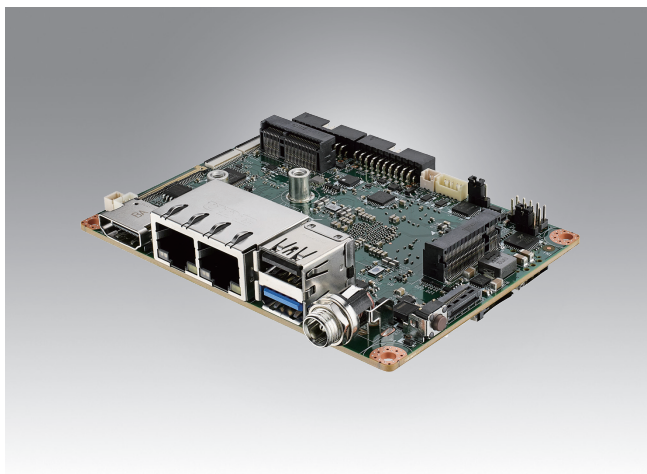


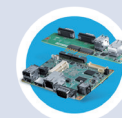
RSB-3810

MediaTek Genio 1200 Cortex A78 & A55 2.5" SBC with UIO40-Express



Features

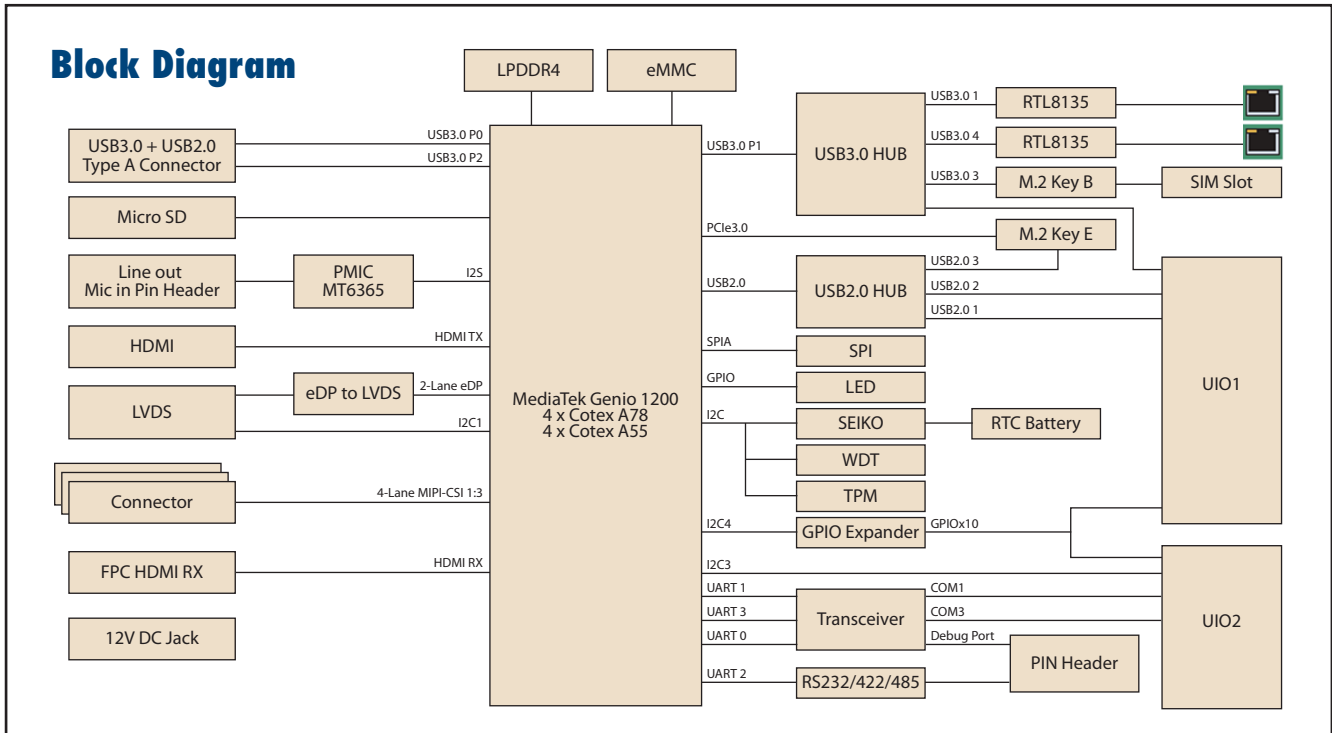
- MediaTek Genio 1200 4 cores A78 & 4 cores A55
- Onboard LPDDR4 8GB, 4000MT/s memory
- HDMI 4k60fps, 1 Dual Channel 24 bit LVDS
- 1 4-wire RS-232/422/485, 2 USB3.2 Gen1 By 1, 2 USB2.0, 1 Micro SD, 1 Mic. in / Line out
- 1 M.2 3052 Key B for 5G, 1 M.2 2230 Key E Slot For WiFi/BT
- Support Ubuntu and Android
- Support I/O Expansions by UIO40-Express I/O boards, please refer to page #3 for more information



Specifications

| | | |
|------------------|-------------------------|---|
| Form Factor | | 2.5" Single Board Computer with UIO40-Express for I/O Expansions |
| Processor System | CPU | MediaTek Genio 1200 |
| Memory | Technology | LPDDR4 4000MT/s |
| | Capacity | On-board 8GB |
| | Flash | 32GB eMMC Flash for O.S. and 8 MB SPI NOR Flash for board information |
| NPU | | 4.8 TOPS Neural Network performance |
| Graphics | HDMI | 1 HDMI 2.0, 4K60 |
| | LVDS | 1 dual channel LVDS |
| Ethernet | Chipset | RTL8153 |
| | Speed | 2 10/100/1000 Mbps |
| WatchDog Timer | | 1~6553s, default 60s, power on/off 1s |
| TPM | | TPM 2.0 (ST33HTPH2E32AHB8) |
| RTC | | Yes |
| I/O | USB | 1 USB3.0 Host, 1 USB2.0 Host |
| | Audio | Mic-in, Line-Out Connectors |
| | Serial Port | 1 4 wires RS-232/422/485 by pin header + COM debug console |
| | Camera Input | 3 4-Lane MIPI-CSI2 |
| | HDMI | 1 FPC HDMI RX |
| | UIO40-Express | 2 USB2.0, 1 USB3.0, 10 GPIO, 2 UART), 1 I2C |
| Expansion | M.2 | 1 M.2 2230 Key E Slot / 1 M.2 3052 Key B Slot |
| | SD Socket | 1 Micro SD Socket |
| | SIM Slot | 1 Nano SIM Slot |
| Power | Power Supply Voltage | 12V DC-IN by lockable DC Jack (default) or 2pin type connector |
| | Power Consumption | 10.68W |
| Environment | Operational Temperature | 0 ~ 60 °C / -40 ~ 80 °C |
| | Operating Humidity | 95% Relative Humidity, non-condensing |
| Mechanical | Dimensions (W x D x H) | 100 x 72 x 19 mm |
| Operating System | | Ubuntu and Android |
| Certifications | | CE/FCC Class B |

Block Diagram



Ordering Information

| Part No. | CPU | Memory | Flash Memory | HDMI | LVDS | LAN | USB Host | SD | Operating Temperature | Operating System |
|------------------|---------------------|--------|--------------|------|------|-----|----------|----|-----------------------|------------------|
| RSB-3810CO-FCA1E | MediaTek Genio 1200 | 8 GB | 32 GB | 1 | 1 | 2 | 2 | 1 | 0 ~ 60 °C | Android |
| RSB-3810WO-FCA1E | MediaTek Genio 1200 | 8 GB | 32 GB | 1 | 1 | 2 | 2 | 1 | -40 ~ 80 °C | Android |
| RSB-3810CO-FUA1E | MediaTek Genio 1200 | 8 GB | 32 GB | 1 | 1 | 2 | 2 | 1 | 0 ~ 60 °C | Ubuntu |
| RSB-3810WO-FUA1E | MediaTek Genio 1200 | 8 GB | 32 GB | 1 | 1 | 2 | 2 | 1 | -40 ~ 80 °C | Ubuntu |

Packing List

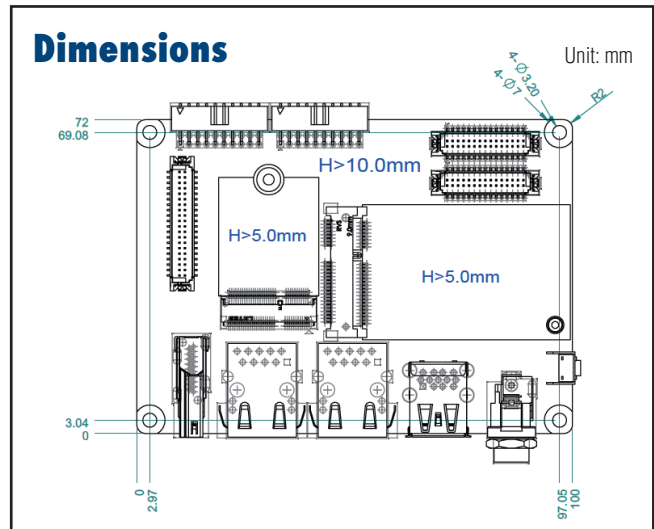
| Part Number | Description |
|-------------|----------------------------------|
| RSB-3810 | RSB-3810 2.5" SBC with Heat Sink |

Optional Accessories

| Part Number | Description |
|--------------------|--|
| 96PSA-A36W12W7-5 | ADP A/D 100-240V 36W 12V C6 LOCK DC JACK 62368 |
| 1700001524 | Power Cord 3P UL 10A 125V 180cm |
| 170203183C | Power Cord 3P Europe (WS-010+WS-083) 183cm |
| 170203180A | Power Cord 3P UK 2.5A/3A 250V 1.83M |
| 1700008921 | Power Cord 3P PSE 183cm |
| 1700009652 | Power Cord CCC 3P 10A 250V 187cm |
| 1700030307-01 | UIO40 extending cable of RSB-3430, 3COM&8GPIO |
| 1700031429-01 | Line out cable |
| 1700026878-01 | Mic. in cable |
| 1700034345-01 | Debug Cable 10P-2.0/D-SUB 9P(M) 25CM |
| 1700019474 | RS-232 Cable DB9 female to DB9 female |
| 96LEDK-A215FH25NF3 | 21.5" LED Panel, 250N, 1920 x 1080 |
| 1700034353-01 | LVDS Cable |
| TBD | LVDS BKLT Cable |
| EWM-W174M201E | IEEE802.11ax+BT 5.2 2T2R MT7921L M.2 2230 |
| 1750008717-01 | Dipole Ant. D.B 2.4/5G WIFI 3dBi SMA/M-R BLK |
| 1750007965-01 | Antenna Cable R/P SMA (M) to MHF4, 300mm |
| TBD | AIW-3 series LTE CAT4 mini PCIe module for US |
| 1750008303-01 | Antenna AN0727-64SP6B5M |
| 1750006009 | Antenna Cable SMA (F) to MHF 1.32 25cm |

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

Dimensions

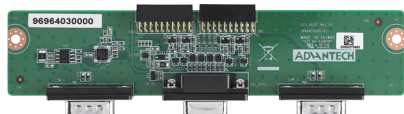


Front I/O on RSB-3810

UIO40-Express I/O Expansion Boards

UIO-4030

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



CEFC

UIO-4032

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



CEFC

UIO-4034

1 x CAN bus
2 x RS-232



CEFC

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

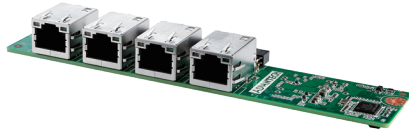
| Part No. | Description |
|-------------------|---|
| RSB-3430XD-PXA1E* | RSB-3430 NXP i.MX6 Series 2.5" UIO Main Board |
| RSB-3720XX-XCA1E* | RSB-3720 NXP i.MX8M Plus Series 2.5" UIO Main Board |
| RSB-3710XX-XXA1E* | RSB-3710 Rockchip RK3399 Series 2.5" UIO Main Board |
| RSB-3810XX-XXA1E* | RSB-3810 MediaTek Genio 1200 2.5" UIO Main Board |

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

UIO40-Express I/O Expansion Boards

UIO-4036

4 x GbE



CEFC

UIO-4038

4 x GbE (3 x LAN; 1 x WAN)



CEFC

UIO-4040

NVMe SSD



CEFC

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 |

Specifications

| General | |
|-----------------------|---|
| USB | - |
| RS-232 | - |
| RS-485 | - |
| GPIO | - |
| CAN Bus | - |
| GbE | 4 x GbE (3 x LAN; 1 x WAN) |
| Dimension | 146 x 100 x 20mm |
| Environment | |
| Weight | 300g |
| 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-4038 | UIO-4038, 3 x LAN 1 X WAN |

Specifications

| General | |
|-----------------------|---|
| USB | - |
| RS-232 | - |
| RS-485 | - |
| GPIO | - |
| CAN Bus | - |
| GbE | - |
| NVMe SSD | SQF-C8Bxx-xG-EDx |
| Dimension | 146 x 31 x 20mm |
| 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-4040-128G | UIO-4040, NVMe SSD storage 128GB |
| UIO-4040-256G | UIO-4040, NVMe SSD storage 256GB |
| UIO-4040-512G | UIO-4040, NVMe SSD storage 512GB |
| UIO-4040-1TB | UIO-4040, NVMe SSD storage 1TB |
| UIO-4040-2TB | UIO-4040, NVMe SSD storage 2TB |

Optional Accessories

| P/N | Description |
|-----|--|
| TBD | Heat spreader, AL 68.5 x 16 x 11.63 mm |
| TBD | Heat spreader, AL 70 x 25.4 x 19.5 mm |

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 |
| RSB-3810XX-XXA1E* | RSB-3810 MediaTek Genio 1200 2.5" UIO Main Board |

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

Embedded Linux Support and Design-in Services

Hardware Certified Ubuntu and Yocto with Eco Partner Services

Linux is the most popular embedded OS for transportation, outdoor services, factory automation, and mission critical applications. Its open source and kernel reliability features ease security updates, and make it particularly adaptable to new AI and Edge computing technology. Advantech has cooperated with Canonical and other software partners to provide hardware certified Ubuntu image and Yocto BSP as Linux offerings. The Advantech, Embedded Linux, and Android Alliance (ELAA) delivers local software services and consultation.



Features

| | | | |
|--|--|--|---|
| <p>Certified OS and BSP</p> <ul style="list-style-type: none"> Platform compatibility tests Preloaded functional driver and software stacks | <p>Licensed Services</p> <ul style="list-style-type: none"> License authorized Canonical delivers 10-years of bug fixes and security updates In-house bundled service | <p>Numerous AI and Edge Resources</p> <ul style="list-style-type: none"> Containerized technology for service provision and deployment AI resources from Caffe, TensorFlow, and mxnet | <p>Local Partner Alliance</p> <ul style="list-style-type: none"> Embedded Linux and Android Alliance (ELAA) |
|--|--|--|---|

WISE-DeviceOn

Massive IoT Device Management Utility

IoT deployment and management typically involves numerous disparate devices installed on multiple sites. These devices require effective monitoring, managing, and tracking. Advantech's easy-to-use WISE-DeviceOn interface enables users to remotely monitor device health, troubleshoot problems, and send software/firmware updates over-the-air (OTA). In sum, DeviceOn empowers quick real-time responsiveness to emerging problems.



Features

| Comprehensive Management | Remote Access | Efficient Operations |
|--|--|--|
| <ul style="list-style-type: none"> • Devices status • Peripherals/firmware • Open for extension | <ul style="list-style-type: none"> • Real-time monitoring • Remote controls • Troubleshooting | <ul style="list-style-type: none"> • Zero-touch on-boarding • OTA updates • Batch control |

Product Highlights



SOM-6883

High-performance 11th Gen Intel[®] COMe Type 6 Module



MIO-5375

Compact 11th Gen Intel[®] Outdoor Focused 3.5" SBC



EPC-B5587

10th Gen Intel[®] Xeon[®] based Edge server



EPC-R3220

Arm based IoT Edge Gateway