

Low-Power Edge AI System with Intel® Core™ Processors (Series 3)



UP Nexus WCL Edge

Deployment-Ready Edge AI System Designed for Advanced AI Workloads

Modern industrial edge AI deployments often face severe power, thermal, and spatial constraints that limit local processing performance. The UP Nexus WCL Edge solves these operational challenges by delivering plug-and-play edge AI acceleration in a compact, energy-efficient enclosure.

Powered by Intel® Core™ processors (Series 3) delivering up to 40 TOPS of heterogeneous GPU and NPU performance, the system accelerates real-time computer vision, smart infrastructure, and factory automation without high power draw. Key features include up to 48GB onboard LPDDR5 memory, 256GB UFS 3.1 storage, dual 2.5GbE LAN ports, 40-pin GPIO, dual RS-232/422/485 serial interfaces, and flexible M.2 expansion.

Engineered for demanding environments, this fanless system supports 12V to 24V DC input and wide operating temperatures from -20°C to 60°C. Unlike conventional, bulky edge gateways, the UP Nexus WCL Edge uniquely combines high-capacity memory, low power consumption, and rich industrial connectivity into a deployment-ready system.



**Accelerate
edge AI with
up to 40 TOPS
in a compact,
low-power,
deployment-
ready system.**

Intel Products and Technologies

Accelerating AI and Analytics at the Edge



Intel® Core™
Processors



Intel®
Graphics



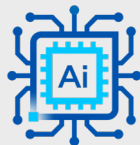
Intel® Ethernet



OpenVINO™
Toolkit

Key Features

Empowered by Intel.



Low-Power
Heterogeneous
AI Computing



Rich, Flexible
Industrial I/O
and Expansion



High-Capacity
Onboard Memory
& High-Speed
Storage



Deployment-
Ready Industrial
Durability

AAEON UP Nexus WCL Edge



intel ai

Intel® AI Edge Systems

Product Specifications

CPU	Intel® Core™ 7 processor 350; Intel® Core™ 5 processor 320
Graphics	Intel® Graphics
Memory	Up to 48GB onboard LPDDR5
Storage	Up to 256GB onboard UFS Optional with M.2 2280 M-Key, M.2 2242 M-Key
Wireless Network	Optional with M.2 2230 E-Key x 1
LAN	2.5GbE x 2 (Intel® Ethernet Controller I226-IT)
Operating / Storage Temp.	-20°C ~ 60°C (0.7 airflow) / -20°C ~ 70°C
Dimension (W x D x H)	5.28" x 4.13" x 2.09" (134mm x 105mm x 53mm)
Weight	1.45 lbs (0.66kg)
OS	Windows 11; Ubuntu 24.04
I/O Options (Input/Output)	2 x USB 3.2 Gen 2 Type-A; 1 x USB 3.2 Gen 2x2 Type-C; 2 x HDMI 2.1 (TMDS); 1 x DisplayPort 1.4a via USB Type-C; 2 x RS-232/422/485 COM ports

Learn More

[AAEON UP Nexus WCL Edge](#)

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