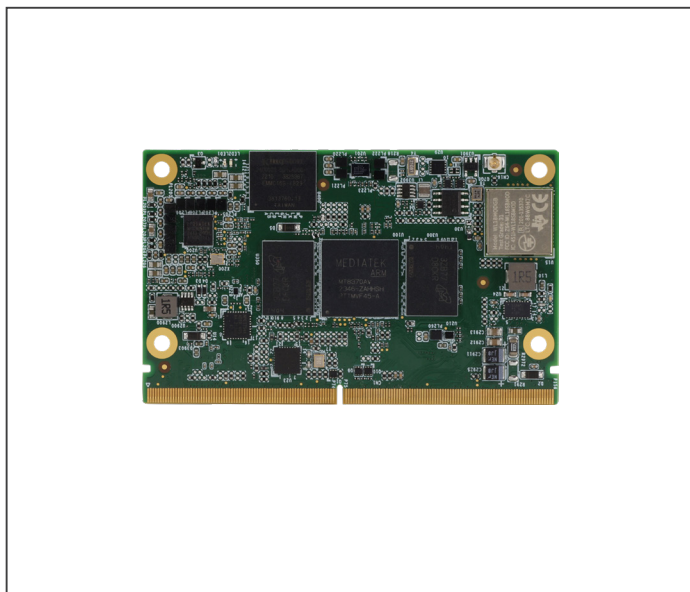




SMARC CPU Module with MediaTek Genio 700/510, up to Cortex-A78 x 2 + Cortex-A55 x 6 processor



## Features

- ARM MediaTek Genio 700 / 510
- Onboard LPDDR4, Up to 8GB
- HDMI 2.0 x 1, DP 1.4 x 1
- eDP 2 lane x 1, MIPI-DSI 4 lane x 1
- GbE x 1
- USB 3.0 HOST x 1, USB 2.0 OTG x 1, USB 2.0 HOST x 4
- UART x 4, GPIO x 12, MIPI CSI x 2, TPM 2.0



Giga LAN



HDMI



PCI Express



LPDDR 4



USB 3.0



## Specifications

System	
Form Factor	SMARC 2.1 Compliant
CPU	MediaTek Genio 700 (MT8390) Cortex-A78 x 2 + Cortex-A55 x 6, 4 TOPs, Cortex-A78 2.2GHz, Cortex-A55 2.0GHz MediaTek Genio 510 (MT8370) Cortex-A78 x 2 + Cortex-A55 x 4, 3.2 TOPs Cortex-A78 2.0GHz, Cortex-A55 2.0GHz
Chipset	—
Memory	Onboard LPDDR4, up to 8 GB
Storage	eMMC 5.1, 16GB (Optional: 32GB/64GB/128GB) SDIO 3.0 x 1 (for SD Card)
BIOS	—
MTBF (Hours)	TBD
Wake On LAN	—
Watchdog Timer	Yes
Real Time Clock	RTC x 1
Boot Select	Module eMMC Flash
Security	TPM 2.0 (optional)
Display	
Graphics Controller	ARM Mali-G57 MC2/3, OpenGL ES 1.1/2.0/3.2, Vulkan 1.0/1.1 (700: MC3, 510: MC2)
Video Output	HDMI 2.0 x 1 (3840 x 2160 @ 60GHz) DP 1.4 x 1 (4k2k @ 60GHz) eDP 1.2 2-Lane x 1 MIPI-DSI 4-Lane x 1 (by request) *Support up to dual display (4K x 1 + 2K x 1)
I/O Interfaces	
Ethernet	Gigabit Ethernet x 1 (support TSN)
USB	USB 3.0+2.0 x1 (Host) USB 2.0 x 5 (Host x 4, OTG x 1)
Serial Port	UART x 2 (4-wire, 1.8V) UART x 2 (2-wire, 1.8V, one for debug port)
Audio	I2S x 1
PCIE	PCIe 2.0 x 1
CANBus	—
MIPI-CSI	MIPI CSI 4 Lane x 1 + 2 Lane x 1 (by request)
GPIO	12 bits
Other Interfaces	SPI x 1, QSPI x 1 I2C x 5
Power	
Power Requirement	DC 3~5.25 V, AT (Option: ATX for Yocto)

Power Consumption	—
Environmental And Mechanical	
Dimensions	3.23" x 1.97" (82mm x 50mm)
Weight	TBD
Operating Temperature	-40°F ~ 185°F (-40°C ~ 85°C) (Option: 0°C ~ 60°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
Certification	CE/FCC Class A
OS Support	Ubuntu, Yocto, Android (by request)
Support Protocol	By request

## Packing List

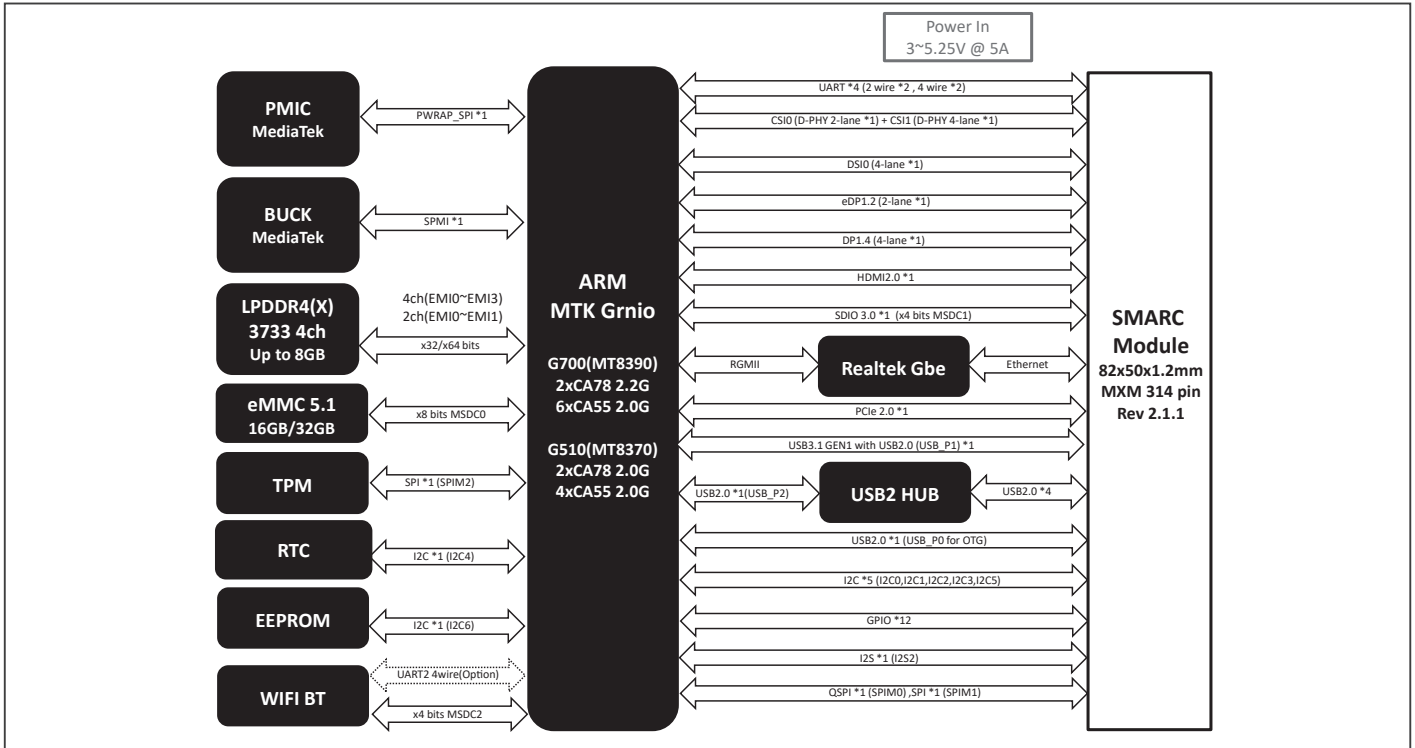
- uCOM-M700

## Optional Accessories

Part Number	Description
UCOM-M700-HSK01	HeatSink.82*42*21.5mm.for uCOM-M700/M510
ECB-960T-A15-0002	Carrier board for uCOM-M700/M510

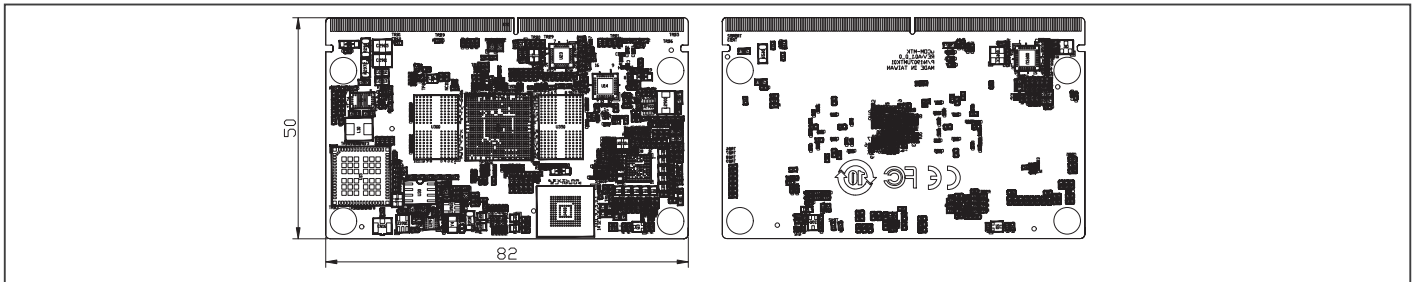


## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part Number	Form Factor	CPU	Memory	Display	Storage	LAN	USB	UART	Expansion	Power	Temperature	Others
uCOM-M700-A10-0001	SMARC	ARM MediaTek Genio 700 2 x Cortex-A78 2.2GHz + 6 x Cortex-A55 2.0GHz processor (4 TOPs)	Onboard LPDDR4 8GB	HDMI 2.0 x 1 DP 1.4 x 1 eDP x 1 MIPI-DSI x 1	16GB eMMC	GbE x 1	USB 3.0 x 1 USB 2.0 x 5 (OTG x 1)	UART x 4 (1.8V, 4-wire x 2, 2-wire x 2, one for debug port)	PCIe Gen 2.0 x 1	+5V	-40°C ~ 85°C	MIPI-CSI x 2 SPI x 1 QSPI X 1 I2C x 5 GPIO 12 bits
uCOM-M510-A10-0001	SMARC	ARM MediaTek Genio 510 2 x Cortex-A78 2.0GHz + 4 x Cortex-A55 2.0GHz processor (3.2 TOPs)	Onboard LPDDR4 8GB	HDMI 2.0 x 1 DP 1.4 x 1 eDP x 1 MIPI-DSI x 1	16GB eMMC	GbE x 1	USB 3.0 x 1 USB 2.0 x 5 (OTG x 1)	UART x 4 (1.8V, 4-wire x 2, 2-wire x 2, one for debug port)	PCIe Gen 2.0 x 1	+5V	-40°C ~ 85°C	MIPI-CSI x 2 SPI x 1 QSPI X 1 I2C x 5 GPIO 12 bits