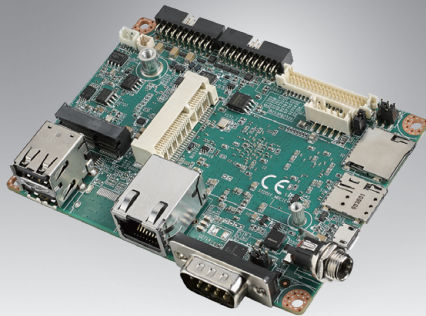


RSB-3730

NXP iMX 8M Mini Cortex-A53 2.5" SBC

Preliminary



Features

- NXP i.MX 8M Mini Cortex-A53 Quad core up to 1.8GHz
- Onboard LPDDR4 2/4 GB
- 1 HDMI or 1 Dual Channel 24 bit LVDS by bom option
- Up to 5 USB2.0, 1 USB OTG, 2 RS232, 1 RS232/485, 8 GPIO, 1 I2C
- 1 GbE, 1 Mini-PCIE , 1 M.2
- Supports Yocto and Andorid
- Support I/O Expansions by UIO40-Express I/O boards, please refer to page #3 for more information



Introduction

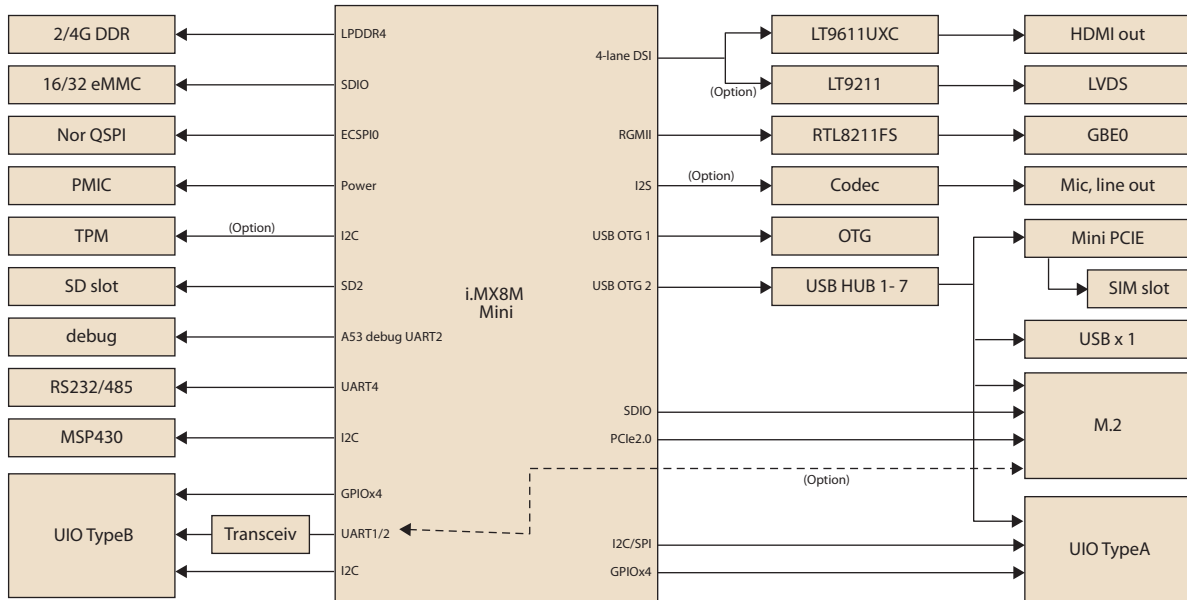
RSB-3730 is a RISC 2.5" single board computer (SBC) powered by aNXP iMX 8M Mini Cortex-A53 Quad high performance processor. It offers both rich display as HDMI/LVDS and rich IO as 1 GbE/3 serials/5 USB/8GPIOs. RSB-3730 also features Mini-PCle for LTE and M.2 for WiFi/BT solution. It is an ideal solution for healthcare, security, IOT gateway and Vending machine application.



Specifications

| | | |
|------------------|-----------------------|--|
| Form Factor | | 2.5" SBC |
| Processor System | CPU | NXP i.MX 8M Mini Cortex-A53 Quad core up to 1.8GHz |
| Memory | Technology | LPDDR4 1333MHz |
| | Capacity | On-board 2/4 GB |
| | Flash | 16GB of eMMC NAND Flash for OS and boot loader |
| NPU | NPU | - |
| Graphics | HDMI | 1 HDMI 2.0 |
| | LVDS | 1 Dual Channel 18/24 Bit LVDS, Backlight power, 5/12V, Max. 1A (shared with HDMI, default as HDMI) |
| | Graphics Engine | Vivante GC320, GC NanoUltra 3D GPU Support OpenGL ES 2.0, VG 1.1 |
| | H/W Video Codec | Decoder: 1080p60 H265, VP9;1080p60 H264, VP8 Encoder: 1080p60 H.264, VP8 |
| Ethernet | Chipset | RTL8211FS |
| | Speed | 1 10/100/1000 Mbps |
| WatchDog Timer | WatchDog Timer | Yes |
| I/O | USB | 2 x USB2.0 by typeA, 1 x USB OTG |
| | Audio | 1 Mic. in / Line out by pin header (option) |
| | CAN | - |
| | Serial Port | 1 x RS232 for debug 1 x RS232/485 |
| | Camera Input | - |
| | UIO40-Express | 3 USB2.0, 2 RS232, 2 I2C, 8 GPIOs |
| Indicator | LED | 1 Power LED |
| | Mini PCIe | 1 Full Size Mini PCIe Slot (with USB) |
| Expansion | M.2 | 1 E-Key 2230, w/ SDIO & UART&PCIE &USB signal |
| | SD Socket | 1 Micro SD Socket |
| | SIM Slot | 1 Nano SIM Slot |
| | Power Supply Voltage | +12 V |
| Power | Power Type | Lockable DC-Jack (2pin type connector by BOM option) |
| | Power Consumption | TBD |
| | Operating Temperature | 0 ~ 60 °C / -40 ~ 85 °C |
| Environment | Operating Humidity | 5%~95% Relative humidity, non-condensing |
| | Dimensions | 100 x 72 x 19 mm |
| Mechanical | Weight | 0.05kg |
| | Operation System | Yocto3.0, and Android |
| Certifications | | CE/FCC Class B |

Block Diagram



Ordering Information

| Part No. | CPU | Memory | Flash Memory | HDMI | LVDS | LAN | USB Host | SD | CANbus | Operating Temperature |
|------------------|------------------------|--------|--------------|------|------|-----|----------|----|--------|-----------------------|
| RSB-3730CO-XNA1E | iMX8M Mini Quad 1.8GHz | 2 GB | 16 GB | 1 | - | 1 | 5 | 1 | - | 0 ~ 60 °C |
| RSB-3730WO-XNA1E | iMX8M Mini Quad 1.6GHz | 2 GB | 16 GB | 1 | - | 1 | 5 | 1 | - | -40 ~ 85 °C |

Packing List

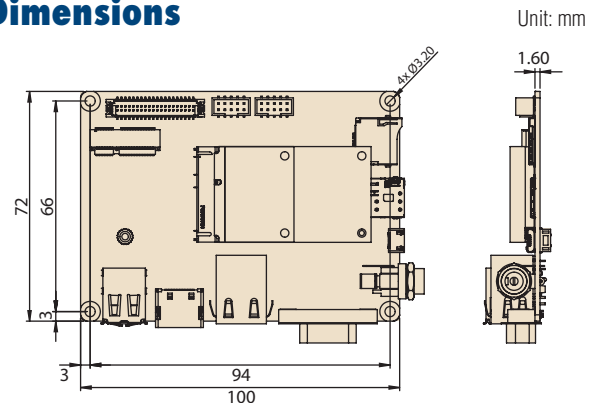
| Part Number | Description |
|-------------|-------------------|
| RSB-3730 | RSB-3730 2.5" SBC |

Optional Accessories

| Part Number | Description |
|------------------|---|
| 96PSA-A36W12R1-3 | ADP A/D 100-240V 36W 12V C6 DC PLUG 90° 62368 |
| 1700031429-01 | Line out cable |
| 1700026878-01 | Mic. in cable |
| 1702002605 | Power Cord 3P EU 10A 250V 183cm |
| 1700008921 | Power Cord 3P PSE 183cm |
| 1702031801 | Power Cord 3P UK 10A 250V 183cm |
| 1702002600 | Power Cord UL 3P 10A 125V 183cm |
| 1700009652 | Power Cord CCC 3P 10A 250V 187cm |
| SQF-MSDM1-8G-21C | SQF MICRO SD C10 MLC 8G (-25 ~ 85 °C) |

* Please contact us to get suitable cellular module for your region.

Dimensions



Front I/O on RSB-3730



Compatible I/O Expansion Boards

UIO-4030

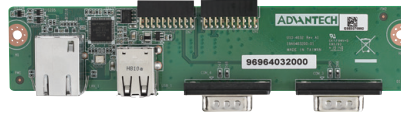
1 x RS-485
1 x RS-232
1 x 4 DIs & 4 DOs



CE FC

UIO-4032

1 x GbE
2 x USB2.0
2 x RS-232



CE FC

UIO-4034

1 x CAN bus
2 x RS-232



CE FC

Specifications

| General | |
|-----------------------|---|
| USB | – |
| RS-232 | 1 x 2 wires RS-232 |
| RS-485 | 1 x RS-485 |
| GPIO | 4 DIs, 4 DOs (2.5-24V) |
| CAN Bus | – |
| GbE | – |
| Dimension | 146 x 31 x 22 mm |
| Environment | |
| Weight | 180g |
| Operating Humidity | 5 ~ 95% relative humidity, non-condensing |
| Operating Temperature | -40 ~ 85 °C |
| Storage Temperature | -40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing |

Ordering Information

| P/N | Description |
|----------|---|
| UIO-4030 | UIO-4030, 1 RS232, 4 DIs, 4 DOs, 1 RS-485 |

Specifications

| General | |
|-----------------------|---|
| USB | 2 x USB 2.0 |
| RS-232 | 2 x 2 wires RS-232 |
| RS-485 | – |
| GPIO | – |
| CAN Bus | – |
| GbE | 1 x GbE |
| Dimension | 146 x 31 x 22 mm |
| Environment | |
| Weight | 200g |
| Operating Humidity | 5 ~ 95% relative humidity, non-condensing |
| Operating Temperature | -40 ~ 85 °C |
| Storage Temperature | -40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing |

Ordering Information

| P/N | Description |
|----------|----------------------------------|
| UIO-4032 | UIO-4032, 1 GbE, 2 USB, 2 RS-232 |

Specifications

| General | |
|-----------------------|---|
| USB | – |
| RS-232 | 2 x 2 wires RS-232 |
| RS-485 | – |
| GPIO | – |
| CAN Bus | 1 x CAN bus 2.0B, 1 Mbps |
| GbE | – |
| Dimension | 146 x 31 x 22 mm |
| Environment | |
| Weight | 180g |
| Operating Humidity | 5 ~ 95% relative humidity, non-condensing |
| Operating Temperature | -40 ~ 85 °C |
| Storage Temperature | -40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing |

Ordering Information

| P/N | Description |
|----------|---------------------------|
| UIO-4034 | UIO-4034, 1 CAN, 2 RS-232 |

Compatible Main Boards

| Part No. | Description |
|-------------------|---|
| RSB-3430XD-PXA1E* | RSB-3430 NXP i.MX6 Series 2.5" UIO Main Board |
| RSB-3720XX-XCA1E* | RSB-3720 NXP i.MX8M Plus Series 2.5" UIO Main Board |
| RSB-3710XX-XXA1E* | RSB-3710 Rockchip RK3399 Series 2.5" UIO Main Board |

*X indicates different configurations, please refer to each main board's datasheet for complete P/N to order.

UIO-4036

4 x GbE



Specifications

| General | |
|-----------------------|---|
| USB | – |
| RS-232 | – |
| RS-485 | – |
| GPIO | – |
| CAN Bus | – |
| GbE | 4 x GbE |
| Dimension | 146 x 31 x 20 mm |
| Environment | |
| Weight | 200g |
| Operating Humidity | 5 ~ 95% relative humidity, non-condensing |
| Operating Temperature | -40 ~ 85 °C |
| Storage Temperature | -40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing |

Ordering Information

| P/N | Description |
|----------|-----------------|
| UIO-4036 | UIO-4036, 4 GbE |

Compatible Main Boards

| Part No. | Description |
|-------------------|---|
| RSB-3430XD-PXA1E* | RSB-3430 NXP i.MX6 Series 2.5" UIO Main Board |
| RSB-3720XX-XCA1E* | RSB-3720 NXP i.MX8M Plus Series 2.5" UIO Main Board |
| RSB-3710XX-XXA1E* | RSB-3710 Rockchip RK3399 Series 2.5" UIO Main Board |

*X indicates different configurations, please refer to each main board's datasheet for complete P/N to order.