

3.5" Single Board Computer with MediaTek® MT8395 (Genio 1200) Processor

- ➤ High-performance ARM® Cortex®-A78 + low-power Cortex®-A55 big.LITTLE configuration
- ➤ Daul-core AI Processor Unit (API) + 3x CSI camera interface for edge AI applications
- > Soldered memory and storage for shock and vibration resistant applications
- ➤ Additional Rear I/O expansion via board-to-board connector
- ▶ Industrial-grade operating temperature range for extreme environmental conditions



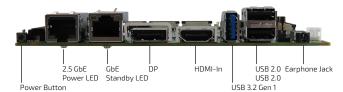
3.5" Single Board Computer with MediaTek® MT8395 (Genio 1200) Processor

3.5"-SBC-i1200 is a 3.5" single board computer powered by MediaTek® MT8395 (Genio 1200) SoC based on quad-core ARM® Cortex®-A78 + quad-core Cortex®-A55 configuration as well as ARM® Mali-G57 MP5 integrated GPU. In addition to multiple display

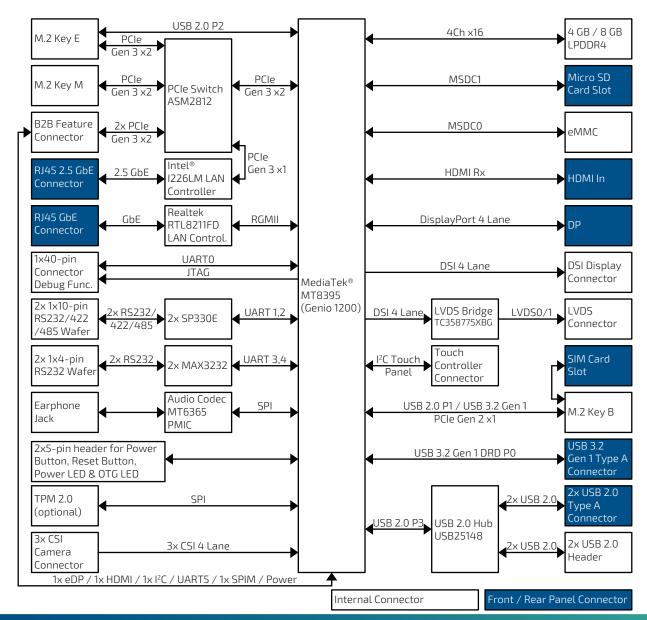
output options, the board supports three camera inputs via CSI interfaces as well. It can deliver best-in-class graphics performance and AI capabilities, ideal for edge computing and edge AI applications.

- ➤ MediaTek® MT8395 (Genio 1200) SoC
- ➤ 4 GByte / 8 GByte LPDDR4X memory down
- > 1x DP, 1x DSI, 1x LVDS for display output
- ➤ 1x HDMI-In for display input
- 3x CSI for camera input
- 1x 2.5 GbE LAN, 1x GbE LAN for Ethernet
- 1x USB 3.2 Gen 1, 4x USB 2.0 for USB device connection
- > 2x RS232/422/485, 2x RS232, 1x UART for serial connection
- ➤ 8x DIO for device / signal control
- ➤ 1x I2C for touch control
- **▶** 32 GByte eMMC, 1x Micro SD Slot, 1x M.2 Key M for storage

- ▶ 1x M.2 Key B for SSD, WWAN or other possible expansion
- 1x M.2 Key E for WLAN, Bluetooth or other expansion
- ★ 1x Board-to-board connector for additional rear I/Os
- > TPM 2.0 support (optional)
- Extreme temperature model available: -40 °C ~ 85 °C



Block Diagram



MediaTake MT3335 (Cenia 1200) MEMORY			
DISPLAY OUTPUT INTERFACE DISPLAY INPUT INTERFACE CAMERA INTERFACE DISPLAY INPUT INTERFACE CAMERA INTERFACE AUDIO CODEC AUDIO INTERFACE AUDIO I	SYSTEM		(4C ARM® Cortex®-A78 @ 2.2 GHz + 4C Cortex®-A55 @ 2.0 GHz, 3.1 W TDP)
AUDIO AUDIO CODE AUDIO CODE AUDIO INTERFACE AUDIO INTERPACE AUDIO INTERFACE AUDIO INTERPACE AUDIO INTERE	VIDEO		1x DP (on front) 1x DSI (by wafer)
AUDIO INTERFACE NETWORK CONNECTION ETHERNET READ SECTION ETHERNET READ SECTION SETHERNET READ SECTION BY SERIAL PORT SERIAL PORT SERIAL PORT SERIAL PORT SERIAL PORT OTHER I/OS SERIAL PORT SERIAL POR			
PERIPHERAL CONNECTION USB IN USB 3.2 Gean (Type A on front, Xeby header) 2x RS232/422/485 (by header) 2x RS232/422/485 (by header) 1x UART (by header, debug support) 1x PC (for touch control) STORAGE & EXPANSION EMMC MICRO SD CARD SLOT M.2 SIM CARD HOLDER BOARD-TO-BOARD CONNECTOR 1x M2 Key B (2242 / 2260 / 2280, w/ USB 2.0 / VSPe xl optl. / UIIM) 1x M2 Key B (2242 / 2280, w/ USB 2.0 / VSPe xl) 1x M1 Card Holder (Micro type) 1x M2 Key B (1ype 2280, w/ PCle xl) 1x M1 Card Holder (Micro type) 1x PCle x2 1x PC 1x HOM 1x PCle x2 1x PC 1x UART 1x SPIM POWER INPUT VOLTAGE CONNECTOR FIRMWARE POWER INPUT VOLTAGE CONNECTOR Processor integrated in processor to generate system reset event Processor integrated RTC TPM 2.0 Support (Infineno SLB 9670, optional) 1x Power Buttom (on front) 1x Power Buttom (on front) 1x Power LED (Green, on front) 1x Header for M2 Key B activity LED 1x	AUDIO		
SERIAL PORT SERIAL PORT 2 x RS232/(22/24/56) (w) header) 2 x RS232/(22/24/56) (w) header) 2 x RS232/(22/24/56) (w) header) 3 x RS232/(22/256) (w) header)	NETWORK CONNECTION	ETHERNET	
STORAGE & EXPANSION eMMC MICRO SD CARD SLOT M.2 SIM CARD HOLDER BOARD-TO-BOARD CONNECTOR IN PUT VOLTAGE CONNECTOR EVALUATION EVALUATION SYSTEM CONTROL & BUTTON, SWITCH & INDICATOR FP HEADER BUTTON, SWITCH & INDICATOR FP HEADER BUTTON, SWITCH & INDICATOR BUTTON, SWITCH & INDICATOR FP HEADER BUTTON, SWITCH & INDICATOR The Power Button (no front) The Power Button, Reset Button, Power LED & OTG LED The Header for Power Button, Reset Button, Power LED & OTG LED The Header for M.Z. Key & activity LED The HEADER BUTTON, SWITCH & M.Z. FP - 140 °F (Standard) -40 °C - 80 °C / 32 °F - 140 °F (Standard) -40 °C - 85 °C / -40 °F - 185 °F (Extreme) -20 °C - 80 °C / -60 °C / 60	PERIPHERAL CONNECTION	SERIAL PORT	4x USB 2.0 (2x Type A on front, 2x by header) 2x RS232/422/485 (by header) 2x RS232 (by header) 1x UART (by header, debug support)
MICRO SD CARD SLOT M.2 MICRO SD CARD SLOT M.2 MICRO SD CARD SLOT M.2 N M.2 Key B (2242 / 2260 / 2280, w/ USB 3.2 / PCle x1 optl. / UIM) N M.2 Key E (1ype 2230, w/ USB 2.0 / PCle x1) N M.2 Key M (1ype 2280, w/ PCle x2) N SIM CARD HOLDER BOARD-TO-BOARD CONNECTOR IN PUT VOLTAGE CONNECTOR INPUT VOLTAGE CONNECTOR INPUT VOLTAGE CONNECTOR IN PCle x 2 N PC N K-DP N K-DDM N K-PCle x 2 N PC N K-PIM N SPIM IN PCle x 2 N PC N K-PIM N SPIM IN POWER INPUT VOLTAGE CONNECTOR IN WATCHDOG REAL TIME CLOCK SECURITY TPM 2.0 Support (Infineon SLB 9670, optional) IN POWER PUT ON THE SINDICATOR IN POWER PUT ON THE SINDICATOR IN POWER BUTTON, SWITCH & INDICATOR IN POWER BUTTON, OPTIONAL N POWER LED (Green, on Front) N POWER LED (G		UTHER I/US	
FIRMWARE WATCHDOG REAL TIME CLOCK SECURITY Programmable WDT integrated in processor to generate system reset event Processor integrated RTC TPM 2.0 Support (Infineon SLB 9670, optional) SYSTEM CONTROL & MONITORING BUTTON, SWITCH & INDICATOR Ix Power Buttom (on front) Ix Power LED (Green, on front) Ix Standby LED (Vellow, on front) Ix Header for Power Button, Reset Button, Power LED & OTG LED Ix Header for M.2 Key B activity LED Ix Header for M.2 Key B activity LED Ix Header for M.2 Key M activity LED Ix Header for M.2 Key M activity LED COOLING COOLING METHOD Passive MECHANICAL DIMENSION (L x W) ECX (146 mm x 105 mm / 5.75" x 4.13") ENVIRONMENTAL OPERATING TEMPERATURE -40 °C - 85 °C / -40 °F - 185 °F (Extreme) -20 °C - 80 °C / -4 °F - 176 °F (Standard) -55 °C - 85 °C / -67 °F - 185 °F (Extreme) -20 °C - 85 °C / -67 °F - 185 °F (Extreme) -95 %	STORAGE & EXPANSION	MICRO SD CARD SLOT M.2 SIM CARD HOLDER	1x Micro SD Card Slot (on rear) 1x M.2 Key B (2242 / 2260 / 2280, w/ USB 2.0 / USB 3.2 / PCIe x1 optl. / UIM) 1x M.2 Key E (Type 2230, w/ USB 2.0 / PCIe x1) 1x M.2 Key M (Type 2280, w/ PCIe x2) 1x SIM Card Holder (Micro type) 1x eDP 1x HDMI 1x PCIe x2 1x ²C 1x UART
REAL TIME CLOCK SECURITY Processor integrated RTC TPM 2.0 Support (Infineon SLB 9670, optional) SYSTEM CONTROL & MONITORING BUTTON, SWITCH & INDICATOR Ix Power Buttom (on front) Ix Power LED (Green, on front) Ix Standby LED (Yellow, on front) Ix Header for Power Button, Reset Button, Power LED & OTG LED Ix Header for M.2 Key B activity LED Ix Header for M.2 Key B activity LED Ix Header for M.2 Key M activity LED Ix Header for M.2 Key M activity LED Ix Header for M.5 Key M activity LED IX Header for M.6 Key M activity LED IX Header for M.7 Key M activity LED IX Header for M.8 Key M activity LED IX Header for M.9 Key B activity LED	POWER		
MONITORING 1x Power LED (Green, on front) 1x Standby LED (Yellow, on front) 1x Header for Power Button, Reset Button, Power LED & OTG LED 1x Header for M.2 Key B activity LED 1x Header for M.2 Key E activity LED 1x Header for M.2 Key M activity LED 1x Header for M.2 Key M activity LED MECHANICAL DIMENSION (L x W) ECX (146 mm x 105 mm / 5.75" x 4.13") ENVIRONMENTAL OPERATING TEMPERATURE / -40 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme) STORAGE TEMPERATURE / -55 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme) HUMIDITY 0 % ~ 95 %	FIRMWARE	REAL TIME CLOCK	Processor integrated RTC
MECHANICAL DIMENSION (L x W) ECX (146 mm x 105 mm / 5.75" x 4.13") ENVIRONMENTAL O °C ~ 60 °C / 32 °F ~ 140 °F (Standard) - 40 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme) - 20 °C ~ 85 °C / -40 °F ~ 176 °F (Standard) - 55 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme) - 55 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme) - 67 °F ~ 185 °F			1x Power LED (Green, on front) 1x Standby LED (Yellow, on front) 1x Header for Power Button, Reset Button, Power LED & OTG LED 1x Header for M.2 Key B activity LED 1x Header for M.2 Key E activity LED
ENVIRONMENTAL OPERATING TEMPERATURE 0 °C ~ 60 °C / 32 °F ~ 140 °F (Standard) -40 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme) -20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -55 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme) HUMIDITY O °C ~ 60 °C / 32 °F ~ 140 °F (Standard) -40 °C ~ 80 °C / -4 °F ~ 176 °F (Extreme) 0 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme)	COOLING	COOLING METHOD	Passive
-40 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme) -20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -55 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme) HUMIDITY 0 % ~ 95 %	MECHANICAL	DIMENSION (L x W)	ECX (146 mm x 105 mm / 5.75" x 4.13")
COMPLIANCE EMC & SAFETY CE Class B, FCC Class B	ENVIRONMENTAL	STORAGE TEMPERATURE	-40 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme) -20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -55 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme)
	COMPLIANCE	EMC & SAFETY	CE Class B, FCC Class B

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