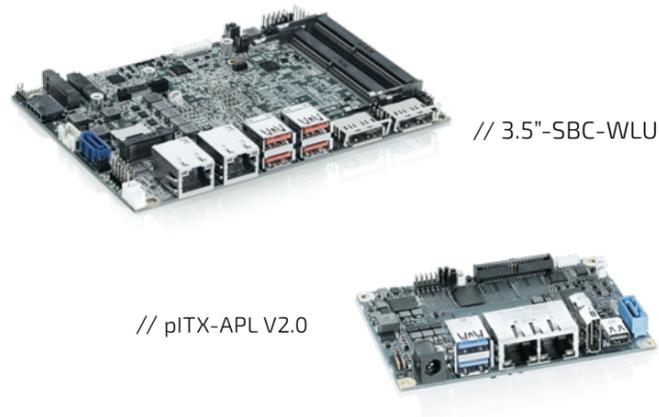


## EMBEDDED SINGLE BOARD COMPUTERS



The longevity Single Board Computers follow international industry size standards with well-defined mounting holes and standard I/O bracket areas. In addition, Kontron offers many value-added services like detailed documentation, display support and complete life-cycle management.

The Core™-i and Atom®-based Single Board Computer offer up to 7 years product availability from the release date, based on embedded key components. In applications where permanence and risk avoidance must be optimized, Kontron's experience in a variety of markets leads customers to the solution that meets their critical programming and cost objectives.



**Single Board Computer**  
High quality longevity Single Board Computers in the formfactors of 2,5" (pITX) and 3,5". These embedded "SBC" are based on newest processors and chipset platforms, and utilize advanced technology components.



### About Kontron – Member of the S&T Group

Kontron is a global leader in IoT/Embedded Computing Technology (ECT). As a part of technology group S&T, Kontron offers a combined portfolio of secure hardware, middleware and services for Internet of Things (IoT) and Industry 4.0 applications. With its standard products and tailor-made solutions based on highly reliable state-of-the-art embedded technologies, Kontron provides secure and innovative applications for a variety of industries. As a result, customers benefit from accelerated time-to-market, reduced total cost of ownership, product longevity and the best fully integrated applications overall.

For more information, please visit: [www.kontron.com](http://www.kontron.com)

### About the Intel® Internet of Things Solutions Alliance

From modular components to market-ready systems, Intel and the 400+ global member companies of the Intel® Internet of Things Solutions Alliance provide scalable, interoperable solutions that accelerate deployment of intelligent devices and end-to-end analytics. Close collaboration with Intel and each other enables Alliance members to innovate with the latest IoT technologies, helping developers deliver first-in-market solutions.

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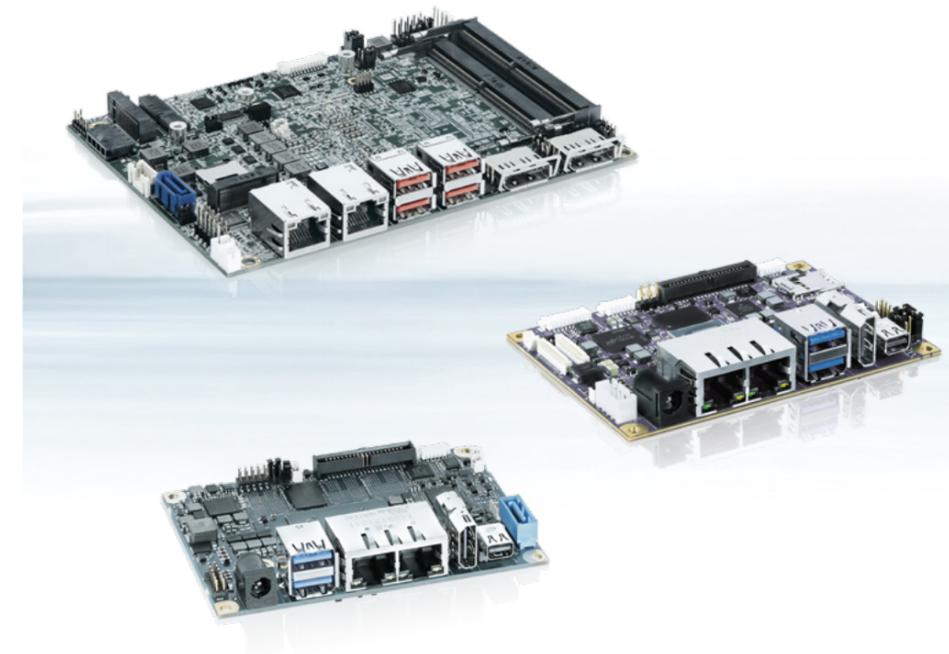
### Global Headquarters

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## Embedded SINGLE BOARD COMPUTER



- ▶ **SMART AUTOMATION**  
Industrial IoT applications, edge & fog computing
- ▶ **SECURITY AND LICENSING SOLUTIONS**  
Approtect - Kontron Embedded Hard-/  
Software Security Solution
- ▶ **FOREVER YOUNG**  
Maximum innovation – minimum investment

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# SINGLE BOARD COMPUTER



3.5"-SBC-WLU

NEW!

<b>PROCESSOR</b>	Intel® Core™ i7-8665UE (Quad Core, 8M Cache, up to 4.4 GHz, FCBGA1528, 15 W TDP) Intel® Core™ i5-8365UE (Quad Core, 6M Cache, up to 4.1 GHz, FCBGA1528, 15 W TDP) Intel® Core™ i3-8145UE (Dual Core, 4M Cache, up to 3.9 GHz, FCBGA1528, 15 W TDP) Intel® Celeron® 4305UE (Dual Core, 2M Cache, 2.00 GHz, FCBGA1528, 15 W TDP)
<b>MEMORY</b>	2x DDR4 2400 1.2 V SO-DIMM up to 64 GByte (Core™ i models) 2x DDR4 2133 1.2 V SO-DIMM up to 64 GByte (Celeron® models)
<b>GRAPHICS INTERFACE</b>	Intel® UHD Graphics 620 (Core™ i models) Intel® UHD Graphics 610 (Celeron® models)
<b>SPECIAL</b>	3x M.2 Slot's (Key M/E/B)
<b>SATA PORTS</b>	1x SATA 3.0
<b>mPCIe SLOT</b>	
<b>SERIAL PORTS</b>	2x RS232/422/485 (by header)
<b>LAN PORTS</b>	2x GbE LAN (RJ45 on rear, Intel® I219-LM, Intel® I210-AT)
<b>USB PORTS</b>	4x USB 3.1 (Type A on rear) 4x USB 2.0 (by header)
<b>AUDIO</b>	HD Analog audio interface (Line-In/Line-Out/SPK-Out)
<b>POWER SUPPLY</b>	DC 12 V + 4 pin
<b>MTBF</b>	tbd
<b>SAFETY</b>	CE, FCC Class B
<b>COOLING SOLUTIONS</b>	1x Wafer for Smart Fan
<b>OPERATING TEMPERATURE</b>	0 °C to 60 °C
<b>REGULATORY</b>	
<b>DIMENSIONS</b>	3.5" 146 x 105 mm
<b>OPERATING SYSTEMS</b>	Windows 10
<b>BIOS</b>	AMI uEFI BIOS w/ 256 Mb SPI Flash



3.5"-SBC-VR1000

NEW!

<b>PROCESSOR</b>	AMD Ryzen™ V1000 / R1000 Series Processors V1605B / V1202B / R1606G / R1505G
<b>MEMORY</b>	2x DDR4 SO-DIMM memory socket up to 32 GByte
<b>GRAPHICS INTERFACE</b>	AMD Radeon™ Vega 8 (V1605B) AMD Radeon™ Vega 3 (V1202B, R1606G & R1505G) 1x LVDS (24-bit, 2-ch, 1920 x 1200 @ 60 Hz) 1x DP (4096 x 2160 @ 60 Hz, on rear) 1x HDMI 2.0 (3840 x 2160 @ 60 Hz, on rear) Triple Display Support
<b>SPECIAL</b>	TPM 2.0 / System Control via several FP Header Pins
<b>SATA PORTS</b>	2x SATA Gen 3.0 (1x shared with M.2 Key M)
<b>mPCIe SLOT</b>	1x (half size)
<b>SERIAL PORTS</b>	2x RS232/422/485 (by header) 2x RS232 (by header)
<b>LAN PORTS</b>	2x GbE LAN (RJ45 on rear, Intel® I219-LM, Intel® I210-AT)
<b>USB PORTS</b>	4x USB 3.1 (Type A on rear, for V1000 models) 2x USB 3.1 (Type A on rear, for R1000 models) 4x USB 2.0 (by header, for V1000 models) 6x USB 2.0 (2x Type A on rear, 4x by header, for R1000 models)
<b>AUDIO</b>	Realtek ALC662 2x Speaker-out (3 W, by header) 1x Line-in (by header) 1x Line-out (by header) 1x Mic-in (by header)
<b>POWER SUPPLY</b>	1x 4-pin pitch 3.0 mm Wafer DC 12 V
<b>MTBF</b>	tbd
<b>SAFETY</b>	CE, FCC Class A
<b>COOLING SOLUTIONS</b>	1x Wafer for CPU Smart Fan
<b>OPERATING TEMPERATURE</b>	0 °C to 60 °C
<b>REGULATORY</b>	
<b>DIMENSIONS</b>	3.5" 146mm x 105mm
<b>OPERATING SYSTEMS</b>	Windows 10
<b>BIOS</b>	AMI Aption V, UEFI



pITX-APL 2.0

NEW!

<b>PROCESSOR</b>	Onboard CPU variants Intel® Processor line, 14 nm SoC - Intel Atom® x7 E3950 4C 2.0 GHz, 13 W - Intel Atom® x5 E3940 4C 1.8 GHz, 9.5 W - Intel Atom® x5 E3930 2C 1.8 GHz, 6.5 W - Intel® Mobile Celeron® N3350 2C 2.3 GHz, 6 W - Intel® Pentium® N4200, 4 Core, 2.3 GHz, 6 W - Intel® Celeron® J3455 4C 2.3 GHz, 10 W
<b>MEMORY</b>	4x channel LPDDR4, support maximum memory size up to 16 Gbyte
<b>GRAPHICS INTERFACE</b>	2x Independent Graphic Output (HDMI 2.0 & mDP/LVDS)
<b>SPECIAL</b>	TPM 2.0, Kontron Approtect (Optional), eMMC NAND Flash Built-In (Optional)
<b>SATA PORTS</b>	1x M.2 M-Key (PCIe Rev 2.0) / micro-SIM Interface
<b>mPCIe SLOT</b>	
<b>SERIAL PORTS</b>	1x RS232 (Internal)
<b>LAN PORTS</b>	2x RJ45 LAN Port (with Transformer and 2 LED Indicators)
<b>USB PORTS</b>	1x USB 3.0
<b>AUDIO</b>	1x SPDIF internal headers
<b>POWER SUPPLY</b>	12 V DC In1x Locking barrel-type DC Power Jack 1x Internal 4-Pin Power Connector
<b>MTBF</b>	
<b>SAFETY</b>	EN 62368-1
<b>COOLING SOLUTIONS</b>	Passive and active cooling solution
<b>OPERATING TEMPERATURE</b>	-25 °C to 75 °C - Operation Temp.
<b>REGULATORY</b>	
<b>DIMENSIONS</b>	2,5", 100 x 72mm
<b>OPERATING SYSTEMS</b>	Win10 IOT Enterprise x64/Win10 IOT Core x64, eMMC Boot Linux Yocto 64bitKontron KEAPI
<b>BIOS</b>	AMI Aption V, UEFI



pITX-iMX8M (Release Date Q3/20)

<b>PROCESSOR</b>	NXP's processors - 8M QuadLite (1.3 GHz/Industry) - 8M QuadLite (1.5 GHz/Consumer) - 8M Dual (1.3 GHz/Industry) - 8M Dual (1.5 GHz/Consumer)
<b>MEMORY</b>	Up to 4 GByte LPDDR4 3200 MTps Memory Down
<b>GRAPHICS INTERFACE</b>	2x Independent Graphic Output (HDMI 2.0 & mDP/LVDS)
<b>SPECIAL</b>	TPM, Hardware Security (Optional), eMMC NAND Flash Built-In (Optional)
<b>SATA PORTS</b>	M.2 8-key (PCIe x1, USB 3.0)
<b>mPCIe SLOT</b>	
<b>SERIAL PORTS</b>	1x RS232 (Internal)
<b>LAN PORTS</b>	2x RJ-45 LAN Port (with Transformer and 2 LED Indicators)
<b>USB PORTS</b>	1x USB 3.0 Hub, 1x USB 2.0 Hub
<b>AUDIO</b>	1x SPDIF internal headers, 1x Line-In, Line-Out and Microphone-In headers at rear I/O
<b>POWER SUPPLY</b>	1x Locking barrel-type DC Power Jack, 1x Internal 4-pin Power connector
<b>MTBF</b>	
<b>SAFETY</b>	EN 62368-1
<b>COOLING SOLUTIONS</b>	Passive and active cooling solution
<b>OPERATING TEMPERATURE</b>	-25 °C to 75 °C - Operation Temp.
<b>REGULATORY</b>	Comply with Emission: EN55022
<b>DIMENSIONS</b>	2,5", 100 x 72 mm
<b>OPERATING SYSTEMS</b>	Linux, Android
<b>BIOS</b>	U-Boot

▶ Learn more about Kontron singleboards:  
<https://www.kontron.com/products/boards-and-standard-form-factors/single-board-computer/>