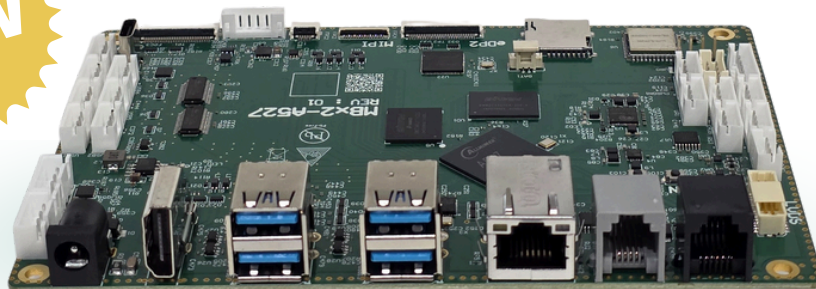# MBx2-A527   Industrial-Optimized Embedded Board

NEW

Features

- High-performance Octa-Core Cortex-A55 SoC processor, up to 2.0GHz
- Built-in Integrated ARM G57 MC01 GPU for High performance multimedia processing with low power consumption
- 4GB LPDDR4 Memory and 32GB eMMC onboard design

- Comprehensive connectivity: 1 Gigabit Ethernet and Wi-Fi6 +BT5.4 for option
- Flexible Media output for selection: HDMI, eDP(eDP1, eDP2), LVDS, MIPI-DSI, Optional 5 to 2
- Rich I/O for usage: 11 x USBs, 6x Serial Ports, 1x 1W stereo Amp 4Ω, Support 1x R12 C/D
- Support Android 15, Linux-Debian, Ubuntu

Introduction

MBx2-A527 is a compact, high-performance embedded board tailored for automation control, smart retail, and industrial terminals. Built on an Octa-core ARM Cortex-A55 processor and equipped with a G57 GPU, it provides responsive system performance and efficient multimedia handling—ideal for interface-rich industrial applications.

This board integrates 11x USB ports and 6x serial ports, enabling seamless connection with a wide range of peripherals such as barcode readers, thermal printers, industrial sensors, and control panels. With 1x Gigabit Ethernet, optional Wi-Fi 6 + BT 5.4, and support for Android 15, Debian, and Ubuntu, MBx2-A527 delivers deployment flexibility across both wired and wireless environments.

Its advanced multimedia capabilities support dual eDP, MIPI-DSI, LVDS, and HDMI outputs—making it a great fit for dual-screen HMI panels, real-time dashboards, or operator terminals that require graphical interfaces and responsive touch interaction.

MBx2-A527's compact-size design and 12V input make it ideal for space-constrained deployments such as factory HMI panels, self-service kiosks, retail data terminals, and interactive info points—where rich I/O and dual-display support are key.
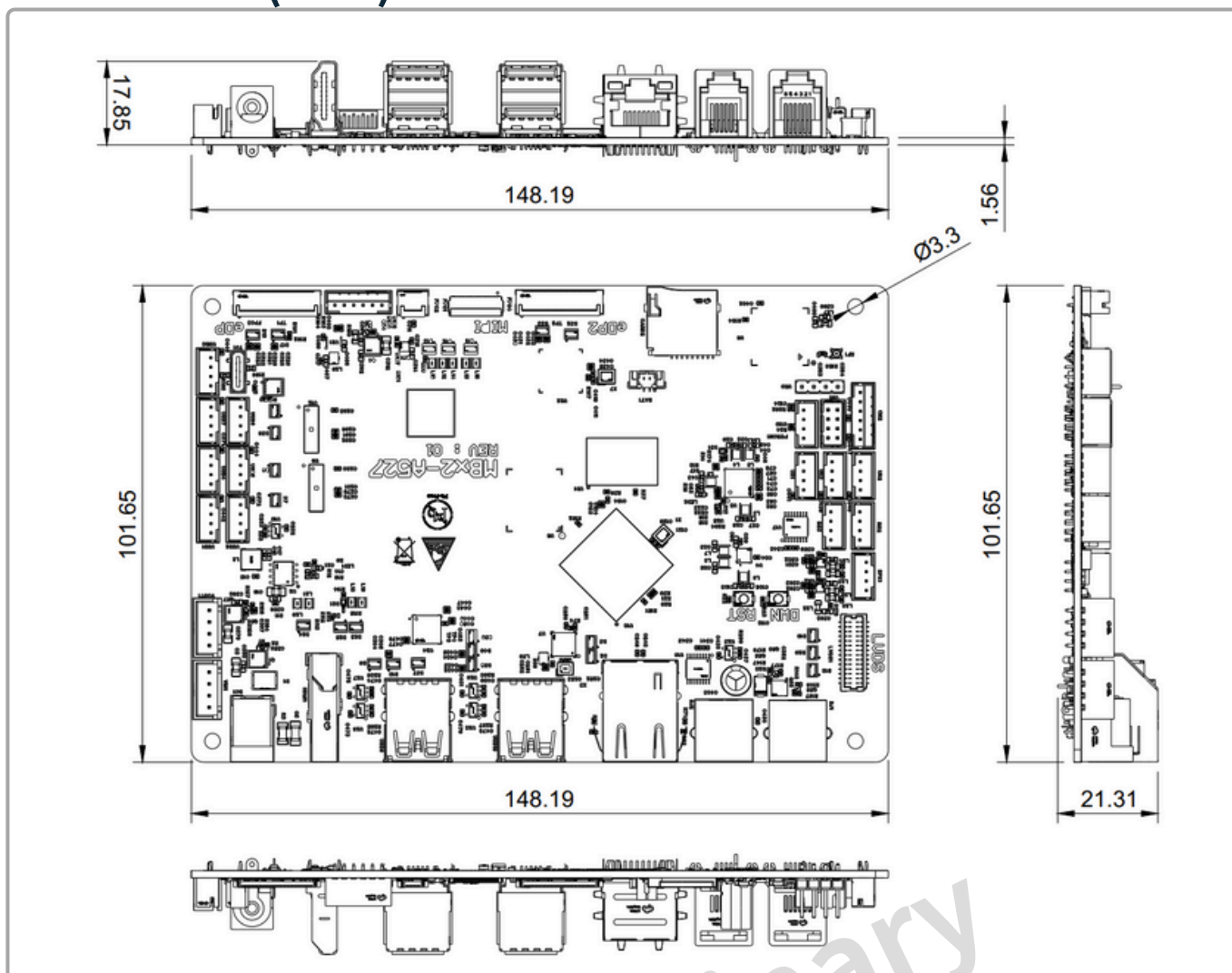
Specification

System	Processor	8x ARM Cortex-A55 up to 2.0GHz
	Memory	Onboard LPDDR4 4GB
	Storage	32GB eMMC (Option to 64GB/128GB)

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Dimension(mm)

Specification		
System	**Graphics**	For internal LCD: MIPI-DSI up to 1920x1080; LVDS up to 1366x768; eDP up to 1920x 1080; For external Display: HDMI up to 1920x 1080
	Display	MIPI DSI, eDP (eDP1/eDP2), LVDS, HDMI
	Touch	Support via I2C signal
Connectivity	**WLAN**	WiFi 6+ BT 5.4 for Option
	LAN	10/100/1000Mbps
I/O Interface	**Display Port**	1x HDMI
	Ethernet	1x RJ45 connector w/ LED indicator
	USB Port	4x USB 3.0 Type-A
	Serial Port	1x RJ11 (6P4C) for RS232
	Cash Drawer	1x RJ12 6P/6C
	Power Input	1x DC Jack, 5.5/ 2.5mm

Specification		
Internal I/O	**USB Ports**	7x USB 2.0 (PH 2.0mm)
	Serial Ports	2x RS232 (PH 2.0mm), 3x TTL UART (PH 2.0mm, 4P)
	Display Port	1x LVDS, 1x MIPI DSI, 2x eDP
	Touch Conn.	1x 6-Pin Connector (PH 2.0mm)/1 x 6-Pin FFC Connector, P=0.5mm
	Audio	1x 1W speaker stereo Amp 4Ω
	RTC	Support via 1x PH 1.25mm
	Others	1x 12V IN Conn.(PH 2.5mm, 4P); 1x 12V Out conn. (PH 2.5mm, 4P); 1x Type-C for ADB; 1x Power Key/LED conn. (PH 2.0mm, 4P) ; 1x Reset KEY/GPIO (PH 2.0mm, 4P); 1x SPI Conn. (PH2.0mm, 6P); 1x RST Button, 1x DWN Button
Expansion		1x TF Card Slot
Power Supply		1x 12V DC Jack 5.5/2.5mm
Dimension		148.2 x101.6mm (in temporary)
Operating Temperature		0°C ~ 70°C (0% to 90% RH, non-condensing)
Storage Temperature		-40°C ~ 85°C
Operating System		Android 15, Linux-Debian, Ubuntu