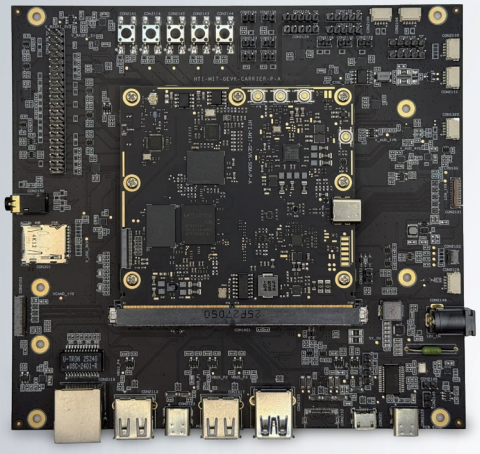
hti 慧通智聯 HuiTong Intelligence

G520 AIoT SMARC Module



Hub G520 AIoT Module, powered by the MediaTek Genio 520 with an octa-core CPU and 10 TOPS AI performance, enables efficient image and voice processing. It supports MIPI DSI/CSI for display and camera integration, and includes the features of USB 3.2, Gigabit Ethernet, SD 3.0, and GPIO. Built-in Wi-Fi 5 and wireless communication technology deliver reliable connectivity.

AI-powered image and voice processing

Supports DSI/CSI displays and cameras

Rich I/O interfaces for embedded use

Application Areas

IoT & Edge Computing

- AI Real-Time Facial Recognition
- Smart Retail / Vending Machines
- Smart Home Hub

Industrial Control & Automation

- AOI Visual Defect Detection
- Smart Robotic Arm Control
- Smart Energy Management

In-Vehicle Applications

- ADAS Driver Assistance
  (Lane Departure / Pedestrian Detection)
- In-Car Voice Assistant
- Driver Monitoring System
  (Drowsiness Detection)
- Smart Cockpit Entertainment

Smart Healthcare

- Patient Monitoring
  (Heart Rate / Respiration / Fall Detection)
- Mobile Medical / Telemedicine

Smart City

- Intelligent Traffic Lights
  (Real-Time Flow Control)
- Public Safety Monitoring
  (Crowd / Behavior Detection)
- Environmental Monitoring
  (Air Quality, Noise, Disaster Alerts)

Robotics & Service Automation

- Service Robots for Restaurants/Hotels
- Autonomous Delivery Robots
- Educational & Interactive Robots

Specifications

G520 SoM SPEC	
Processor	
SoC Platform	Genio 520 (MT8371+MT6365+MT6319+RT6375+MT6631X)
Memory/Storage	
RAM	4GB LPDDR4x (discrete)
eMMC	16GB TLC (discrete)
Wireless Connectivity	
Wi-Fi	Wi-Fi 5 , IEEE 802.11 ac/a/b/g/n
Wireless	Wireless communication technology
G520 Carrier Board SPEC	
Onboard I/O	
SMARC Modules Socket	Compatibility SMARC 2.1
Peripheral I/O	
Network	RJ45 Jack
Display/TP	4-laneMIPI-DSI, Zif connector
DP	USBC DP-1.4
Camera	2-lane MIPI-CSI, Zif connector
Audio	3.5mm 4-pole Headset
USB	1 x DRD USB3.2 Type-C (w/ DP and download feature, USB-P0) 1 x Host USB 3.2 Type-A (USB-P3) 1 x Host USB2.0 Type-C 2 x Host USB2.0 Type-A
Serial Port	1.8V/3.3V/5V UART interface connector
CAN	CAN interface connector
SPI	1.8V/ 3.3V SPI interfaces connector
12C	1.8V/ 3.3V 12C interfaces connector
Storage	microSD slot
PWM	3.3V PWM
GPIO	10 pins
Buttons	Power/Reset/Download/V+/V-/GPIO-x Button
Power	12V DC-in (2.1mm Inner Pin, 5.5mm Outer DC female)
G520 Software features	
Operating System	Android 15
Integrated Development Environment (IDE)	Android Studio development
SDK	HTI service (Built-in HTI service; enables programming for 12C, UART, SPI, and more without the need to develop kernel drivers)
Firmware Update	Support update.zip by HTI
Root Access	Supported

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