



System on Module Based on NXP i.MX 6UltraLite Cortex-A7 CPU

Description:

The SOM-iMX6UL is a highly flexible System on Module (SoM) based on NXP i.MX 6UltraLite Cortex-A7 processor with 528MHz CPU Clock. It is a power-optimized cost-effective SoM that perfectly fits various embedded and industrial products and segments. It provides a variety of interfaces and connectivity options, ideal for fast emerging applications such as Internet of Things (IoT), as well as other portable and battery-operated embedded systems.

The highly integrated connectivity includes Ethernet, serial, GPIO, CAN, LCD with touch panel and camera interfaces. In addition, the system supports industrial operating grade, targeting embedded application requiring a wide temperature range.



NXP i.MX6UL Cortex-A7

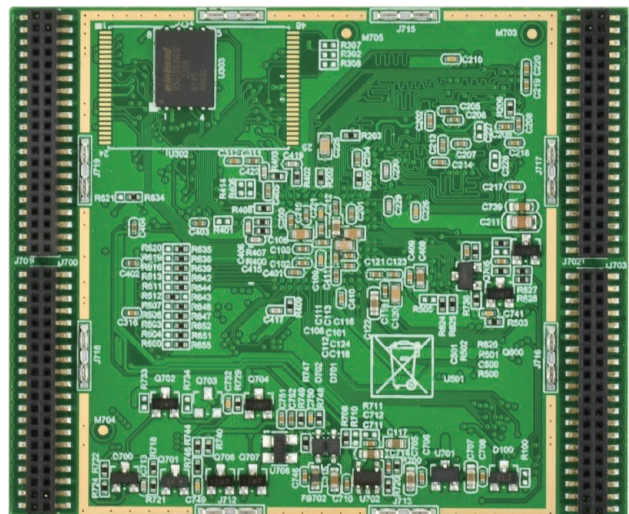
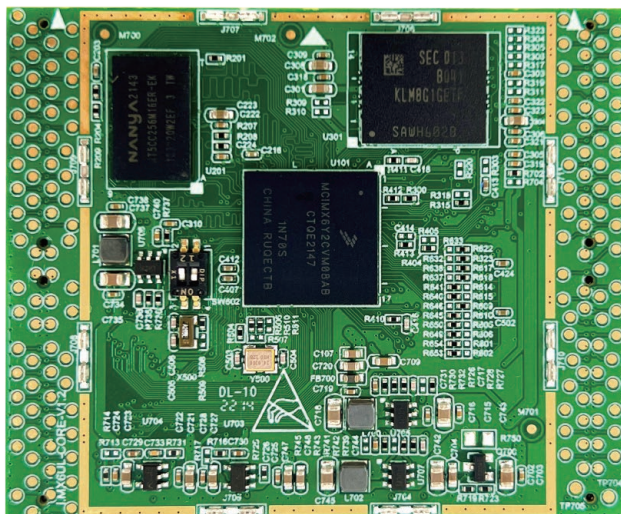
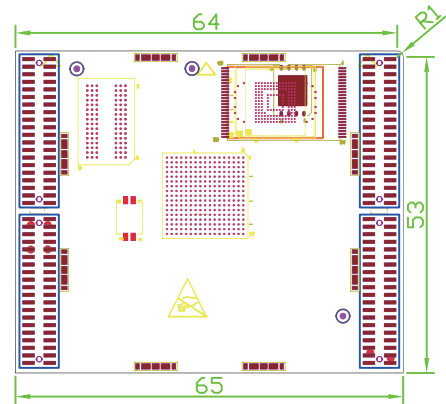


Buildroot/Yocto



Main Features:

- NXP i.MX 6UltraLite ARM Cortex-A7 528Mhz CPU
- Onboard 256MB RAM (512MB/1GB optional)
- Onboard 4GB eMMC (8GB/16GB/32GB/64GB optional)
- Supports Buildroot 2019.02.4, Yocto 2.5.2 operating system
- Other Interfaces: One ethernet, Dual CAN, I2C, SPI, GPIO, Serial, ADC, PWM

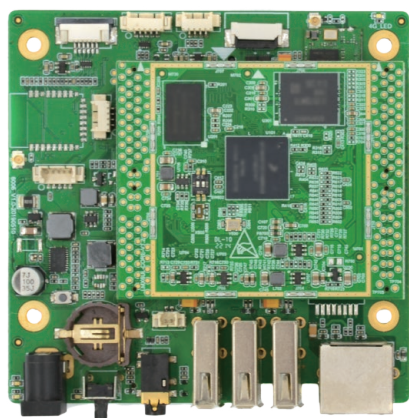


Specification:

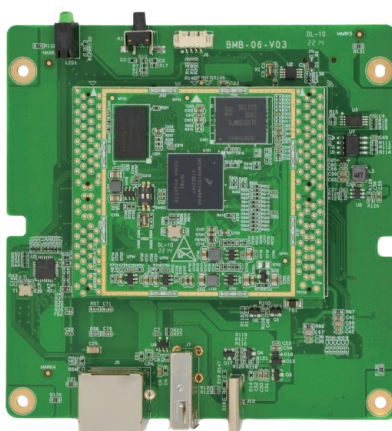
System	
CPU	NXP i.MX 6UL CPU MCIMX6G2CVM05AB (default)
RAM	Onboard 256MB DDR3 (512MB/1GB optional)
eMMC	Onboard 4GB (8GB/16GB/32GB/64GB optional)
Kernel	Linux 4.1.15
OS	Buildroot 2019.02.4, Yocto 2.5.2
Connectivity	
LAN	1 x Ethernet, supporting MII/RMII
GPIO	Up to 106 x GPIO
Serial	Up to 8 x serial ports
I2C	Up to 4 x I2C
CAN	Up to 2 x CAN
SPI	Up to 4 x SPI
ADC	Up to 10 x ADC
PWM	Up to 8 x PWM
I2S	Up to 3 x I2S
Camera	1 x 8bit parallel camera port
JTAG	1 x JTAG debug port
LCD	1 x 24bit RGB LCD panel port
Power	
Input Voltage	Average 5V, 3.3V to 6.1V
Input Current	110mA, Max. 250mA
Power Consumption	Average 0.55W, Max. 1.25W
Mechanical	
Dimension	65mm(L) x 54mm(W) x 9mm(H)
Operating Temp.	-40 °C ~ 105 °C

SOM-iMX6UL is compatible with the following Carrier Board:

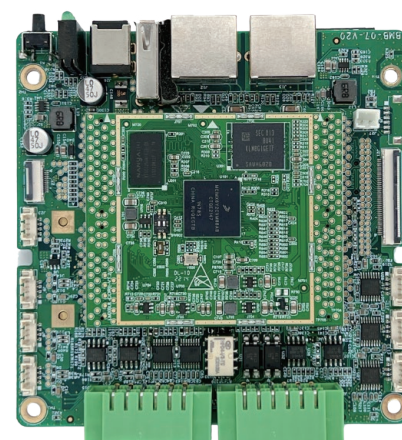
BMB-03



BMB-06

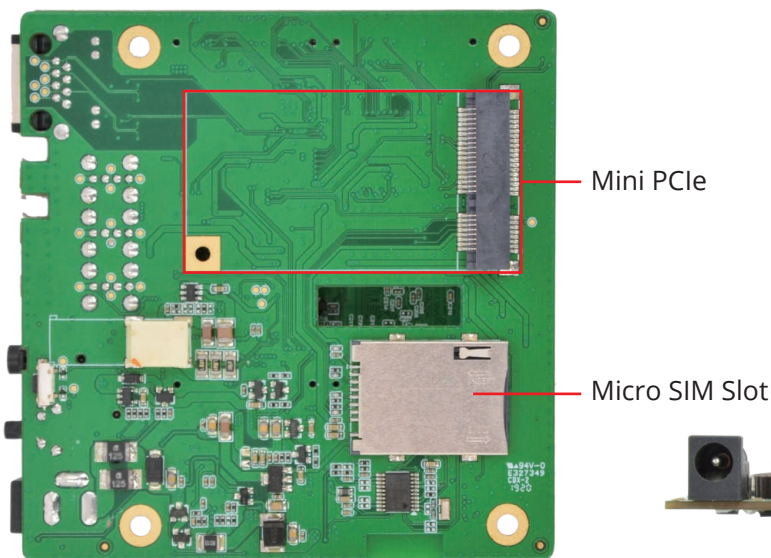
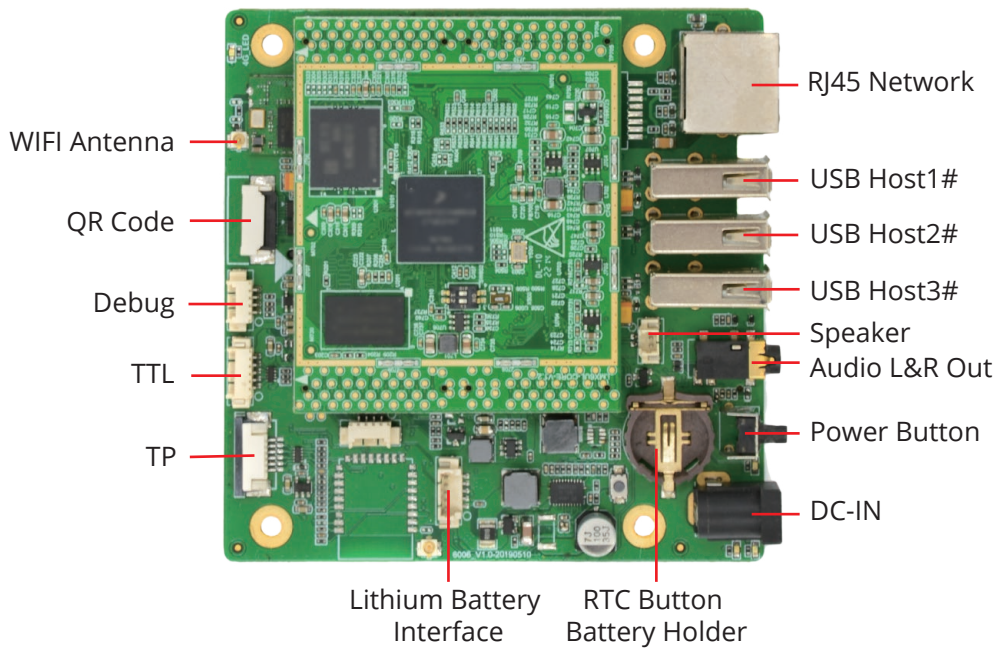


BMB-07



BMB-03 Specification:

I/O Interfaces	
Network	1 x RJ45
WIFI	1 x WIFI Antenna
USB	3 x USB Host
Display	1 x TP
Audio	1 x Speaker Out, 1 x Audio L&R Out
Serial Port	1 x Debug Serial Port, 1 x TTL Serial Port
SIM Slot	1 x Micro SIM Slot
Mini PCIe	1 x Mini PCIe
Power	1 x DC-In, 1 x RTC Button Battery Holder, 1 x Lithium Battery Interface
Other Interface	1 x QR Code
Button	1 x Power Button
Dimension	92mm x 90mm

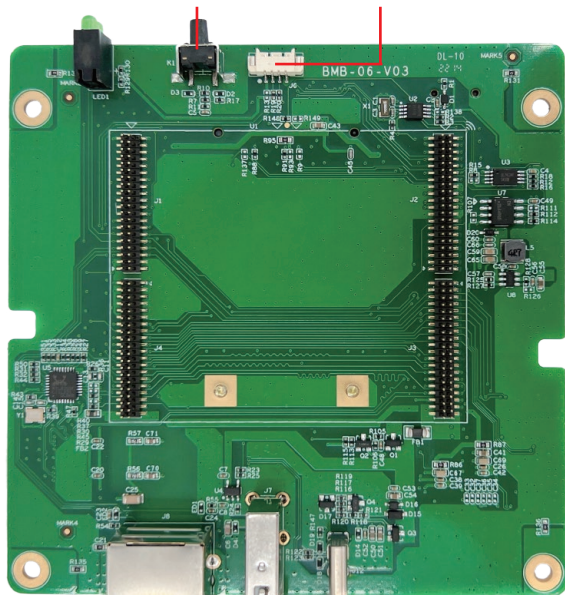


BMB-06 Specification:

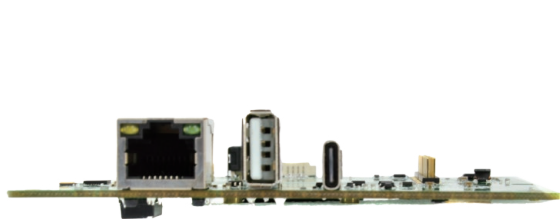
I/O Interfaces

LAN	1 x 10M/100Mbps RJ45 network port
USB	1 x USB 2.0 Host Type-A
PCIe	1 x Mini PCIe
Button	1 x Bluetooth Pairing Button
LED	1 x System LED, 1 x Status LED
Expansion	1 x RTC 1 x UART for system debug
Power Input	DC 5V USB Type-C
Dimension	102mm x 102mm

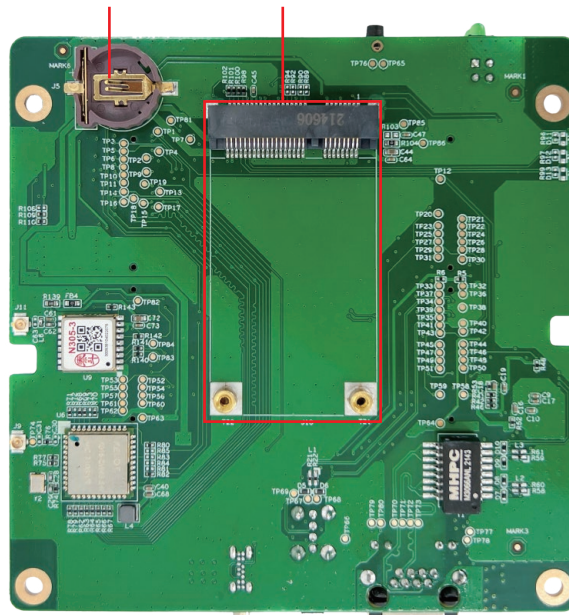
Bluetooth Pairing Button Debug



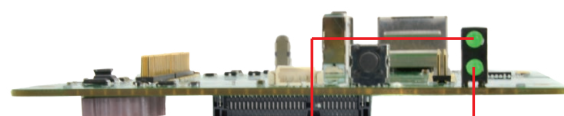
RJ45 Network USB 2.0 DC-IN



RTC Mini PCIe



System LED Status LED



BMB-07 Specification:

I/O Interfaces

LAN	2 x 10M/100Mbps RJ45 network port
USB	1 x USB 2.0 Host Type-A, can be configured as USB OTG through software
SIM	1 x Micro SIM slot
RS485	2 x Physically-isolated RS485
RS232	2 x Physically-isolated RS232
CAN	2 x Physically-isolated CAN
LED	1 x Power LED, 2 x User-defined GPIO LED
Button	1 x Reset button
PCIe	1 x Mini PCIe
Expansion	1 x ESSPI
	1 x LVDS
	3 x RS232
	2 x DI
	2 x DO (One normally open and the other normally closed)
	3 x USB Host
	4 x GPIO
Power Input	1 x DC jack
	1 x Built-in connector for 12V~24V power input
Dimension	102mm x 102mm

