



SBC-pITX-ADL-N

Pico-ITX SBC with the Intel® Atom™ Processor "Alder Lake N" Embedded
Embedded PC Client N Series for the Edge

Pico-ITX SBC with the Intel® Atom™ Processor "Alder Lake N" Embedded PC Client N Series for the Edge



HIGHLIGHTS



CPU

Intel® Atom™ Processor "Alder Lake N" Embedded PC Client N Series



GRAPHICS

Up to 2 independent displays (LVDS/eDP + HDMI)
Integrated Intel® Graphics controller with up to 32 EU
4K60 HW decoding and encoding of HEVC (H.265), AVC (H.264), VP9, SCC, AV1 (decoding only)



CONNECTIVITY

Up to 2x 2.5GbE, M.2 E-Key (WiFi+BT), M.2 B-Key (WWAN)



MEMORY

LPDDR5-5200 Soldered Down Memory, Up to 16 GB, with IB ECC support



MAIN FIELDS OF APPLICATION



Coffee &
Vending



Medical



Transportation



Safety &
Surveillance



Industrial
Automation



Smart Devices



Smart Buildings &
Smart Cities



Digital Signage



Energy &
Utilities

FEATURES

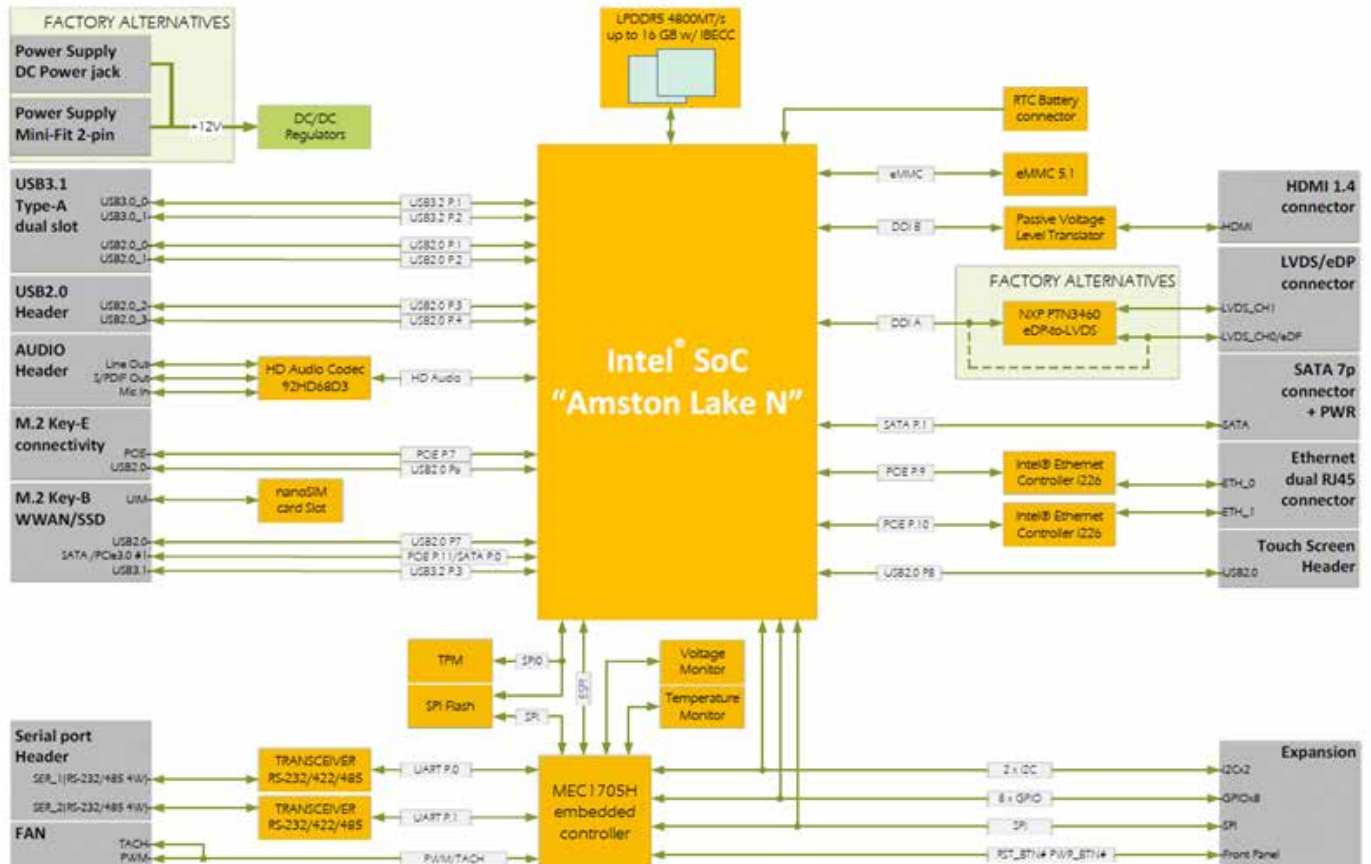
Processor	<ul style="list-style-type: none"> Intel Processor N50 Dual Core @1GHz (3.4GHZ Turbo) 6W TDP w/o TSN and w/o TCC Intel Processor N97 Quad Core @2GHz (3.6GHZ Turbo) 12W TDP w/o TSN and w/o TCC Intel Processor N200 Quad Core @1GHz (3.7GHZ Turbo) 6W TDP w/o TSN and w/o TCC Intel Core i3-N305 Eight Core @1GHz/@1.8GHz (3.8GHZ Turbo) 9W/15W TDP w/o TSN and w/o TCC 	Networking	Up to 2x 2.5GbE Ethernet LAN ports available on 2x single RJ45 connectors M.2 WiFi+BT Connectivity Slot (Socket 1 Key E type 2230) M.2 WWAN Connectivity Slot (Socket 2 Key B size 2242/3042/3052/2260) coupled to on-board Nano-SIM slot**
Memory	LPDDR5-5200 Soldered Down Memory, Up to 16 GB, with IB ECC support	USB	2x SuperSpeed USB 10Gbps ports on Dual type-A socket 3x USB 2.0 ports on internal pin headers
Graphics	Integrated Intel® Gen 12 UHD Graphics driven by Intel® Xe architecture: <ul style="list-style-type: none"> Intel® Core i3-N305 with 32 Execution Units Intel® Processor N200 with 32 Execution Units Intel® Processor N97 with 24 Execution Units Intel® Processor N50 with 16 Execution Units AVX256 & VNNI support for faster AI inference and media transcoding 3D API DirectX 12.1, OpenGL 4.6, Mesa 3D, Vulkan 1.2 4K60 HW decoding and encoding of HEVC (H.265), AVC (H.264), VP9, SCC, AV1 (decoding only)	Audio	HD Audio Codec, Tempo Semicon 92HD68D3 S/PDIF Out and Mic In on internal pin header
Video Interfaces	eDP 1.4b or Single/Dual Channel 18/24bit LVDS interface HDMI 1.4b interface	Serial Ports	2x Serial Ports (RS-232/RS-422/RS-485) on internal pin header
Video Resolution	1x LVDS, Dual Channel 18/24-bit, up to 1920 x 1080 1x HDMI 1.4b, up to 3840 x 2160 x 24bpp@20-30Hz eDP, Up to 4096 x 2304	Other Interfaces	2x I2C interfaces available on expansion internal header 8x GP I/Os interfaces available on expansion internal header 1x SPI interface available on expansion internal header Optional TPM 1.2/2.0 Module on-board FAN connector RST_BTN#, PWR_BTN# and activity LED signals on front panel pin header
Mass Storage	Optional eMMC 5.1 drive soldered on-board, up to 128GB 1x SATA Gen3 7p M connector with + 4p M power connector 1x M.2 SATA SSD Slot (Socket 2 Key B size 2242/3042/3052/2260)**	Power Supply	12V _{DC} Cabled coin cell battery for RTC
		Operating System	Microsoft® Windows 11 IoT Enterprise LTSC Edgehog OS
		Operating Temperature*	0°C - +60°C (Commercial version)
		Dimensions	100x72mm (3.93" x 2.83")

**SATA SSD and WWAN functionalities share the same slot and are therefore mutually exclusive.

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BLOCK DIAGRAM



Streamline and expedite your edge computing implementations

Clea OS

A flexible operating system that adapts to your needs, thanks to the customization tool and Docker support. Reliability and security are built-in through a dual-partition system and native integration with Exein's robust AI-based protection.

Clea Astarte

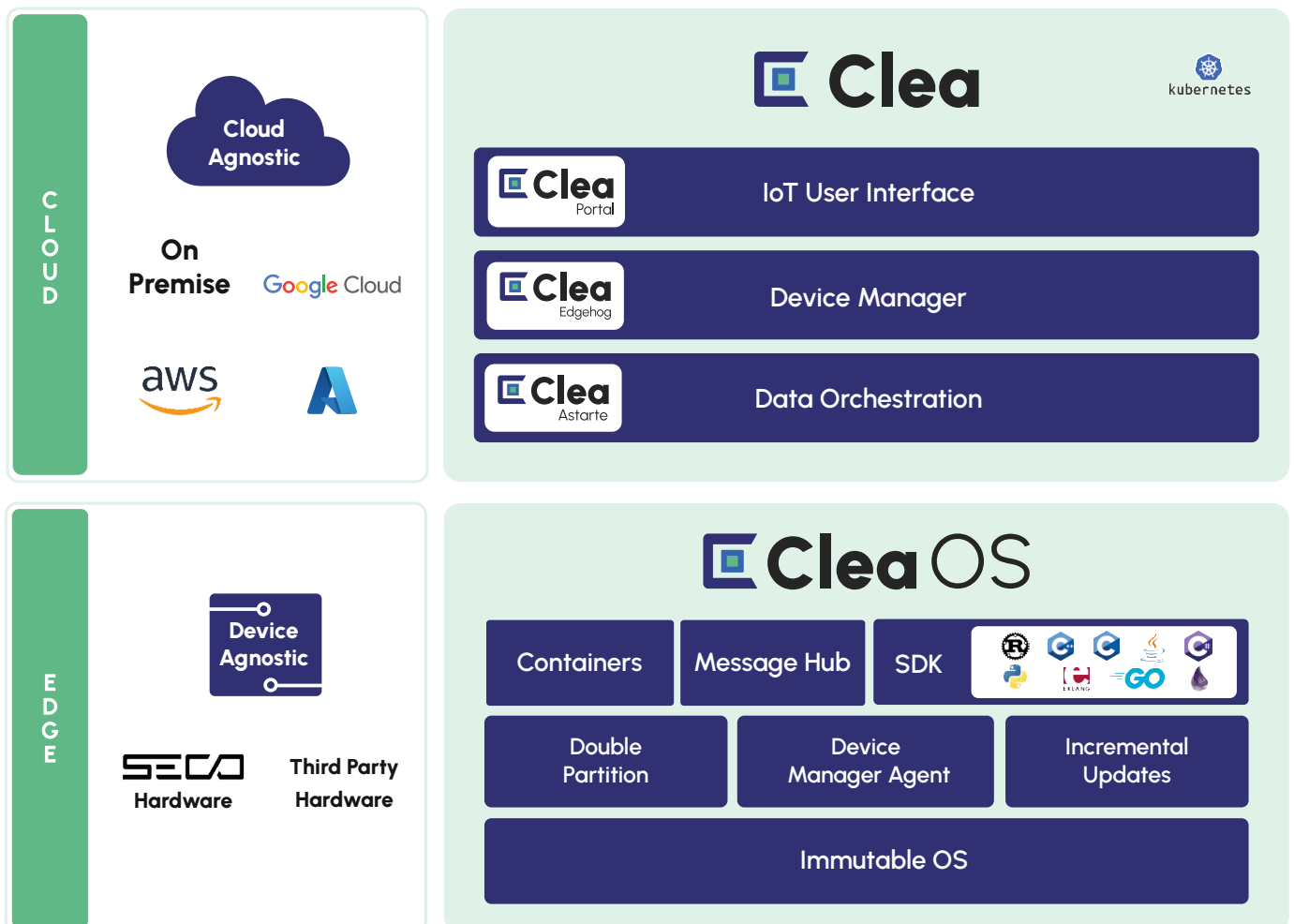
Integrate third-party services, simplify data flows and analysis, and enhance business efficiency by enabling easy and fast utilization of AI.

Clea Edgehog

Update, configure, and manage remote devices. Optimize time and costs to maximize operational efficiency and security without the need for costly field interventions.

Clea Portal

Analyze data from remote devices, customize the user experience with applications tailored to user needs, and manage user rights, company access, and tenant privileges.



Scan to know more about our solution

Clea OS



Clea DOCS

