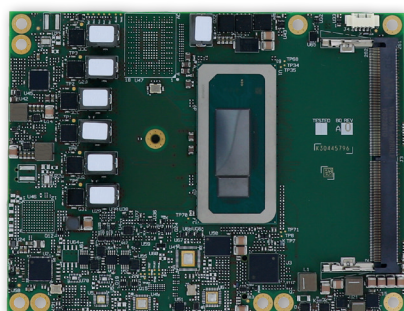# COM EXPRESS®

SOM-COMe-BT6-RPL-P
COM Express® 3.1 Type 6 Basic Module with 13th Gen Intel® Core™ processors (Raptor Lake-P)

Intensive video processing and AI-based analytics for edge devices in challenging environments

early access

HIGHLIGHTS

CPU
13th Gen Intel® Core™ processors targeted for IoT Applications

CONNECTIVITY
1x NBase-T 2.5GbE; 2x USB4.0 Gen2; 4x USB3.2 Gen 2; 8x USB 2.0; 8x PCI-e x1 Gen3; PEG x8 Gen4 and 2x PEG x4 Gen4

GRAPHICS
Embedded Intel® Iris® Xe graphics with up to 96 execution units

MEMORY
Two DDR5 SO-DIMM Slots supporting DDR5-4800 IBECC Memory, up to 64GB

Available in Industrial Temperature Range

COM Express | intel partner Gold

Windows 10 | ubuntu

MAIN FIELDS OF APPLICATION

Coffee & Vending | Medical | Transportation | Safety & Surveillance | Industrial Automation | Smart Devices | Digital Signage | Energy & Utilities

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FEATURES

Processor	13th Gen Intel® Core™ processors (Raptor Lake U/P/H series) and Intel® Processor U300E		
	U series, up to 10C (2P+8E)	P series, up to 14C (6P+8E)	H series, up to 14C (6P+8E)
P-Core base/turbo	1.7/4.9GHz	1.9/4.8GHz	2.5/5.0GHz
E-Core base/turbo	1.2/3.7GHz	1.2/3.7GHz	1.8/4.0GHz
Cache	Up to 12M	Up to 24M	Up to 24M
TDP	15W	28W	45W

Memory	Two DDR5 SO-DIMM slots supporting DDR5-4800, IBECC modules memory, up to 64GB
Graphics	Intel® UHD Graphics/Intel® Iris® Xe Graphics architecture, up to 96 EU Improved image (IPU6EP) and video processing (AV1/GNA 3.0) Support up to 4 independent displays @ 4K
Video Interfaces	Up to 3x Digital Display Interfaces (DDIs), supporting DVI, DP 1.4, HDMI® 2.1 1x VGA (factory option) 1x eDP 1.3 or single/dual-channel 18-/24-bit LVDS interface (factory alternatives)
Video Resolution	HDMI® and DP up to 8K @ 60Hz via TCSS with Hayden Bridge eDP 1.4b up to 5K @ 120Hz (HBR3 with VDSC1.1) LVDS up to 1920x1200 @ 60Hz
Mass Storage	2x SATA Gen3 channels Up to 128 GB on-board NVMe SSD (factory alternative to one PCI-express Graphics (PEG) x4 Gen4)
Networking	1x NBase-T Ethernet interface with Intel® I225 GbE controller, with TSN and 2.5GbE supported

USB	Up to 2x USB 4 Gen2 host ports (depending on carrier board retimer implementation) 4x USB 3.2 Gen2 (10Gbps) host ports (depending on carrier board retimer implementation) 8x USB 2.0 host ports
PCI-e	Up to 8x PCI-e x1 Gen3 lanes 1x PCI-express Graphics (PEG) x8 Gen4 Up to 2x PCI-express Graphics (PEG) x4 Gen4
Audio	HD audio and Soundwire/i2S audio interfaces
Serial Ports	2x UARTs
Other Interfaces	SPI, I2C, SM Bus, Thermal Management, FAN management Optional eSPI or LPC bus (factory alternatives) Optional TPM 2.0 on-board LID#/SLEEP#/PWRBTN#, Watchdog 4 x GPI, 4 x GPO
Power Supply	+12V_{DC} ± 10%, +5V_{SB} (optional), +3VRTC (optional)
Operating System	Microsoft® Windows 10 Linux Ubuntu

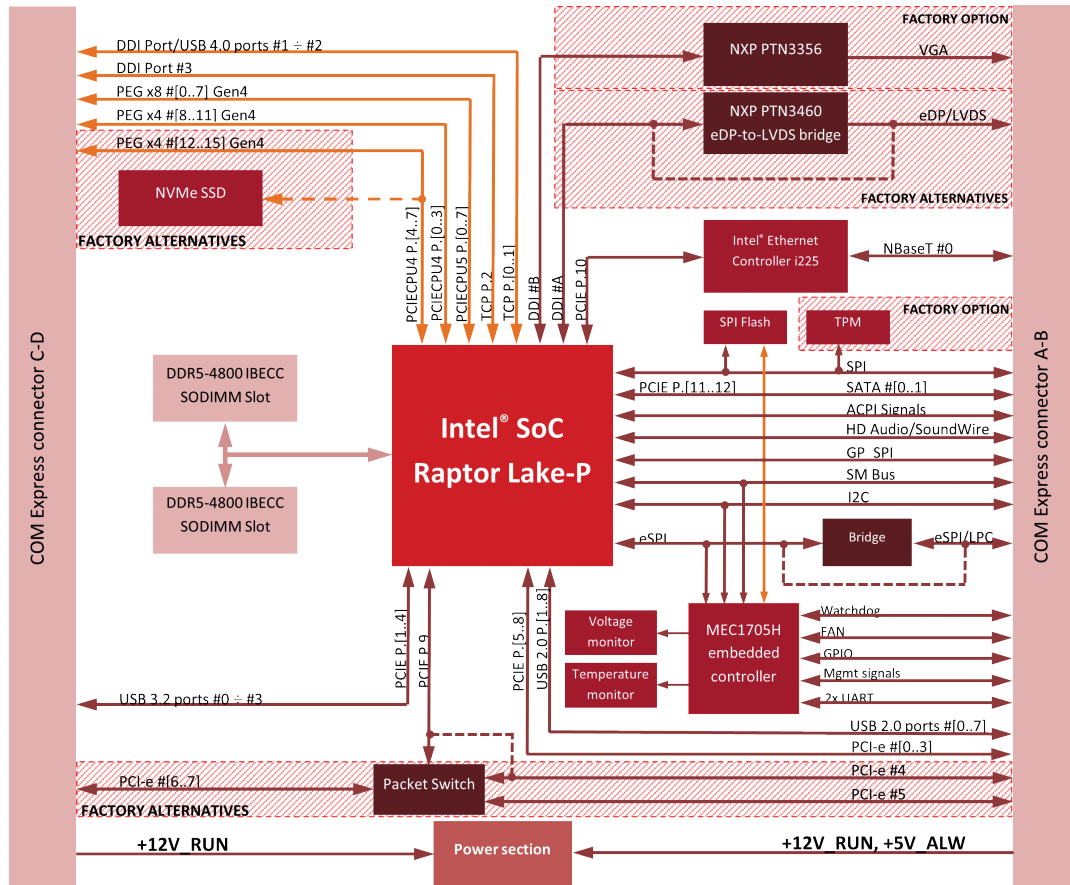
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FEATURES

🌡 Operating Temperature*	0°C to +60°C (commercial version) -40°C to +85°C (industrial version)
📏 Dimensions	125 x 95 mm (COM Express® Basic Form factor, Type 6 pinout)

*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.

BLOCK DIAGRAM

Streamline and expedite your edge computing implementations

EDGEHOG 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.

DEVICE MANAGER

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

DATA ORCHESTRATION

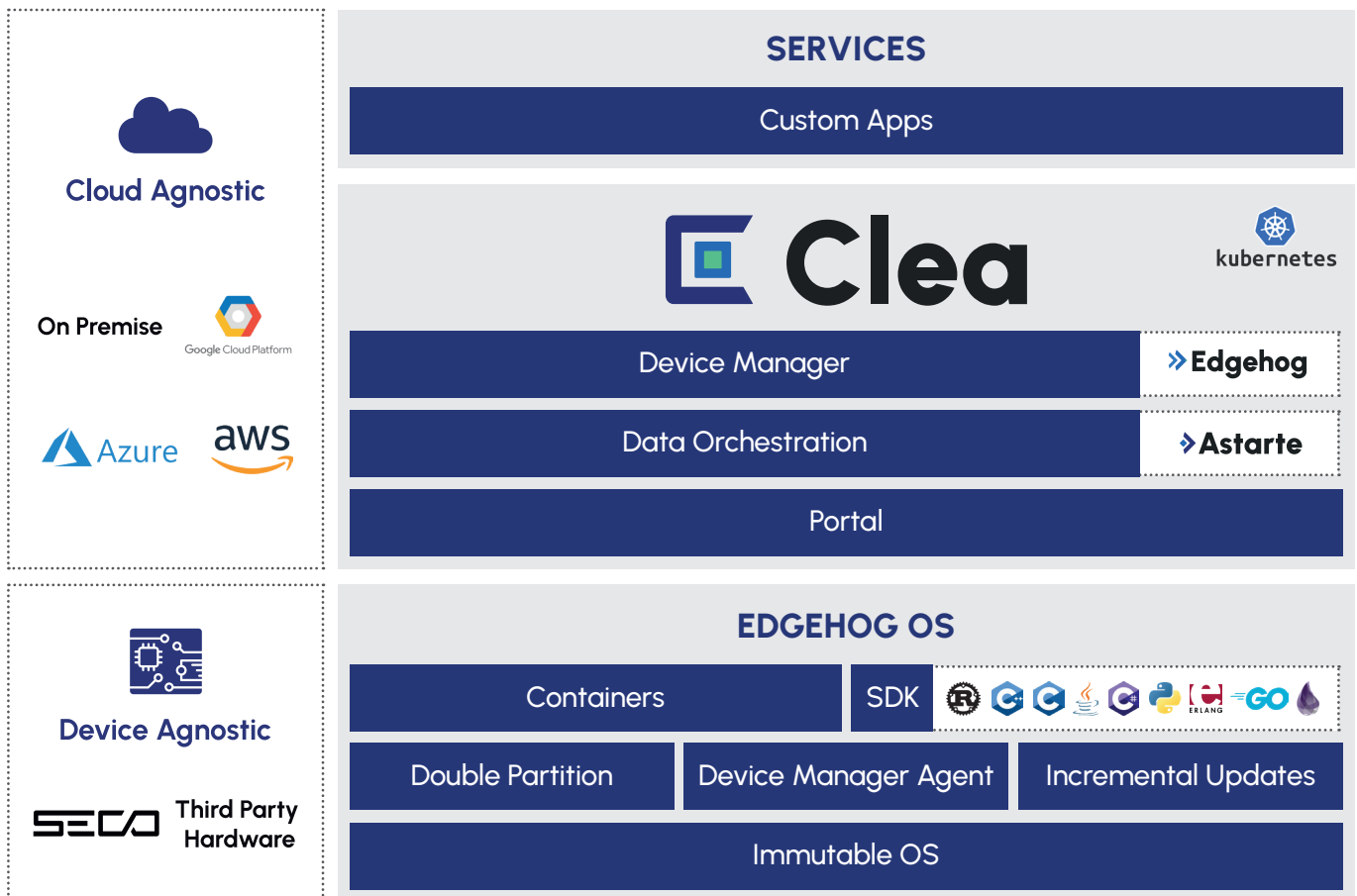Integrate third-party services, simplify data flows and analysis, and enhance business efficiency by enabling easy and fast utilization of AI.

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.

Cloud Agnostic

On Premise

Google Cloud Platform

Azure

aws

SERVICES

Custom Apps

Clea

kubernetes

Device Manager — Edgehog

Data Orchestration — Astarte

Portal

EDGEHOG OS

Containers | SDK

Double Partition | Device Manager Agent | Incremental Updates

Immutable OS

Device Agnostic

SECO **Third Party Hardware**

Scan to know more about our solution

EDGEHOG OS

CLEA DOCS

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