

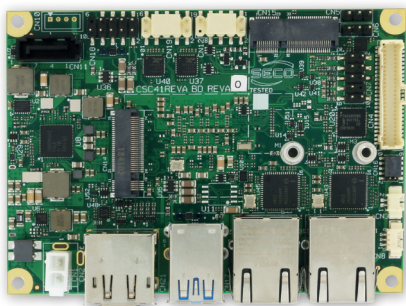
Single Board Computer



ADLER

Pico-ITX SBC with the Intel® Atom® X Series, Intel® Celeron® J / N Series and Intel® Pentium® N Series (formerly Apollo Lake) Processors

x86 solution designed for IoT edge computing in harsh environments



HIGHLIGHTS

CPU Intel® Atom® X Series, Intel® Celeron® J / N Series and Intel® Pentium® N Series (formerly Apollo Lake) Processors	CONNECTIVITY 2x GbE; M.2 WWAN and WLAN slots; 8x GPI/Os
GRAPHICS Integrated Intel® HD Graphics 500 series controller with up to 18 Execution Units	MEMORY Up to 8GB LPDDR4 memory

Available in Industrial Temperature Range



MAIN FIELDS OF APPLICATION



FEATURES

Processor Intel® Atom® x5-E3930 Dual Core @1.3 GHz (Burst 1.8GHz), 2MB L2 Cache, 6.5W TDP Intel® Atom® x5-E3940 Quad Core @1.6 GHz (Burst 1.8GHz), 2MB L2 Cache, 9.5W TDP Intel® Atom® x7-E3950 Quad Core @1.6 GHz (Burst 2.0GHz), 2MB L2 Cache, 12W TDP Intel® Pentium® N4200 Quad Core @1.1GHz (Burst 2.5GHz), 2MB L2 Cache, 6W TDP Intel® Celeron® N3350 Dual Core @1.1GHz (Burst 2.4GHz), 2MB L2 Cache, 6W TDP Intel® Celeron® J3455 , Quad Core @1.5GHz (Burst 2.3GHz), 2MB L2Cache, 10W TDP Intel® Celeron® J3355 , Dual Core @2.0GHz (Burst 2.5GHz), 2MB L2Cache, 10W TDP	Networking Up 2x Gigabit Ethernet connectors WWAN (modem) M.2 Socket 2 Key B 2260 / 3042 slot (excludes SSD interface) Connectivity M.2 Socket 1 Key E 2230 Slot for WiFi+BTLE modules
Max Cores	4
Max Thread	4
Memory	32-bit Single-/Dual-/Quad-Channel LPDDR4 soldered on-board, up to 2400 MT/s Max memory size 8GB
Graphics	Integrated Intel® HD Graphics 500 series controller with up to 18 Execution Units Three Independent displays supported HW decoding of HEVC(H.265), H.264, MVC, VP8, VP9, MPEG2, VC-1, WMV9, JPEG/MJPEG formats HW encoding of HEVC(H.265), H.264, MVC, VP8, VP9 and JPEG/MJPEG formats
Video Interfaces	HDMI connector Optional DP++ connector (combo with HDMI) LVDS connector
Video Resolution	HDMI: up to 3840x2160 @ 30Hz DP++: up to 4096x2160 @ 60Hz LVDS: up to 1920x1200 @ 60Hz
Mass Storage	Optional eMMC 5.0 drive on-board SATA Gen3 7p M connector SSD M.2 Socket 2 Key B lot, size 2260 / 3042 (excludes WWAN modules) microSD Card slot (combo with miniSIM slot)
USB	USB 3.0 Dual Type-A connector Internal USB 2.0 Dual pin header
Audio	HD Audio Codec Line Out + Microphone + S/PDIF Out interfaces on internal pin header
Serial Ports	2 x RS-232/RS-422/RS-485 Serial ports on internal pin header
Other Interfaces	miniSIM slot for M.2 modems (combo with microSD slot) 8 x GPI/Os connector FAN connector Switch / LED Front Header connector I2C + INT# + RST# signals for I2C Touch Screen controller on LVDS connector Optional TPM 2.0 on-board
Power Supply	+12V _{DC} Cabled coin cell battery for RTC
Operating System	Windows 10 Enterprise (64-bit) Windows 10 IoT Core (32- / 64-bit) WindRiver Linux 64-bit Yocto (64-bit) Android (planning)
Operating Temperature*	0°C ÷ +60°C (Commercial version) -40°C ÷ +85°C (Industrial version)
Dimensions	100 x 72 mm (3,93" x 2,83")

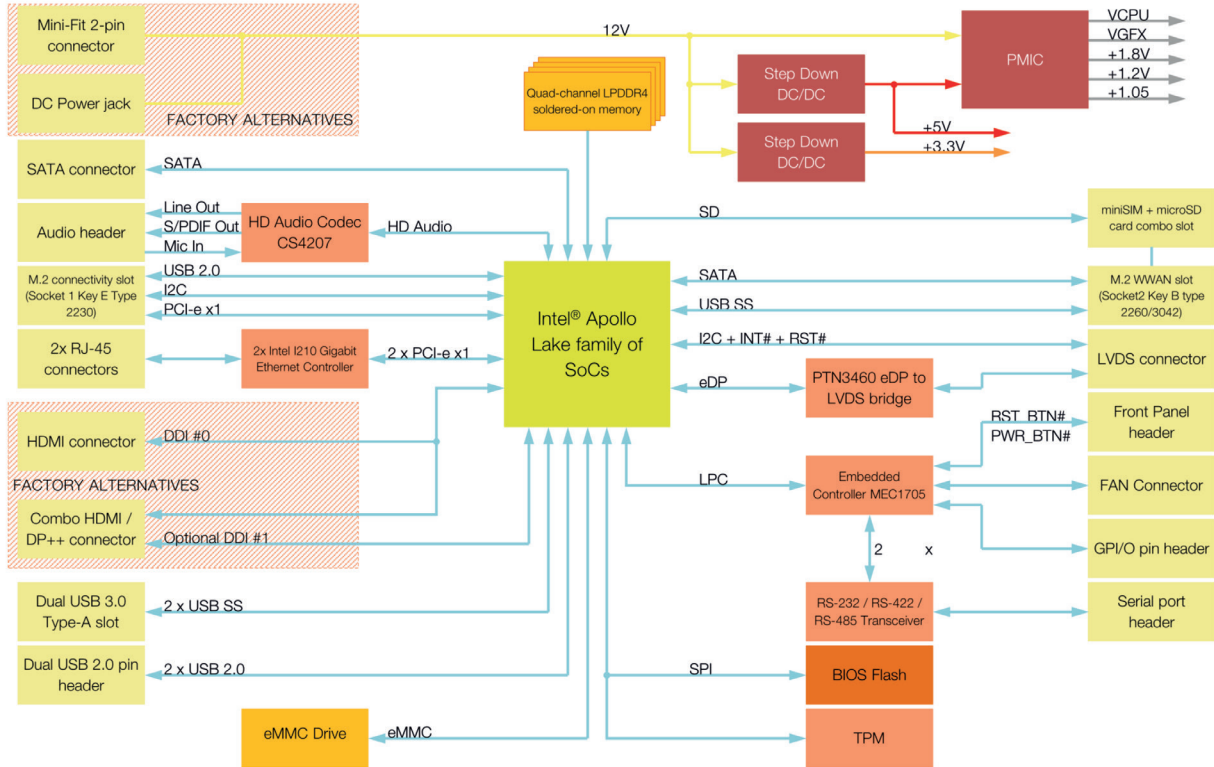
*Measured at any point of SECO standard heatspreader for this product, during any and all times (including start-up). Actual temperature will widely depend on application, enclosure and/or environment. Upon customer to consider application-specific cooling solutions for the final system to keep the heatspreader temperature in the range indicated.



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BLOCK DIAGRAM



Information subject to change. Please visit www.edge.seco.com to find the latest version of this datasheet.

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