Edge Server Innovation

Embracing OCP MHS Modularity

Sep. 2024

Inventec

Today's Journey

01 Next-Gen Modular Edge Solutions

02 Inventec EdgePro Edge Server

Next-Gen Modular Edge Solutions

Introducing the Concept

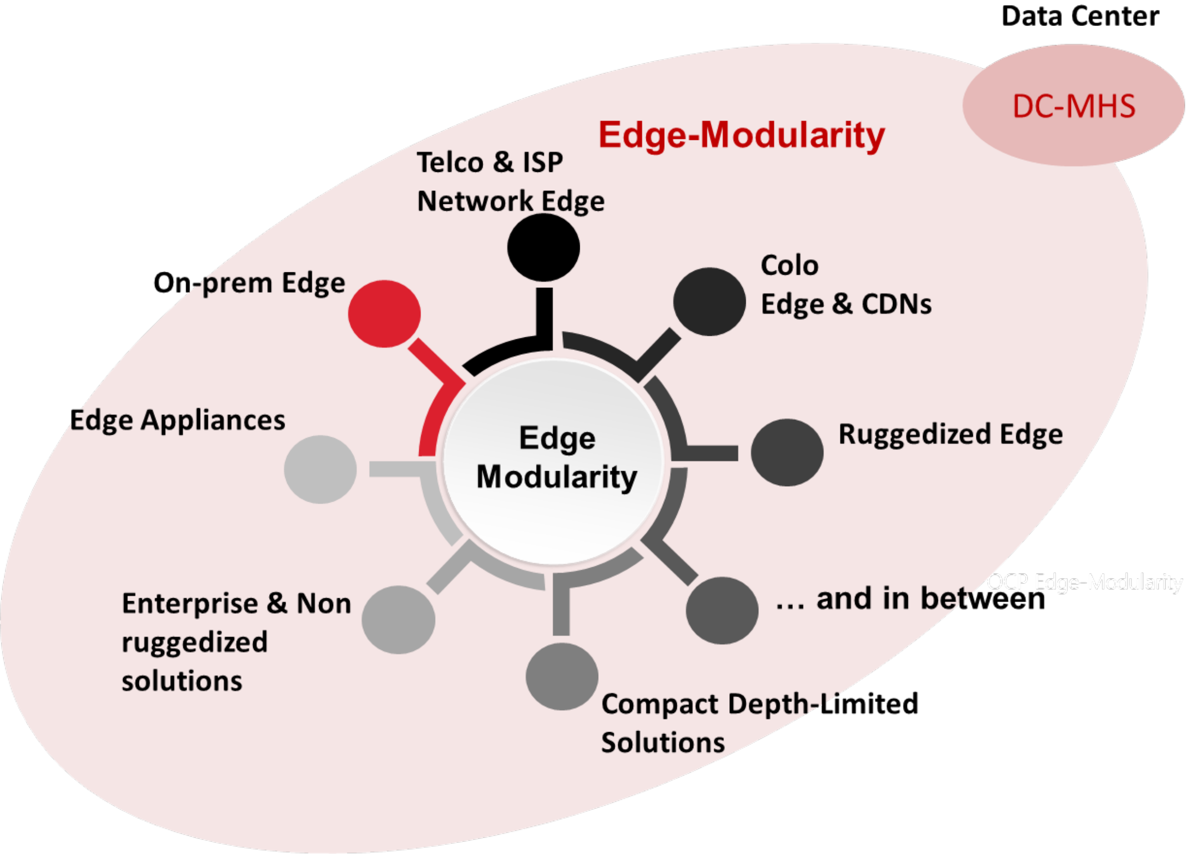
Advantages of Modular Architecture

Interoperability of Common Modular Building Blocks to create multiple platforms

Reduced Carbon Footprint - Sustainability through recyclable components, multi-generational lifecycles, and efficient inventory management.

Innovation - Cater to a wider audience with the ability for users to tailor the product to their specific needs.

Future Proof - Users can upgrade specific modules instead of replacing the entire server, extending its lifespan, lower TCO and increasing customer satisfaction.



OCP Edge-Modularity

EdgePro (EP)
Product Introduction

IEC EdgePro (EP) 1U/2U Server

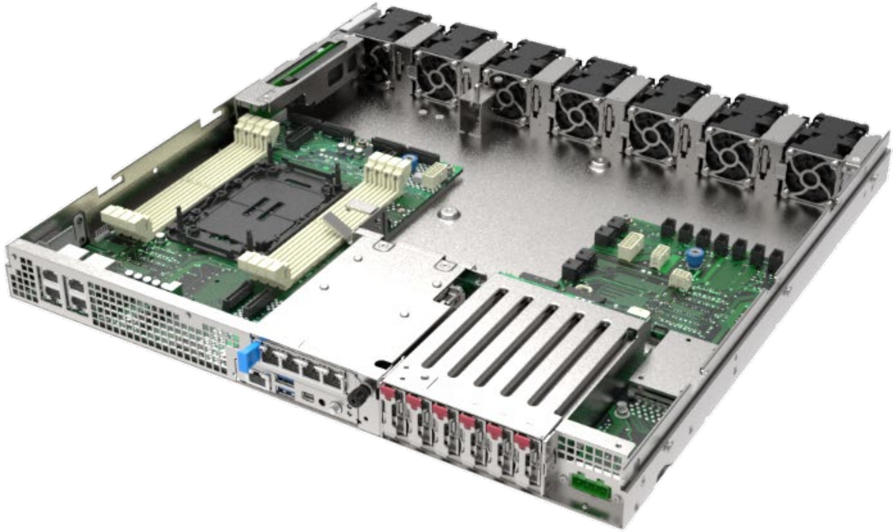
Future-Proofing with Modular Design: Leveraging the OCP MHS Concept

Maximize Your Edge Computing Potential with Our Versatile Server Solutions

- Our edge server appliances are engineered to cater to a broad spectrum of use cases, from near-edge to mid-edge deployments. They are designed to seamlessly integrate into various deployment scenarios, ensuring optimal performance and adaptability.

Key Deployment Scenarios:

- Networking and Media: Ideal for Cloud Gaming, Immersive Media, Live Media Processing, Content Delivery Networks (CDN), Virtualized Radio Access Networks (VRAN), 5G, and User Plane Functions (UPF).
- Artificial Intelligence: Perfect for applications in Computer Vision, Image Recognition and Classification, Natural Language Processing (NLP), Recommendation Systems, and Robotic Process Automation.
- Web Applications and Microservices: Provides robust support for Web Hosting and Content Management Systems.
- Data Services: Enhances Data Filtering and Aggregation, Online Transaction Processing, and Local Data Caching.
- High-Performance Computing (HPC): Accelerates Trading Performance, Fraud Detection, and Medical Image Analytics.
- Manufacturing: Supports AIoT, Predictive Maintenance, and Quality Control, ensuring efficient and reliable manufacturing processes.



Inventec

IEC EdgePro (EP) 1U/2U Server

Future-Proofing with Modular Design: Leveraging the OCP MHS Concept

Feature

Revolutionary Performance: Equipped with the cutting-edge 6th Gen Intel Granite Rapids-SP Xeon scalable processor, the server boasts up to 86 P-cores and 144 E-Cores, alongside 88 PCIe Gen5 lanes, catering to the most demanding workloads with ease.

Advanced Acceleration: The processor is embedded with specialized accelerator engines, optimizing performance across AI, HPC, security, network processing, analytics, and storage applications.

Rapid Memory Access: With up to 1TB of memory across 8 channels of 128G DDR5 at 6400MTS 1DPC DIMMs, the server ensures swift data access for memory-heavy tasks.

Expansive Storage Options: The server supports 6x EDSFF E1.S NVMe and 2x M.2 2280 drives, enhanced with Intel® VROC – SW RAID, offering a robust storage solution that scales to various needs.

Enhanced Security: Incorporating PFR technology, the server provides robust safeguards for data integrity and protection against unauthorized access.

Cost-Effective COTS: Ready to deploy, the server presents a cost-effective solution that doesn’t compromise on reliability or ease of deployment.

Modular and Future-Ready: A modular design allows for straightforward expansion and customization, ensuring the server stays compatible with upcoming technologies and enhancements.

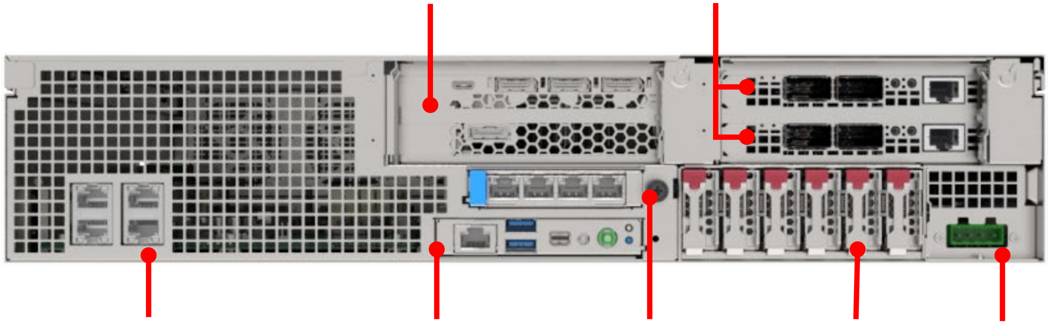
Sustainable and Economical: The server’s design promotes sustainability through recyclable components and multi-generational lifecycles, coupled with efficient inventory management for economies of scale.

IEC EdgePro (EP) 2U Server

Form Factor	2U1N1P W x H x D: 435 x 87.6 x 430 mm (17.13" x 3.45" x 16.93")
Processor	Single Socket-E2 (LGA4710) Intel® Xeon® 6500/6700-series processor with P-cores Intel® Xeon® 6700-series processor with E-cores
Memory	8 DIMM slots 1DPC, DDR5, up to 6400MT/s
Storage	Support up to 2 NVMe Gen 5 M.2 SSDs (2280) Support up to 4 NVMe Gen 5 E1.S SSDs Intel VROC SW RAID capable
Network	Embedded Intel i210 1Gb 4 ports Optional OCP NIC 3.0 SFF
Management	DC-SCM 2.0 Module include: 2x USB3.0 port 1x Mini Display port 1x RJ45 management port
I/O Expansion	1x OCP 3.0 Slot (x16 PCIe 5.0) Expansion Riser Slots: 1x DS FHFL PCIe card slot (x16 PCIe 5.0), TDP up to 350W (e.g. L40S) 2x SS FHFL PCIe card slot (x8 PCIe 5.0), TDP up to 75W
Power	DC-IN 54V (Optional external 1600W AC to DC adaptor)
Fan	6 Dual Rotor Fans Support N+1 Redundant with Optimal fan speed control High PQ Performance & Low Power Consumption

IEC EdgePro (EP) - 2U System Overview

Front I/O



DS FHFL slot
x16 PCIe 5.0

SS FHFL slots
x8 PCIe 5.0

RJ45 1Gbps

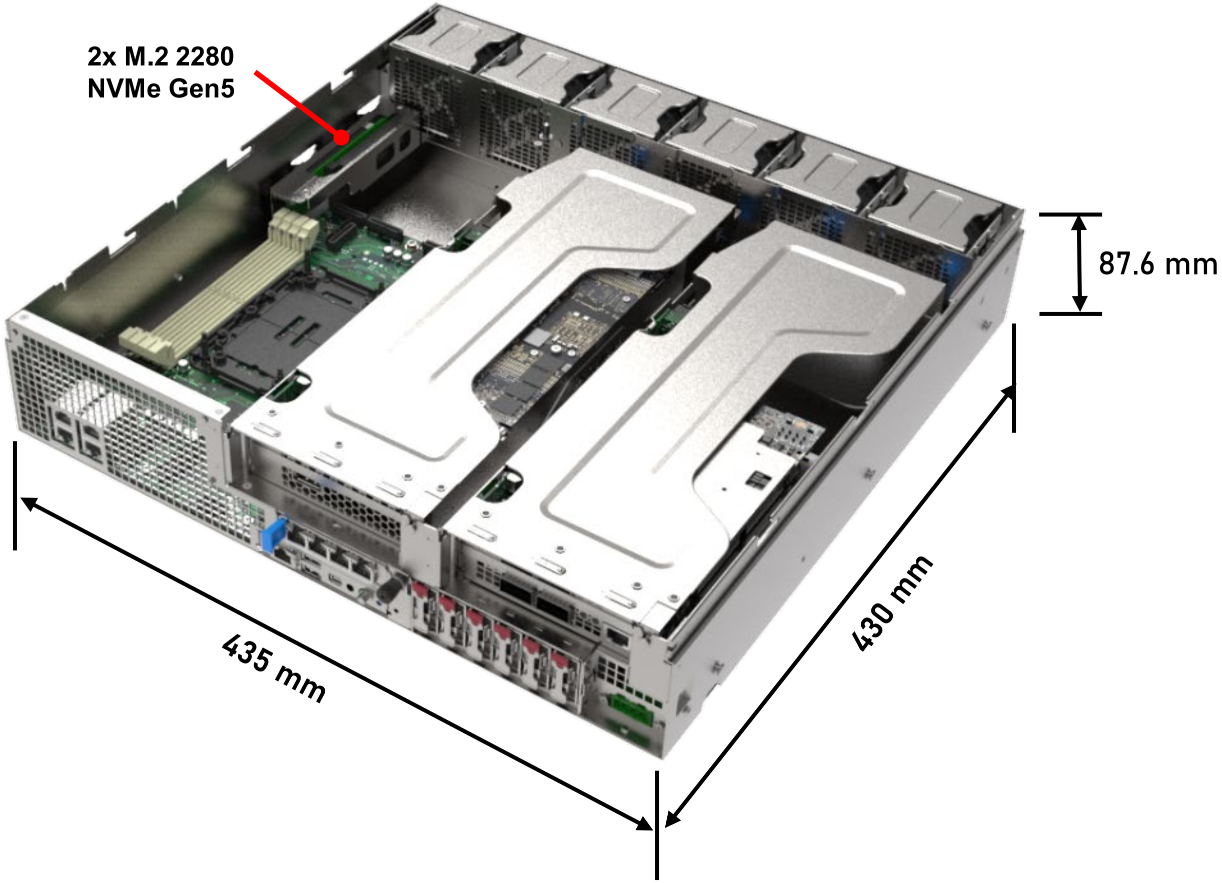
DC-SCM 2.0

OCP 3.0
x16 PCIe 5.0

NVMe E1.S
PCIe 5.0

DC-IN

Outline



2x M.2 2280
NVMe Gen5

87.6 mm

435 mm

430 mm

IEC EdgePro (EP) 1U Server (AC-IN)

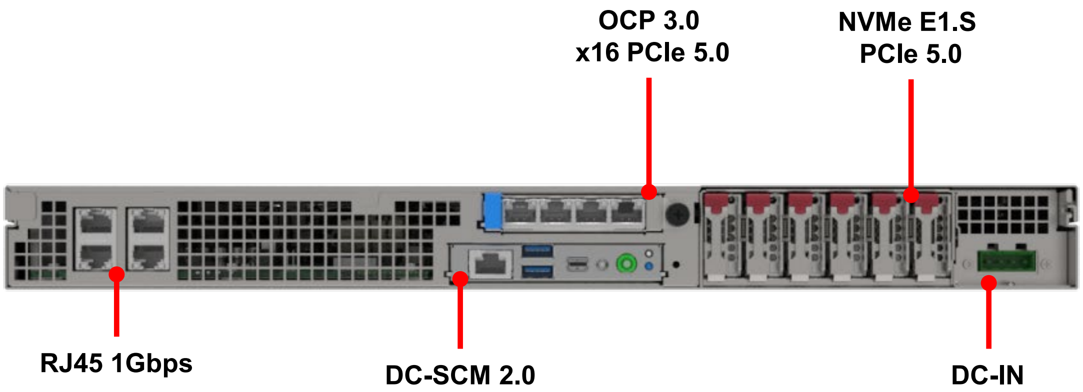
Form Factor	1U1N1P W x H x D: 435 x 42.88 x 430 mm (17.13" x 1.69" x 16.93")
Processor	Single Socket-E2 (LGA4710) Intel® Xeon® 6500/6700-series processor with P-cores Intel® Xeon® 6700-series processor with E-cores
Memory	8 DIMM slots 1DPC, DDR5, up to 6400MT/s
Storage	Support up to 2x NVMe Gen 5 M.2 SSDs (2280)
Network	Embedded Intel i210 1Gb 4 ports Optional OCP NIC 3.0 SFF
Management	DC-SCM 2.0 Module include: 2x USB3.0 port 1x Mini Display port 1x RJ45 management port
I/O Expansion	1x OCP 3.0 Slot (x16 PCIe 5.0)
Power	AC-DC CRPS 1500W, Support 1+1 Redundant
Fan	7 Dual Rotor Fans Support N+1 Redundant with Optimal fan speed control High PQ Performance & Low Power Consumption

IEC EdgePro (EP) 1U Server (DC-IN)

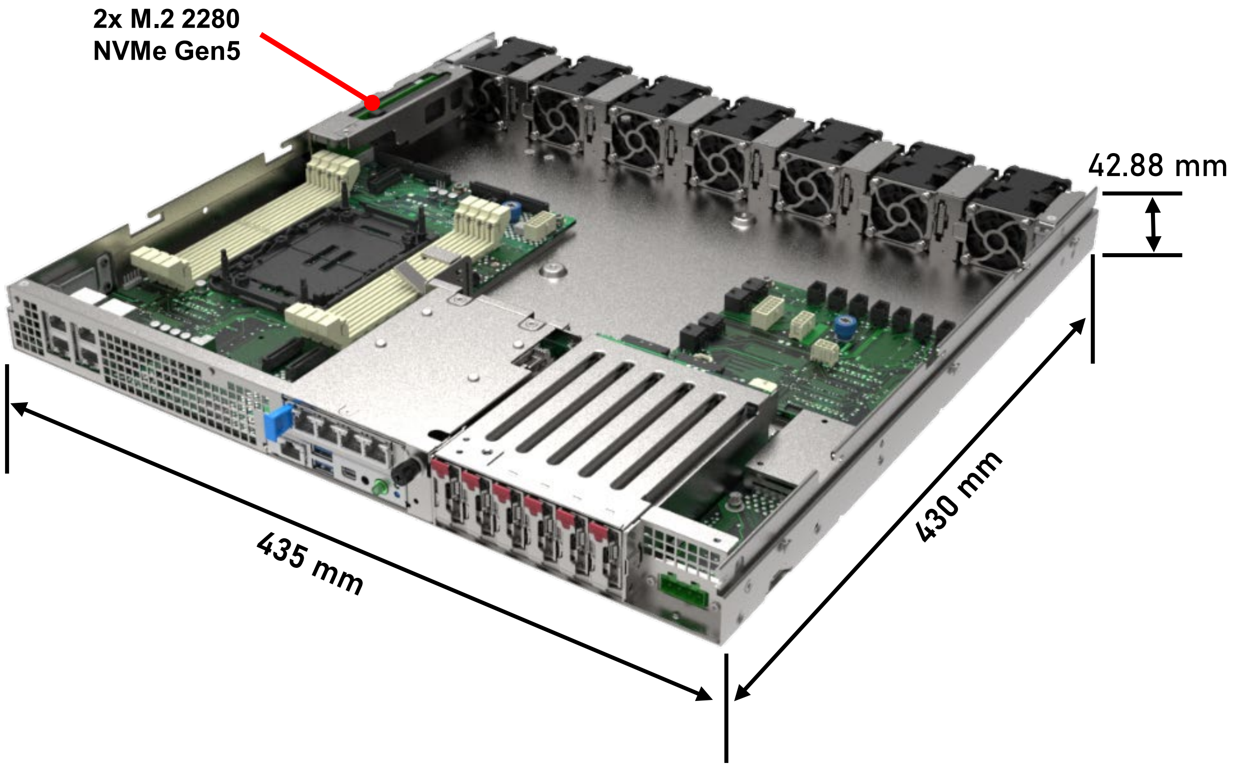
Form Factor	1U1N1P W x H x D: 435 x 42.88 x 430 mm (17.13” x 1.69” x 16.93”)
Processor	Single Socket-E2 (LGA4710) Intel® Xeon® 6500/6700-series processor with P-cores Intel® Xeon® 6700-series processor with E-cores
Memory	8 DIMM slots 1DPC, DDR5, up to 6400MT/s
Storage	Support up to 2x NVMe Gen 5 M.2 SSDs (2280) Support up to 6x NVMe Gen 5 E1.S SSDs Intel VROC SW RAID capable
Network	Embedded Intel i210 1Gb 4 ports Optional OCP NIC 3.0 SFF
Management	DC-SCM 2.0 Module includes: 2x USB3.0 port 1x Mini Display port 1x RJ45 management port
I/O Expansion	1x OCP 3.0 Slot (x16 PCIe 5.0)
Power	DC-IN 54V (Optional external 1600W AC to DC adaptor)
Fan	7 Dual Rotor Fans Support N+1 Redundant with Optimal Fan Speed Control High PQ Performance & Low Power Consumption

IEC EdgePro (EP) - 1U System Overview

Front I/O



Outline



IEC EdgePro Server Software Spec

Operating Environment	Operating Temperature: 0°C ~ 55°C (32°F ~ 122°F) Non-operating Temperature: -40°C to 70°C (-40°F to 158°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing) Meet NEBS Level 3
BIOS Type	AMI UEFI
BIOS Features	ACPI 6.5 SMBIOS 3.7.0 UEFI 2.9 PI 1.7A IPMI 2.0
Software	Redfish IPMI 2.0 KVM with dedicated LAN AMI SPX AMI SPX GUI
Operating System	Ubuntu Linux Red Hat Enterprise Linux VMware ESXi

Thank You