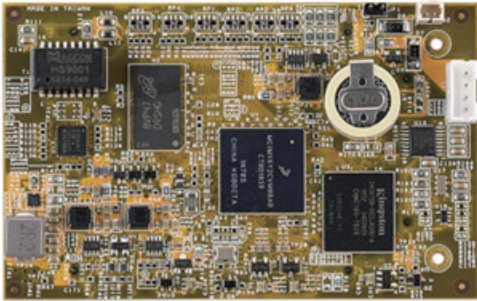


# Linux-ready Cortex-A7 System on Module

# M-X6ULL-B



## Features

- NXP i.MX6ULL Cortex-A7 CPU, Up to 800MHz
- Linux kernel 5.10.x (or up) with Boot Loader & File System
- Toolchain: gcc 9.3.x + glibc 2.31
- 512MB DDR3/LvDDR3 SDRAM, 16GB eMMC
- 1x 10/100MHz Ethernet Interface
- 4x UART, 2x USB & I2C / I2S / SPI / GPIO/RMII Interface
- SD Interface, Serial Console
- 24bits RGB Display Interface, 4 -Wired Resistive Touch Interface
- Compact Size, 50 x 80mm
- Single 3.3VDC Power-In

## H/W Specifications

### CPU / Memory

- CPU: NXP i.MX6ULL Cortex-A7 MPCore, Up to 800MHz
- SDRAM: 512MB, DDR3/LvDDR3
- eMMC: 16GB

### Micro-SD 2.0 Interface

- Signals: cmd, clock, data0~3, card\_detect
- SDHC Compatible

### Network Interface

- Type: 1 x 10/100Mbps Ethernet with PHY
- Signal: EXT+, EXT-, ERX+, ERX
- Protection: 1.5KV Magnetic isolation

### UART Interface

- UART1~4: TX, RX, RTS, CTS, GND
- Signal Level: 3.3V

### Common UART Parameters

- Baud Rate: up to 921.6Kbps
- Parity: None, Even, Odd, Mark, Space
- Data Bits: 5, 6, 7, 8
- Stop Bits: 1, 1.5, 2
- Flow Control: RTS / CTS, XON / XOFF, None

### USB 2.0 Interface

- Supports 480Mbps high-speed mode
- 1x Host USB 2.0 Port, 1x USB Client Port

### I2S (Inter-Integrated Circuit Sound) Interface

- Transmit Signals: TX, Sync, CLK
- Receive Signals: RX

### I2C (Inter-Integrated Circuit) Interface

- Signals: data(SDA), clock (SCL)

### SPI (Serial Peripheral Interface)

- Data Signal: MISO, MOSI, SCLK
- Chip Select: CS1

### GPIO (General-purpose I/Os) & RMII Interface

- Total No. of Pins: 15

### Console / Debug Ports

- Serial console port (TX / RX / GND)

### Display Interface

- One 24bits RGB digital parallel display interface
- Support max 85 MHz display clock, Up to WXGA (1366x768) at 60Hz

### Touch Sensor Interface

- Support 4-wire resistive touch pane

### SD Interface

- Signal: cmd, clock, data0~3, card detect
- SDHC compatible

## General

- Power Input: +3.3VDC, Consumption: 0.75Watts (Typical)
- Watch-Dog Timer: YES
- Real-Time Clock (RTC): YES
- Dimensions (W x L): 50 x 80mm
- Mounting Hole x 2 reserved , 2.0mm (M2) in diameter
- Pins: Total 128pins, 2.0mm pitch, CN1(28pin)/CN2(50pin)/CN3(50pin)

## S/W Specifications

### Operation System

- Linux kernel 5.10.x (or up)
- Support bootup from eMMC or SD card
- Boot Loader: Barebox
- File System: EXT4/EXT3/EXT2, VFAT/FAT, NFS
- GUI Engine: X11

### Desktop Environment

- Matchbox (X11 Desktop Environment)
- Built-in Firefox / Chromium browser + virtual keyboard

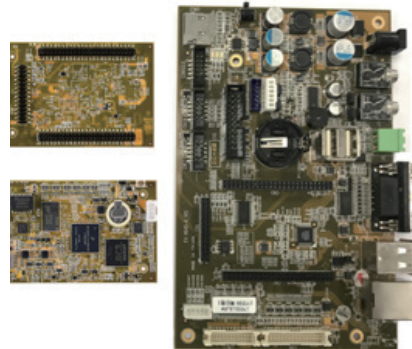
### Software Development

- Toolchain: gcc 9.3.0 + glibc 2.31
- Supports in-place C/C++ code compilation

### Package Management

- Package repository: Artila self-maintained repository
- Command: Using standard apt-get command

## SOM + EVK board



## Ordering Information

### M-X6ULL-B

Linux-ready Cortex-A7 800MHz System on Module with 512MB SDRAM 16G eMMC, (PIN-Header type)