
	CSI	MY-CAM003M camera module driver (OV5640)	YES
	GPIO Key	Key driver	YES
	GPIO LED	LED driver	YES
	RTC	RTC driver	YES
	HDMI	HDMI driver	YES
	Touch	Touch screen driver	YES
	WIFI/Bluetooth	WIFI/BT driver	YES
	Audio	Audio driver	YES
	LVDS	LVDS driver	YES
	CAN	CAN driver	YES
	DP	Standard DP display driver	YES
File system	myd-lt527-core.img	Full-featured image without GUI, built by buildroot	YES
	myd-lt527-full.img	Full-featured image with GUI, built by buildroot	YES
	Ubuntu 22.04	image with built with Ubuntu 22.04	YES

MYD-LT527-GK-B Software Features



Order Information

Product Item	Packing List
MYD-LT527-GK-B IPC Box (Part No.: MYD-LT527MN-32E4D-180-I-GK-B)	✓ One MYD-LT527-GK-B IPC Box ✓ One Quick Start Guide
MYD-LT527-GK-B IPC Box (Part No.: MYD-LT527MN-16E2D-180-I-GK-B)	✓ Phoenix Connectors ✓ One WiFi antenna
MYD-LT527-GK Development Kit (Part No.: MYD-LT527MN-32E4D-180-I-GK)	✓ One MYD-LT527 Development Board ✓ One MY-ICEB001 Expansion Board ✓ One USB to TTL cable ✓ One 12V/2A Power adapter ✓ One Quick Start Guide



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