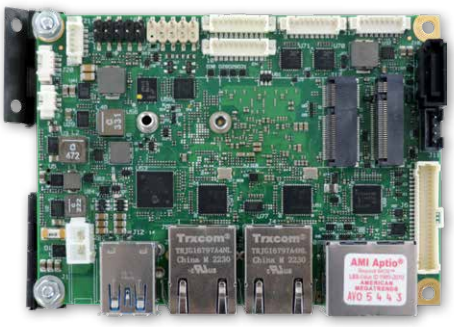
SBC-pITX-TWL

Pico-ITX SBC with the Intel® AtomTMProcessor "Twin Lake" Embedded PC Client N Series for the Edge

Low-power, compact, and versatile - perfect for industrial automation and IoT edge solutions.



HIGHLIGHTS

CPU
Intel® AtomTMProcessor "Twin Lake" Embedded PC Client N Serie

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

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)

MEMORY
LPDDR5-5200 Soldered Down Memory, Up to 16 GB, with IBECC suppor

Windows 11 IoT Enterprise | EDGEHOG ALL-IN-ONE IIoT PLATFORM | HDMI® HIGH-DEFINITION MULTIMEDIA INTERFACE

MAIN FIELDS OF APPLICATION

Medical | Industrial Automation | Smart Devices | Smart Buildings & Smart Cities

FEATURES

Processor	· Intel Processor N150 Quad Core @0.8GHz (3.6GHZ Turbo) 6W TDP · Intel Processor N250 Quad Core @1.3GHz (3.8GHZ Turbo) 6W TDP · Intel Processor N355 Quad Core @1.0/1.9GHz (3.9GHZ Turbo) 9/15W TDP
Memory	LPDDR5-5200 Soldered Down Memory, Up to 16 GB, with IBECC support
Graphics	Integrated Intel® Graphics driven by Intel® Xe architecture: · Intel® Processor N355 with 32 Execution Units · Intel® Processor N250 with 32 Execution Units · Intel® Processor N150 with 24 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)
Video Interfaces	eDP 1.4b or Single/Dual Channel 18/24bit LVDS interface HDMI 1.4b interface
Video Resolution	1x LVDS, Dual Channel 18/24-bit, up to 1920 x 1080 1 x HDMI 1.4b, up to 3840 x 2160 x 24bpp@20-30Hz eDP, Up to 4096 x 2304
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)**

Networking	Up to 2x 2.5GbEthernet 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**
USB	2x SuperSpeed USB 10Gbps ports on Dual type-A socket 3x USB 2.0 ports on internal pin headers
Audio	HD Audio Codec, Tempo Semicon 92HD68D3 S/PDIF Out and Mic In on internal pin header
Serial Ports	2x Serial Ports (RS-232/RS-422/RS-485) on internal pin header
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
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.

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

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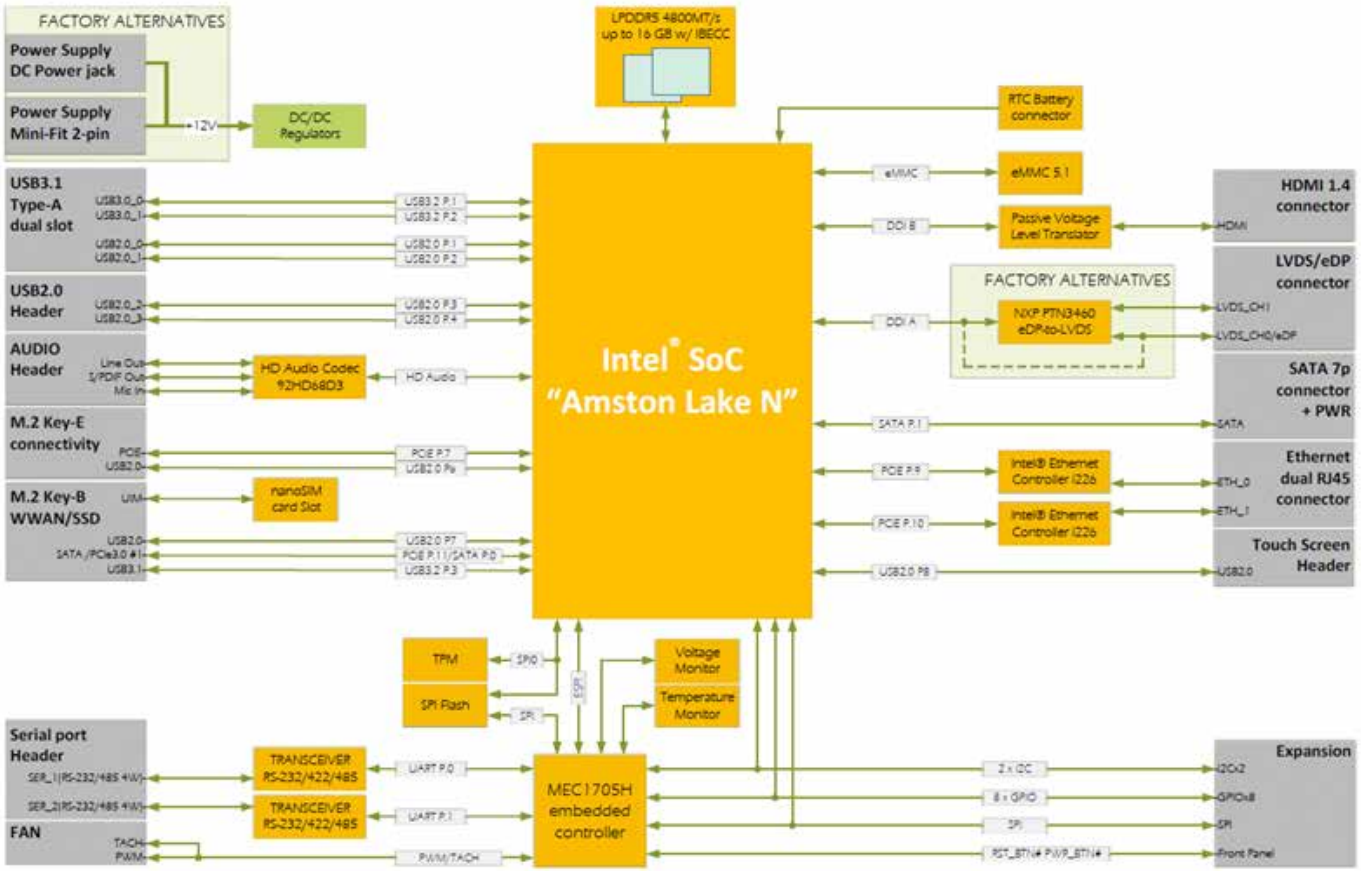
BLOCK DIAGRAM



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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 Edgehog

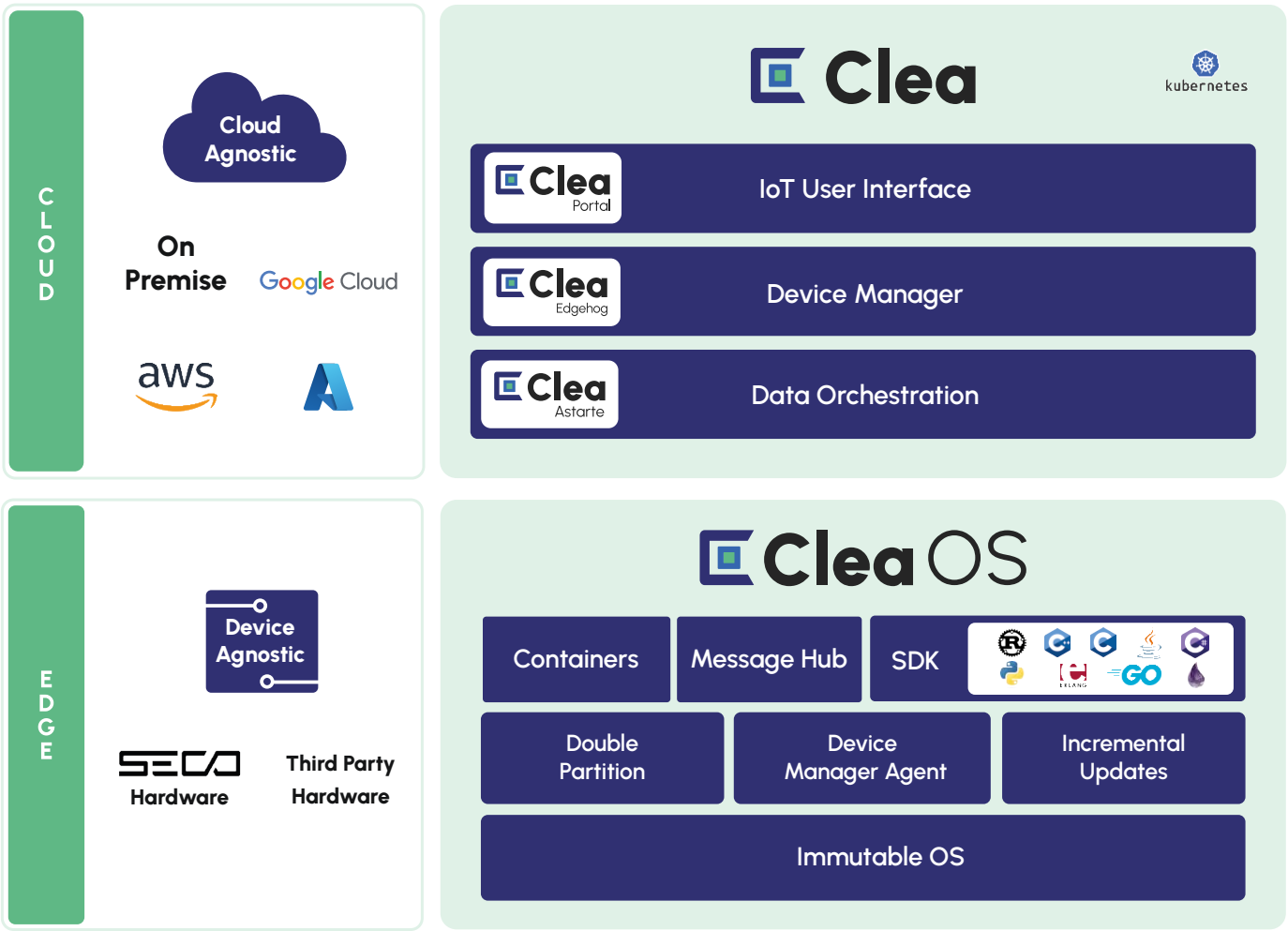
Update, configure, and manage remote devices. Optimize time and costs to maximize operational efficiency and security without the need for costly field interventions.

Clea Astarte

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

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

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