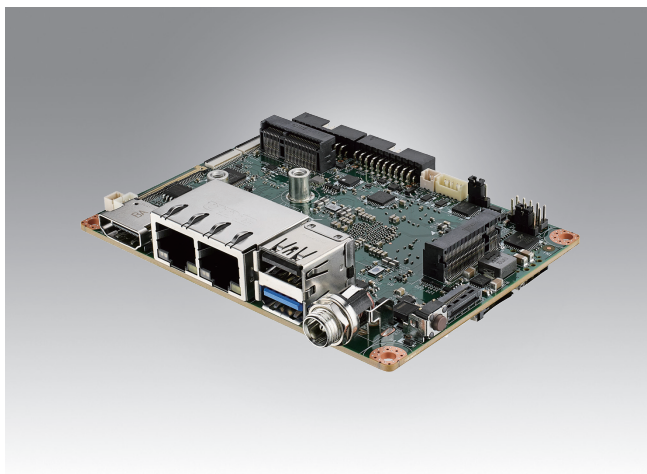


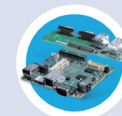
# RSB-3810

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



### Features

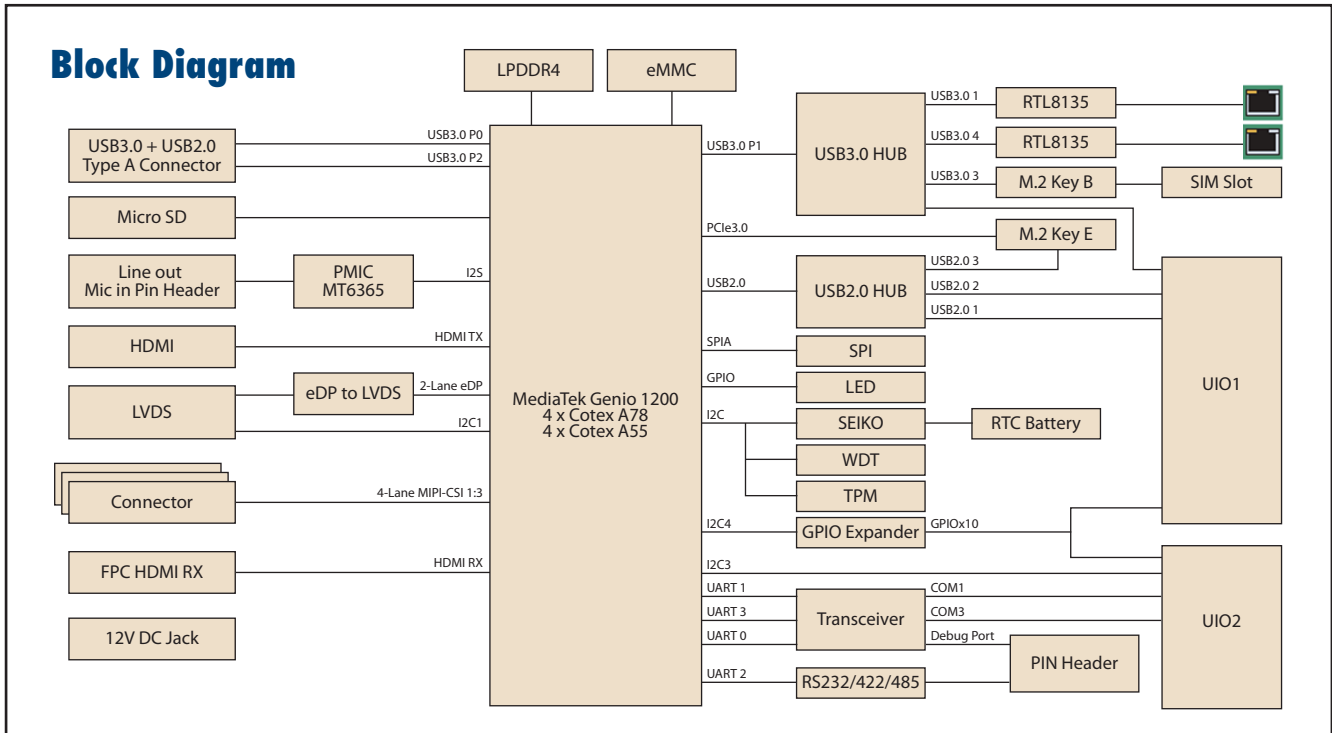
- MediaTek Genio 1200 4 cores A78 & 4 cores A55
- Onboard LPDDR4 8GB, 4000MT/s memory
- HDMI 4k60fps, 1 Dual Channel 24 bit LVDS
- 1 4-wire RS-232/422/485, 2 USB3.2 Gen1 By 1, 2 USB2.0, 1 Micro SD, 1 Mic. in / Line out
- 1 M.2 3052 Key B for 5G, 1 M.2 2230 Key E Slot For WiFi/BT
- Support Ubuntu and 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

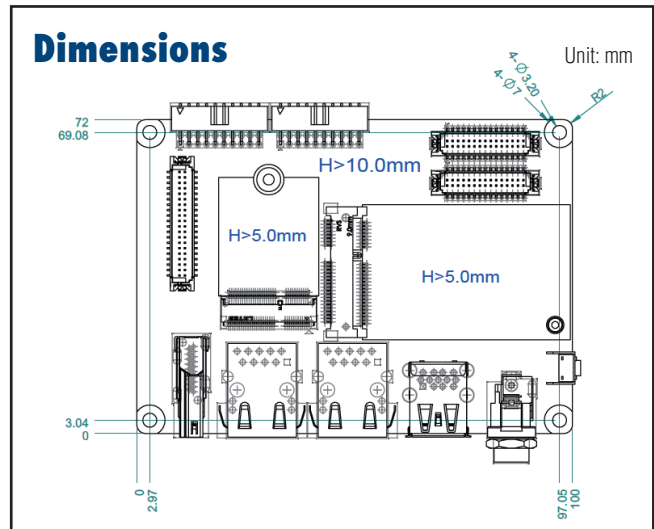
Part Number	Description
RSB-3810	RSB-3810 2.5" SBC with Heat Sink

### 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



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

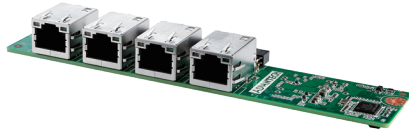
Part No.	Description
RSB-3430XD-PXA1E*	RSB-3430 NXP i.MX6 Series 2.5" UIO Main Board
RSB-3720XX-XCA1E*	RSB-3720 NXP i.MX8M Plus Series 2.5" UIO Main Board
RSB-3710XX-XXA1E*	RSB-3710 Rockchip RK3399 Series 2.5" UIO Main Board
RSB-3810XX-XXA1E*	RSB-3810 MediaTek Genio 1200 2.5" UIO Main Board

\*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.