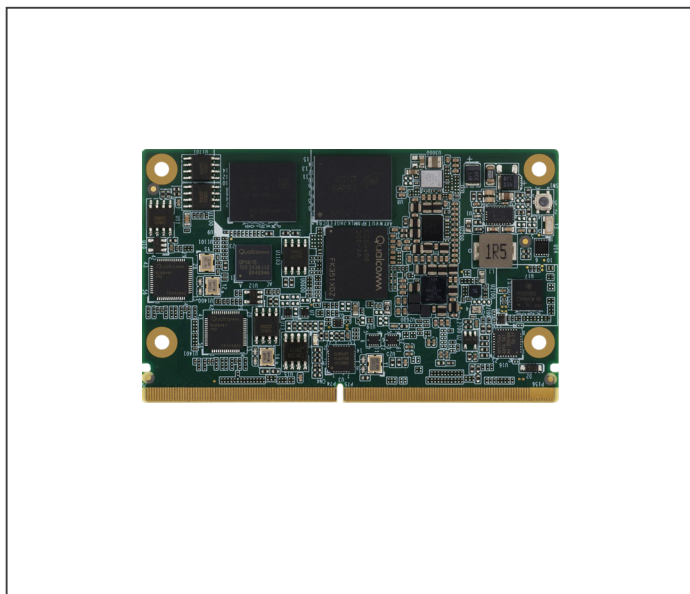


# uCOM-Q6490 PRELIMINARY

SMARC CPU Module with Qualcomm QCS6490, up to Cortex-A78 x4 + Cortex-A55x4 processor



## Features

- ARM Qualcomm QCS6490 - Arm® Cortex®-A78 x4, Cortex-A55 x4, up to 2.7GHz
- Onboard LPDDR5, Up to 8GB
- MIPI-DSI 4 lane x 1
- DP x1
- USB 2.0 x 4 (OTG x 1)
- GbE x 2
- UART x 4, GPIO x 14, MIPI CSI x 2, TPM 2.0



## Specifications

System	
Form Factor	SMARC 2.1 compliance
CPU	Qualcomm® Kryo™ CPU 670 built on Arm v8 Cortex technology QCS6490 Gold+ x 1; Gold x 3; Silver x 4 Cortex-A78 x1 up to 2.7GHz, Cortex-A78 x3 up to 2.4 GHz, Cortex-A55 x4, up to 1.9 GHz
Chipset	—
Memory	Onboard LPDDR5, up to 8 GB
Storage	SDIO 3.0 x 1 (for SD Card) UFS, 16/32/64 GB (optional)
BIOS	—
MTBF (Hours)	TBD
Wake On LAN	—
Watchdog Timer	Yes
Real Time Clock	Yes
Boot Select	Carrier SD Card
Security	TPM 2.0 (optional)
Display	
Graphics Controller	Qualcomm® Adreno™ 643L, Up to 812 MHz, OpenGL® ES 3.2, DirectX® FL 12, OpenCL™ 2.0 FP, Vulkan® 1.1
Video Output	DP 1.4 x 1 MIPI-DSI 4-Lane x 1
I/O Interfaces	
Ethernet	Gigabit Ethernet x 2 (optional)
USB	USB 2.0 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 2
PCIe	PCIe 2.0 x1
CANBus	—
MIPI-CSI	4 Lane x 1 + 2 Lane x 1
GPIO	14 bits (one for PWM)
Other Interfaces	SPI x 2 I2C x 5
Power	
Power Requirement	DC 5 V, AT/ATX
Power Consumption	TBD

Environmental And Mechanical	
Dimensions	82mm x 50 mm
Weight	0.0625 lb (0.02kg)
Operating Temperature	-40°C ~ 85°C
Storage Temperature	-40°C ~ 80°C
Operating Humidity	0% ~ 95% relative humidity, non-condensing
Certification	CE/FCC Class A
OS Support	Yocto 4.0
Support Protocol	—

## Packing List

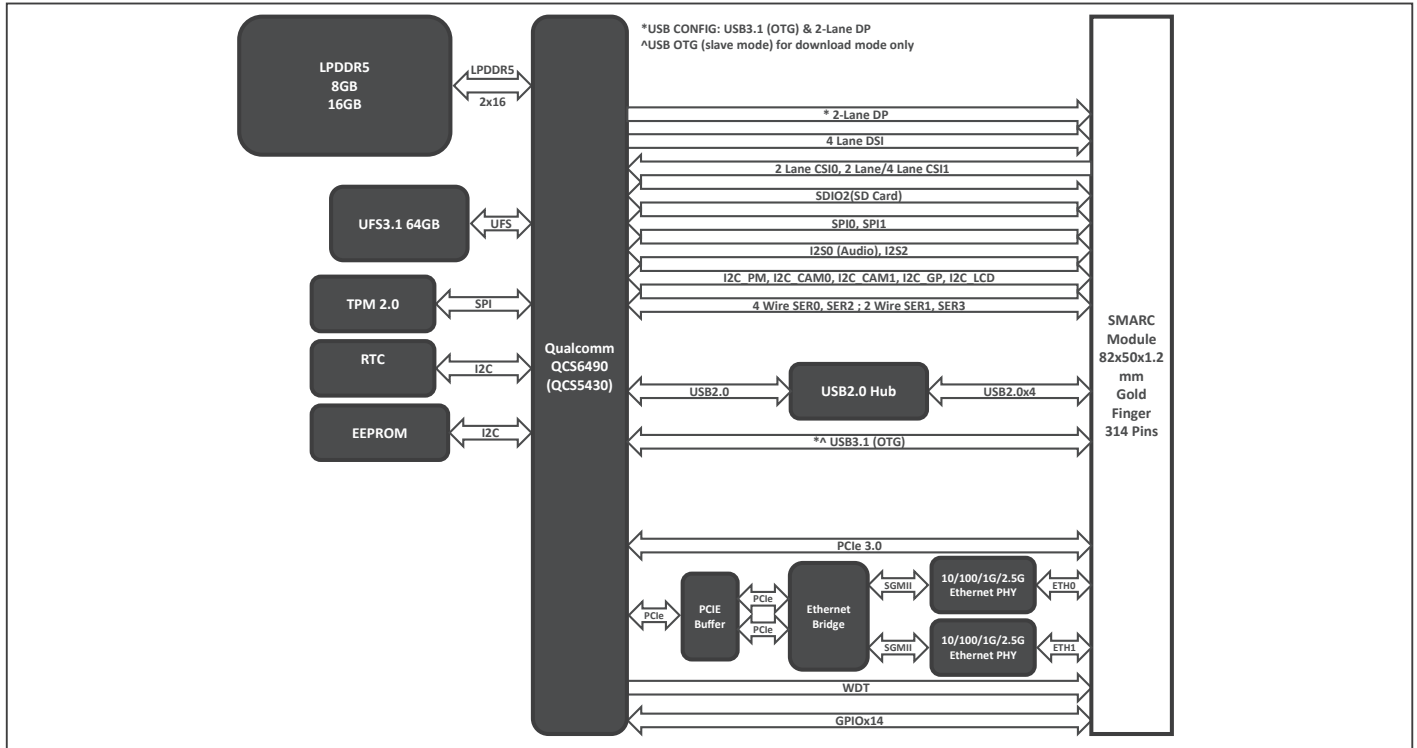
- uCOM-Q6490

## Optional Accessories

Part Number	Description
UCOM-Q6490-HSK01	HeatSink.82*42*21.5mm.for uCOM-Q6490

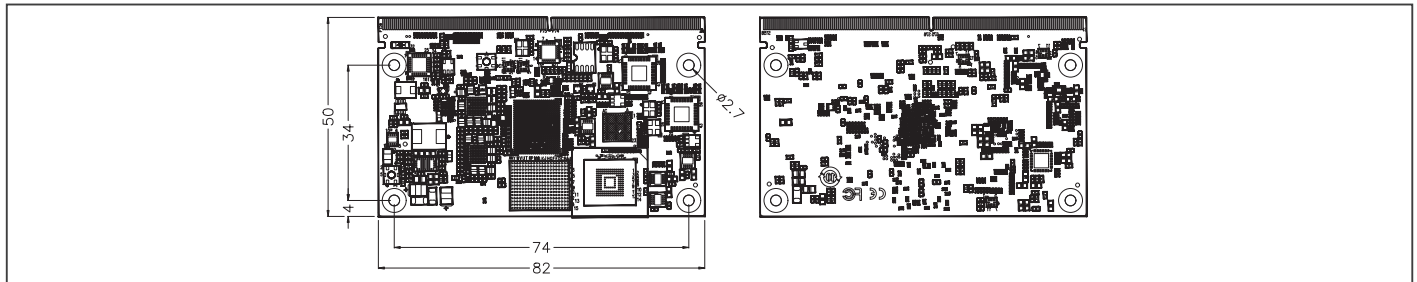


## Block Diagram



## Dimension

Unit: mm



## Ordering Information

Part Number	Form Factor	CPU	Memory	Display	Storage	LAN	USB	UART	Expansion	Power	Temperature	Others
uCOM-Q6490-A10-0001	SMARC	Qualcomm® Kryo™ CPU 670 built on Arm v8 Cortex technology QCS6490 Gold+ x 1; Gold x 3; Silver x 4 Cortex-A78 x1 up to 2.7GHz, Cortex-A78 x3 up to 2.4 GHz, Cortex-A55 x4, up to 1.9 GHz	Onboard LPDDR5 8GB	DP 1.4 x 1 MIPI-DSI 4-Lane x 1	64GB UFS	GbE x 2	USB 3.0 x 1 USB 2.0 x 4 (OTG x 1)	UART x 2 (4-wire, 1.8V) UART x 2 (2-wire, 1.8V, one for debug port)	PCIe 2.0 x 1	+5V	-40°C ~ 85°C	SPI x 2 I2C x 5 I2S x 2 GPIO 12 bits MIPI-CSI x 2
uCOM-Q6490-A10-0002	SMARC	Qualcomm® Kryo™ CPU 670 built on Arm v8 Cortex technology QCS6490 Gold+ x 1; Gold x 3; Silver x 4 Cortex-A78 x1 up to 2.7GHz, Cortex-A78 x3 up to 2.4 GHz, Cortex-A55 x4, up to 1.9 GHz	Onboard LPDDR5 16GB	DP 1.4 x 1 MIPI-DSI 4-Lane x 1	64GB UFS	GbE x 2	USB 3.0 x 1 USB 2.0 x 4 (OTG x 1)	UART x 2 (4-wire, 1.8V) UART x 2 (2-wire, 1.8V, one for debug port)	PCIe 2.0 x 1	+5V	-40°C ~ 85°C	SPI x 2 I2C x 5 I2S x 2 GPIO 12 bits MIPI-CSI x 2