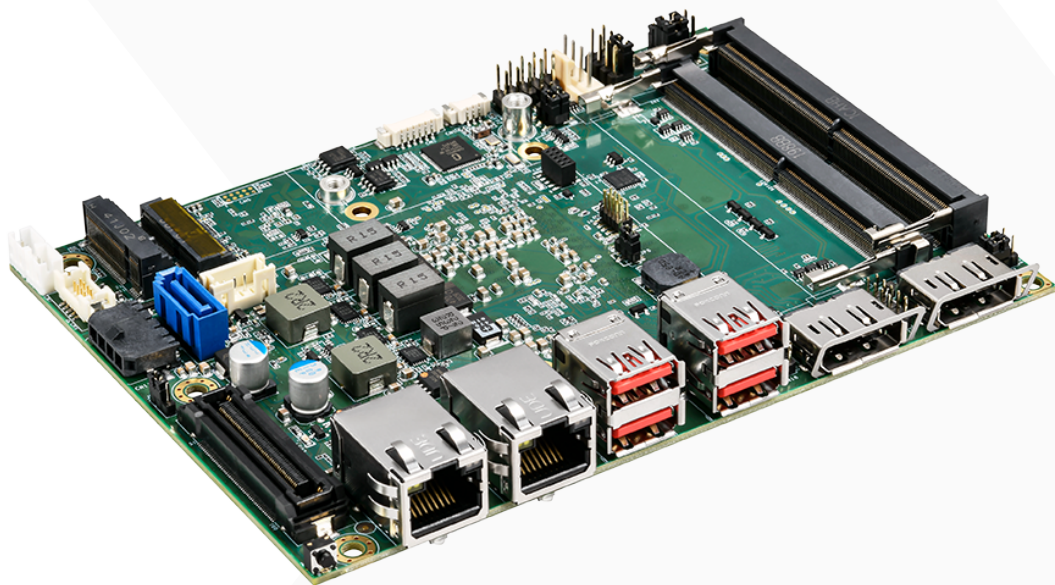


3.5"-SBC-RPL



3.5" Single Board Computer with 13th Gen Intel® Core™ U-Series Processors

- Time Coordinated Computing / Time Sensitive Networking for real-time control
- 8K UHD video output support
- Additional Rear I/O expansion via board-to-board connector
- Industrial-grade operating temperature range for extreme environmental conditions
- Wide power input voltage range for more application scenarios

3.5" Single Board Computer with 13th Gen Intel® Core™ U-Series Processors

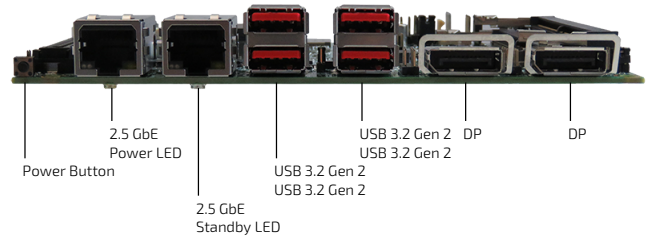
3.5"-SBC-RPL is a 3.5" single board computer powered by 13th Gen Intel® Core™ U-Series processors. Besides great performance improvement in graphics, it features 2.5 GbE with TSN (Time Sensitive Networking) capability and enhanced TPM 2.0 security / encryption support, ideal for a variety of IoT applications, such as

industrial automation, retail, smart city and healthcare.

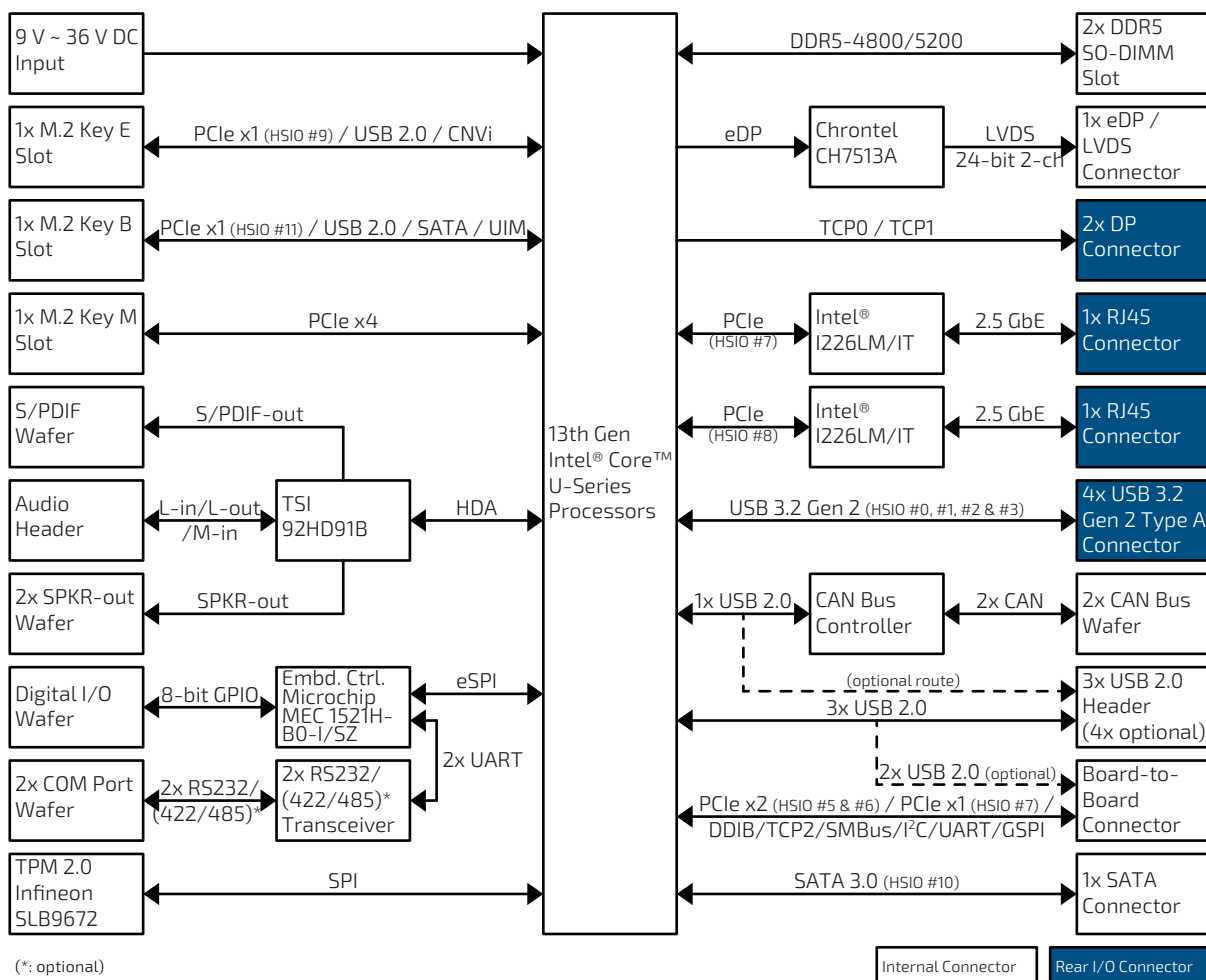
The board supports an extended board-to-board connector, providing additional I/O port expansion to fulfill possible application requirements.

- 13th Gen Intel® Core™ U-Series processors (TDP up to 28 W)
- 2x DDR5 SO-DIMM memory socket
- 2x DP, 1x eDP / LVDS for video output
- 2x 2.5 GbE LAN for Ethernet
- 4x USB 3.2 Gen 2, 3x USB 2.0 for USB device connection
- 2x RS232 or 2x RS232/422/485 for serial device connection
- 4x DI, 4x DO for device / signal control
- 2x CAN Bus for industrial networking
- 1x SATA 3.0 for storage device
- 1x M.2 Key B for SSD, WWAN or other expansion
- 1x M.2 Key E for WLAN, Bluetooth or other expansion
- 1x M.2 Key M for SSD
- 1x board-to-board connector for additional real I/Os

- TPM 2.0 support
- Wide power input voltage range support: DC 9 V ~ 36 V
- Extreme temperature model available: -40 °C ~ 85 °C



Block Diagram



SYSTEM	PROCESSOR	Intel® Core™ i7-1365UE / Intel® Core™ i7-1365URE (10C, 12M, 1.7 / 4.9 GHz, FCBGA1744, 12 W ← 15 W → 28 W TDP) Intel® Core™ i5-1345UE / Intel® Core™ i5-1345URE (10C, 12M, 1.4 / 4.6 GHz, FCBGA1744, 12 W ← 15 W → 28 W TDP) Intel® Core™ i3-1315UE / Intel® Core™ i3-1315URE (6C, 10M, 1.2 / 4.5 GHz, FCBGA1744, 12 W ← 15 W → 28 W TDP) Intel® U300E (5C, 8M, 1.1 / 4.3 GHz, FCBGA1744, 12 W ← 15 W → 28 W TDP) 2x DDR5 5200 SO-DIMM up to 96 GByte
	MEMORY	
VIDEO	GRAPHICS	Intel® Iris® X ^e Graphics
	DISPLAY INTERFACE	1x eDP (4096 x 2304 @ 120 Hz) / LVDS (24-bit, 2-ch, 1920 x 1200 @ 60 Hz)
	MULTIPLE DISPLAY	2x DP (7680 x 4320 @ 60 Hz, on rear) Quadruple Display (more display I/Os supported via board-to-board connector)
AUDIO	AUDIO CODEC	TSI 92HD91B
	AUDIO INTERFACE	1x Speaker-out (Stereo, 3 W, by header) 1x Line-in (by header) 1x Line-out (by header) 1x Mic-in (by header) 1x S/PDIF Out (by header)
NETWORK CONNECTION	ETHERNET	2x 2.5 GbE LAN (RJ45 on rear, Intel® I226-LM/IT, TSN support*)
PERIPHERAL CONNECTION	USB	4x USB 3.2 Gen 2 (Type A on rear)
	SERIAL PORT	3x USB 2.0 (by header, +1 in case of no CAN Bus, -2 in case of 2x USB 2.0 in B2B)
	OTHER I/Os	2x RS232 (def.) / RS232/422/485 (opt.) (by header, Tx/Rx only for RS232 signal) 4x DI (by header) 4x DO (by header) 2x CAN Bus (by header)
STORAGE & EXPANSION	SATA	1x SATA 3.0
	M.2	1x M.2 Key B (Type 2242/3042/3052/2280, w/ PCIe x1 / USB 2.0 / SATA / UIM) 1x M.2 Key E (Type 2230, w/ PCIe x1 / USB 2.0 / CNVi) 1x M.2 Key M (Type 2280, w/ PCIe x4)
	SIM CARD HOLDER	1x SIM Card Holder (by header)
	BOARD-TO-BOARD CONNECTOR	1x DDI 1x TCP 1x PCIe x2 1x PCIe x1 1x SM Bus 1x I ² C 1x UART 1x GSPi 2x USB 2.0 (optional, trade off w/ USB 2.0 header)
POWER	INPUT VOLTAGE	DC 9 V ~ 36 V
	CONNECTOR	1x4-pin pitch 3.0 mm Wafer
FIRMWARE	BIOS	AMI uEFI BIOS w/ 256 Mb SPI Flash
	WATCHDOG	Programmable WDT to generate system reset event
	H/W MONITOR	Voltages, Temperatures
	REAL TIME CLOCK	Processor integrated RTC
	SECURITY	TPM 2.0 Support (Infineon SLB 9672)
SYSTEM CONTROL & MONITORING	FP HEADER	1x Header for Reset Button, HDD LED & External Speaker
	BUTTON, SWITCH & INDICATOR	1x Header for Power Button, Power LED & SM Bus 1x Standby LED (Yellow, on rear) 1x Power LED (Green, on rear) 1x Power Button (on rear)
COOLING	FAN	1x Wafer for Smart Fan
SOFTWARE	OS SUPPORT	Windows 11, Windows 10, Linux
MECHANICAL	DIMENSION (L x W)	ECX (146 mm x 105 mm / 5.75" x 4.13")
ENVIRONMENTAL	OPERATING TEMPERATURE	0 °C ~ 60 °C / 32 °F ~ 140 °F (Standard) -40 °C ~ 85 °C / -40 °F ~ 185 °F (Extreme)
	STORAGE TEMPERATURE	-20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -55 °C ~ 85 °C / -67 °F ~ 185 °F (Extreme)
	HUMIDITY	0 % ~ 95 %
COMPLIANCE	EMC & SAFETY	CE Class B, FCC Class B, ICES Class B, UKCA, UR (UL Recognized)

* TSN support only for models with Core™ URE Series processors

ARTICLE	DESCRIPTION
3.5"-SBC-RPL-0-i7-1365URE-XT	Intel® Core™ i7-1365URE, Operating temperature: -40 °C ~ 85 °C
3.5"-SBC-RPL-1-i5-1345URE-XT	Intel® Core™ i5-1345URE, Operating temperature: -40 °C ~ 85 °C
3.5"-SBC-RPL-2-i3-1315UE	Intel® Core™ i3-1315UE, Operating temperature: 0 °C ~ 60 °C
3.5"-SBC-RPL-3-U300E	Intel® U300E, Operating temperature: 0 °C ~ 60 °C
3.5"-SBC-RPL-4-i5-1345UE	Intel® Core™ i5-1345UE, Operating temperature: 0 °C ~ 60 °C
3.5"-SBC-RPL-5-i3-1315URE-XT	Intel® Core™ i3-1315URE, Operating temperature: -40 °C ~ 85 °C
3.5"-SBC-RPL-6-i7-1365UE	Intel® Core™ i7-1365UE, Operating temperature: 0 °C ~ 60 °C

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