M-X6ULL

Features

- NXP i.MX6ULL Cortex-A7 CPU, Up to 800MHz
- Linux kernel 5.4.x with boot loader & file system
- Toolchain: gcc 9.3.0 + glibc 2.31
- 512MB DDR3/LvDDR3 SDRAM, 4GB eMMC
- 2x 10/100MHz Ethernet interface
- 1x CAN, 2x OTG/HOST USB, 4 x UART & I2C / I2S/GPIO
- SD interface, Serial console
- 24bits RGB display interface, 4-wired resistive touch interface
- SODIMM 200 form factor, Compact size, 68 x 43mm
- Single 5VDC operation

■ H/W Specifications

CPU / Memory
- CPU: NXP i.MX6ULL Cortex-A7 MPCore, Up to 800MHz
- SDRAM: 512MB, DDR3/LvDDR3
- eMMC: 4GB

Network Interface
- Type: 2 x 10/100Mbps Ethernet
- RMII interface

CAN Interface
- 2 x Flexible Controller Area Network (FlexCAN)
- CAN1~2: TX/RX, compliant to CAN 2.0 partA/B

UART Interface
- UART1: TX, RX
- UART2: TX, RX, RTS, CTS
- UART5-6: TX, RX, CTS
- 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
- Two high-speed OTG 2.0 modules with integrated HS USB PHYs

I2S Interface
- Transmit Signals: TX, Sync, CLK
- Receive Signals: RX, Sync, CLK

I2C Interface
- Signals: ata(SDA), clock(SCL)

GPIO (General-purpose I/Os)
- No. of Pins: 8

Console / Debug Ports
- Serial console port (TX / RX / GND)

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

Touch Sensor Interface
- With touch controller to support 4-wire/5-wire resistive touch panel

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

General
- Power Input: +5VDC, Consumption: 0.75Watts (Typical)
- SODIMM 200P Form Factor
- Watch-Dog Timer: YES
- Real-Time Clock (RTC): YES
- Dimensions (W x L): 68 x 43 mm

■ S/W Specifications

Operation System
- Linux kernel 5.4.x
- 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)
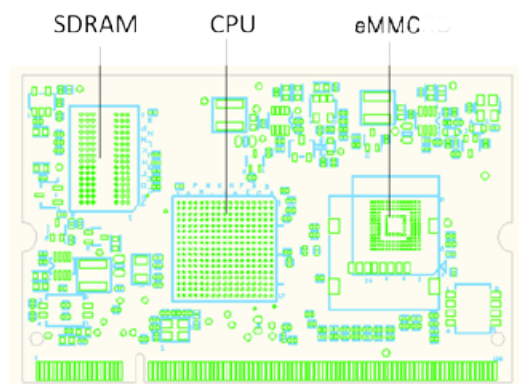- Built-in Firefox / Chromium browser + virtual keyboard

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

■ Front View

■ Ordering Information

M-X6ULL
- Linux-ready Cortex-A7 800MHz System on Module with 512MB SDRAM (SODIMM type)