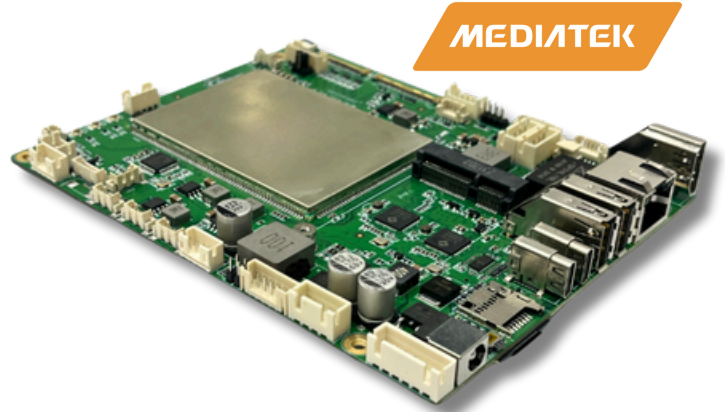


# MTB-613

# Industrial AIoT Motherboard


**MEDIATEK**

## Features

- MediaTek Genio 510 Dual-Core Cortex A78, 2GHz+ Quad-Core Cortex A55, 2GHz
- Built-in Integrated Mali-G57 GPU for High performance multimedia processing with low power consumption
- 8GB LPDDR4X Memory onboard and 64GB eMMC onboard design
- Comprehensive connectivity: Wi-Fi6 (2T2R) +BT5.2(1T1R) and 4G module via miniPCIe socket
- Flexible Media output for selection: HDMI, LVDS, eDP, USB-C w/Alt DP Mode
- Rich IO: 10 x USB, 2xRS232, 1x GbE Ethernet (Support PoE), speaker, MIC, Line-out connectors
- Multiple OS Support : Android 13, Linux Yocto



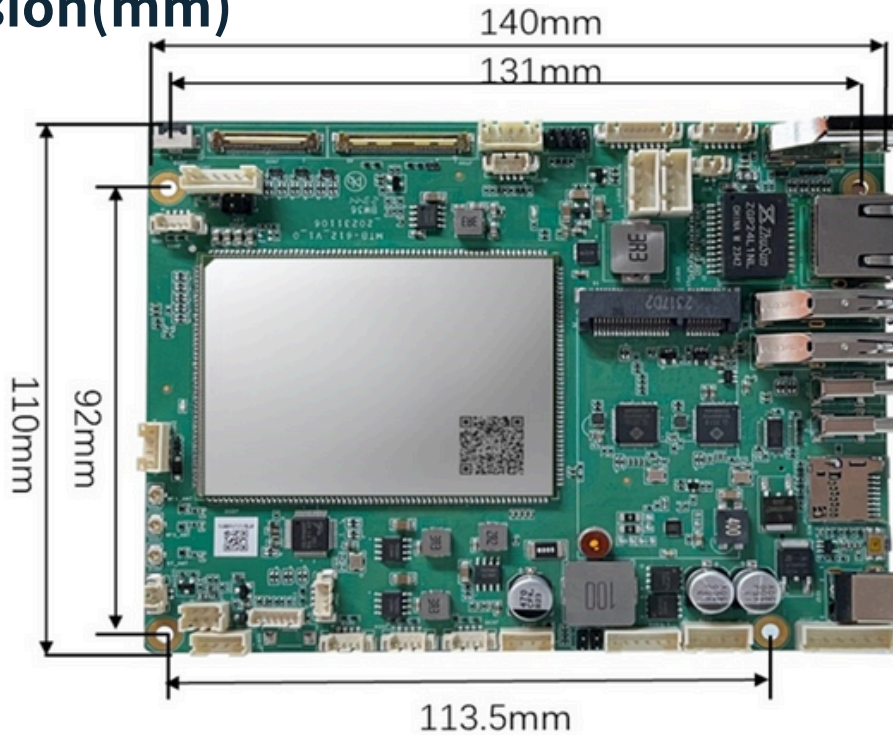
## Introduction

MTB-613 is a high-performance motherboard tailored for industrial AIoT applications. Powered by the MediaTek Genio 510 (MT8370) processor, it features dual-core Cortex-A78 and quad-core Cortex-A55 running at up to 2GHz, alongside a dedicated AI accelerator for advanced tasks like image recognition and data analytics. With 8GB LPDDR4X memory and 64GB eMMC storage, it supports both Android 13 and Linux Yocto, offering flexible application development. Its extensive I/O options include HDMI, DisplayPort, eDP, USB-C (with video output), and PoE Ethernet, making it suitable for smart manufacturing, security, and retail environments. These interfaces enable seamless connections to displays, cameras, and network devices, meeting real-time data needs and making it an ideal choice for high-performance edge computing and industrial automation applications.

## Specification

<b>System</b>	<b>Processor</b>	MT8370(Genio510) Dual-Core Cortex-A78@2GHz + Quad-Core Cortex-A55@2GHz
	<b>Memory</b>	Onboard LPDDR4X 8GB
	<b>Storage</b>	64GB eMMC onboard and 1 TF card slot
	<b>Display</b>	HDMI Type A, Display Port, eDP, Dual 8-bit LVDS
	<b>Touch</b>	Support I2C (6P PH 2.0mm Header)
	<b>Camera</b>	MIPI-CSI



**Dimension(mm)**

**Specification**

Connectivity	Wi-Fi+BT	Wi-Fi6 (2T2R) +BT5.2(1T1R) (MT7921)
	LAN	10/100/1000Mbps
I/O Interface	Ethernet	1x RJ45 connector (Support PoE)
	USB Port	2x USB 3.0 Type-A, 1x USB Type-C for OTG, 1x USB 3.0 Type-C w/ Alt DP mode; 1x USB 2.0 w/ 4P PH 2.0 header; 5x USB 2.0 w/ 4P GH 1.25mm
	Audio	2x 5W/8Ω speaker out, w/ 4P PH 2.0 socket; 1x Line-out w/ 3.5mm, 1x MIC w/ 2Pin header
	COM	1x RS232, 9P GH 1.25mm socket; 1xRS232, 6P GH 1.25mm socket; 1x TTL Debug Port, 4P PH 2.0 socket
	Expansion	1x MiniPCIe socket, 1x SIM Card Slot
	Others	I2C, GPIO, 1x RESET Button
Power Supply		12V DC Power Input; support 1x 2.5mm DC Jack , 1x Type-C PD
Dimension		140x 110mm
Operating Temperature		0°C ~ 60°C ( 0% to 90% RH, non-condensing)
Storage Temperature		-20°C ~ 70°C
Operating System		Android 13/ Linux

## I/O Briefing

