Build better connections between cloud and edge servers

micron™

ECS
EQUUS COMPUTE SOLUTIONS

Optimize data transfer rates, bandwidth, and security

Effective cloud-to-edge strategies can reduce latency, optimize GPU utilization, improve data security, and reduce the cost and power associated with transporting data to the cloud.

However, to achieve success at the edge, every component from cloud to edge must work in sync, with powerful performance, power efficiency, and security features. Memory and storage play a critical role in these processes, as do the connectors between edge and cloud.

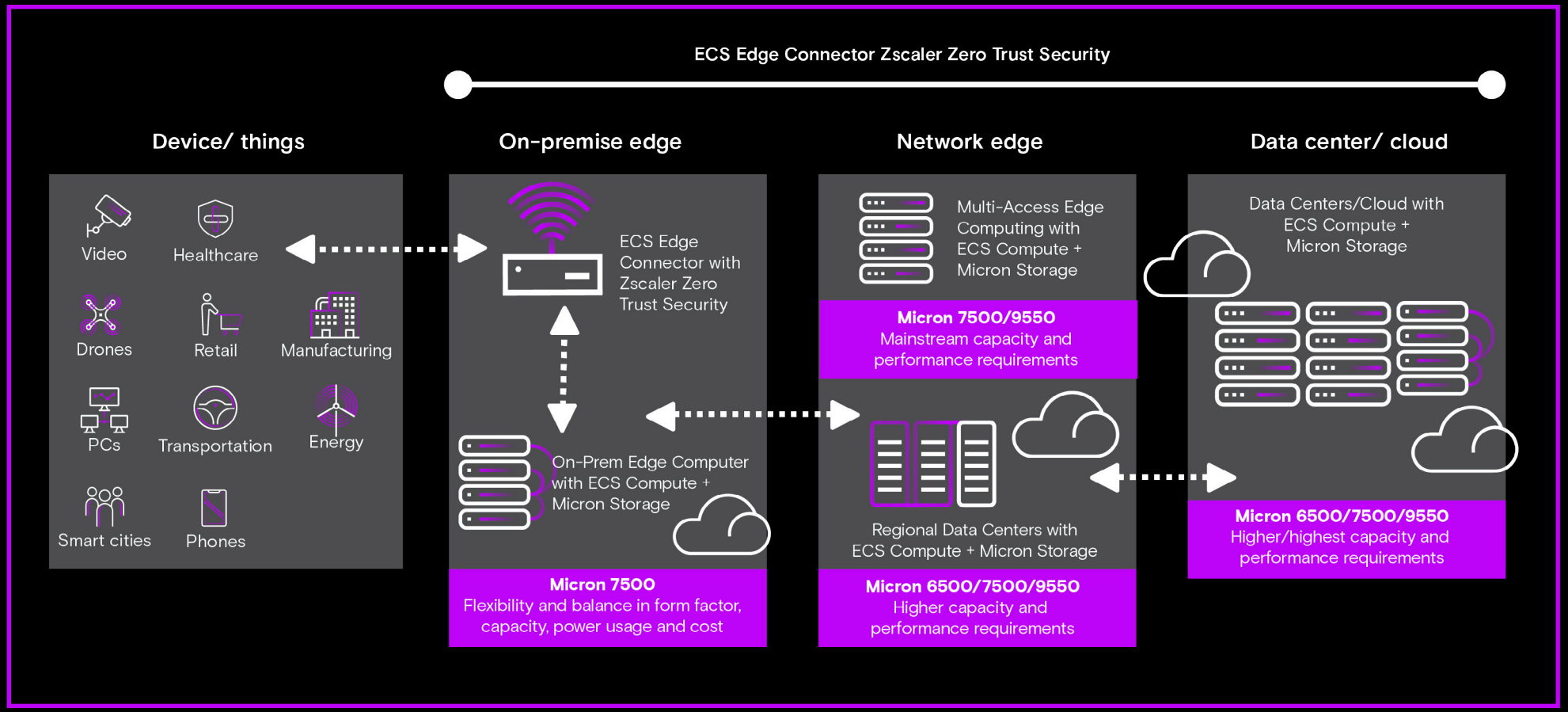
In this document, we highlight the memory, storage, and connectors that are optimized for cloud-to-edge strategies so you can get the most from your system.

Making an impact on AI at the edge

In the race to grow business with AI, reducing latency can result in better customer experiences, safer work environments, less downtime, and real-time insights.

Moving inferencing and model retraining/tuning to edge servers allows businesses to harness the power of AI in real-time at the epicenter of data creation.

Cloud-to-edge ecosystem



Edge-to-cloud overview

Solve challenges around cloud and edge data transfers

When it comes to edge-to-cloud systems, being strategic about data transfers can make a world of difference. Rather than sending every piece of data you collect to the cloud, you can save on data transfer costs by processing much of the data at the edge. That way, you can benefit from real-time responses at the edge, while still achieving massive data processing in the cloud.

Edge: Fast & efficient

Move AI workloads to near-and far-edge servers when you need real-time responsiveness for on-premises applications.

At the edge, you benefit from:

- Lower latency
- Lower power consumption
- Reduced data transport costs

Examples of edge AI workloads include:

- Real-time inferencing
- Data aggregation and preprocessing
- NLP and computer vision
- Edge AI training and tuning

Cloud: Massive & powerful

Move AI workloads to the cloud when you need powerful computing capabilities for data processing and model training.

Benefits of cloud computing include:

- Extreme performance for the most demanding AI workloads
- Scalable enterprise solutions
- Massive capacity for AI data lakes

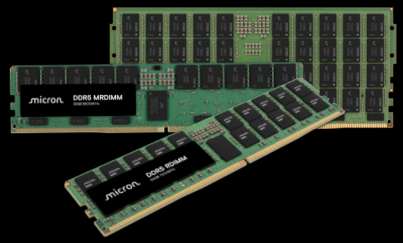
The cloud is ideal for workloads like:

- AI model training
- Data aggregation and preprocessing
- High-performance computing
- Storing data lakes

Micron products

Memory and storage for cloud-to-edge strategies

Micron technology is proven to make servers more powerful and energy efficient for a wide range of workloads



Next-gen Micron® DDR5 Server DRAM

Fast, efficient memory, plus significant energy savings

Edge

- Real-time AI inferencing
- IoT and smart devices
- AR and VR

Cloud

- AI model training
- High-performance computing
- Storing data lakes

Learn more

High-performance Micron® 9550 NVMe™ SSD

Extreme performance for the most demanding workloads

Edge

- Real-time inferencing
- Data aggregation and preprocessing
- NLP and computer vision

Cloud

- AI model training
- High-performance computing
- Graph Neural Network (GNN) training

Learn more

Mainstream Micron® 7500 NVMe™ SSD

Secure, powerful storage for mainstream applications

Edge

- Edge AI training
- IoT data management
- NLP

Cloud

- Cloud storage
- Big data
- High-volume OLTP

Learn more

High-capacity Micron® 6500 ION NVMe™ SSD

Massive storage to unleash the potential of huge data lakes

Edge

- Model storage
- Content delivery
- Data aggregation and analytics

Cloud

- AI data lakes
- Big data
- Cloud infrastructure

Learn more

ECS products

Choose an edge connector at the forefront of 5G and cybersecurity

The ECS Secure Edge Connector is a state-of-the-art solution designed to meet the demanding 5G connectivity and cybersecurity needs of modern data centers. By leveraging private 5G networks, it ensures robust performance and security, essential for managing vast amounts of data efficiently and securely.

ECS 4 Core Edge Connector

ECS 8 Core Edge Connector

Features

- Intel® Atom C3558 Processor: Delivers high performance and reliability for intensive data center operations.
- Zscaler Zero-Trust Exchange Platform: Secure, zero-trust environment protects data and infrastructure from cyber threats.
- Options for 4 or 8 Core CPUs: Balances cost and performance to meet broad data center demands.

Benefits

- Enhanced connectivity: Seamless 5G connectivity, supporting high-speed data transfer and real-time processing, crucial for data center operations.
- Improved cybersecurity: Integrated Zscaler Zero Trust Exchange, offers robust protection against cyber threats, ensuring data integrity and security.
- Scalability: Flexible core options for scalable deployment, catering to the high growth needs of data centers.
- Efficiency: Optimizes network performance, reducing latency and improving overall data handling efficiency compared to standard networks.
- Cost savings: Enhanced security and connectivity reduce downtime and associated costs, increasing operational efficiency.

ECS Secure Edge Connector

Applications

- High-speed data transfer: Supports rapid data movement and processing, critical for data-intensive tasks.
- Secure data management: Ensures data is securely stored and transmitted, protecting against breaches.
- Efficient resource utilization: Enhances the efficiency of re-source allocation and utilization within the data center.
- Reliable network performance: Maintains consistent and reliable network performance, essential for uninterrupted operations.

Use cases

- Optimized cloud access: Ensure faster and more reliable transfers between on-premises resources and cloud services.
- Edge-to-cloud integration: Integrate edge computing nodes with cloud resources, allowing for efficient data processing and management across distributed environments.
- Edge computing: Enable edge computing for applications like AI-driven analytics, content delivery, and real-time data processing.
- AI and machine learning: Process large datasets in real-time to improve decision-making and operational efficiency.

The cloud-to-edge race starts now

To get the most from your cloud-to-edge strategy, ensure that all your components are working together in tandem. By right-sizing memory, storage, and data connections, you can streamline your workloads with smooth, fast data processing, all while reducing energy consumption.

If you're considering this type of approach, there's no time to wait. Edge devices are being deployed rapidly as businesses seek new and innovative ways to make the most of their data. Effective cloud-to-edge systems can be the difference that will drive success, especially in high-stakes areas such as AI.

About Micron

Micron's experts work closely with customers at engineering sites across the country to streamline processes and reduce the load on your engineering teams.

We rigorously test server architecture for purpose-built solutions that keep GPUs running smoothly while reducing power consumption and improving overall efficiency.

Wherever you are in your cloud-to-edge journey, you're surrounded by potential insights. Micron can help you implement strategies so you can tap into those insights as quickly and efficiently as possible.

Learn more at micronpg.com/edgeAI

About Equus

ECS designs, builds and deploys the digital infrastructure that keeps companies relevant, viable and growing. From individualized computing, data center infrastructure and liquid cooling to AI enablement, telecom systems and 5G management, our customer-first approach delivers solutions that form, fit, and function seamlessly.

https://www.equuscs.com/ecs-edge-connector-solutions/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