MICRON®

Are you harnessing data at the edge?

5G-connected devices and the intelligent edge are transforming where and how much data is created, processed and turned into insights.

How much data is being created?

79 zettabytes of data were generated in 2021.[1]

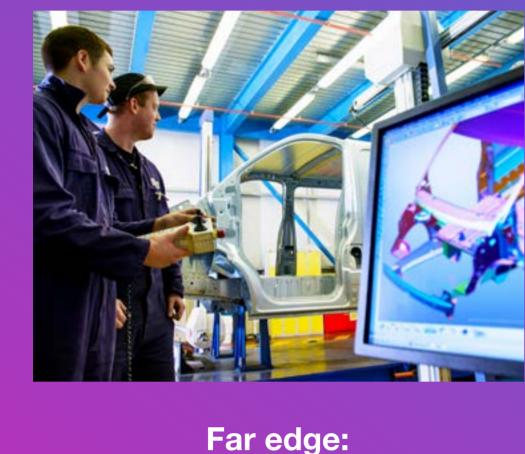|	
Byte	= 8 Bits
Kilobyte	= 1,000 Bytes
Megabyte	= 1,000,000 Bytes
Gigabyte	= 1,000,000,000 Bytes
Terabyte	= 1,000,000,000,000 Bytes
Petabyte	= 1,000,000,000,000,000 Bytes
Exabyte	= 1,000,000,000,000,000,000 Bytes
Zettabyte	= 1,000,000,000,000,000,000,000 Bytes

By 2025, **75% of data** will be generated and processed outside data centers.[2]

What is the edge?

The "edge" is the location where data is created, stored, exchanged and consumed.[3]

Far edge:
Resides at on-premise servers or on user devices[4]

Distributed edge cloud:
Resides at the content delivery network, network access point and data center colocation level[5]

Data centers at the edge

Compute resources are no longer bound to the cloud or centralized data centers. They've moved to the edge, causing a substantial shift in IT infrastructure and workload orchestration. Why? **Quickly processing data as close as possible to where it's generated unlocks its true value and competitive advantage.**

The benefits of edge intelligence:[6]
- Reduce latency
- Increase application performance
- Lower transport costs
- Improve regional data processing
- Satisfy data locality regulations

>1/3 (38.3%) of IT and business decision makers use edge computing infrastructure.[7]

Data center operators who move to meet new customer demands at the edge can avoid the challenges traditionally associated with building large-scale data centers in city centers, such as high costs and difficult logistics.[8]

Are your memory and storage solutions ready for the edge?

Turn torrents of 5G and edge data into valuable, actionable intelligence that drives smart business decisions. **Micron's innovative cloud-to-edge portfolio gives data centers an edge with low latency, high bandwidth and massive capacity.**
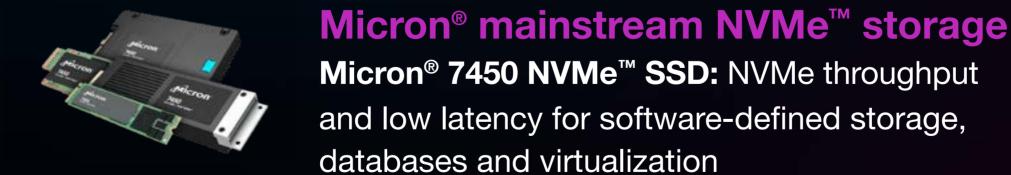
- Set new standards for data center storage and memory performance
- Achieve maximum scalability of edge infrastructure
- Accelerate business-critical applications while maximizing IT budgets
- Make deployments faster and more efficient

Meet Micron's broad portfolio for edge data center infrastructure:

Micron® performance NVMe™ storage
Micron® 9400 NVMe™ SSD: Outperforms competitors by up to 2.3x in mixed workloads[9,10]

Micron® mainstream NVMe™ storage
Micron® 7450 NVMe™ SSD: NVMe throughput and low latency for software-defined storage, databases and virtualization

Micron® Server DRAM

Micron® DDR5 Server DRAM

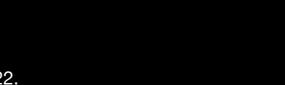**Micron® DDR4 Server DRAM**

Move your workloads to where data is created. Then go where the data takes you.

[Learn more]

MICRON®

Sources

1. Big Data Statistics 2022: Facts, Market Size & Industry Growth, Earthweb, updated December, 2022.

2. Analyst reports, Greylock, Bain analyses, Iit search.

3. Why You Need to Accelerate Your Business with Cloud, Cologix, October 2022.

4. 451 Research, part of S&P Global Market Intelligence, "Distributed Edge Clouds: Building a Cloud-Neutral Enterprise Edge. Craig Matsumoto, Senior Analyst, Datacenter Networking," August 2022.

5. 51 Research, part of S&P Global Market Intelligence, "Distributed Edge Clouds: Building a Cloud-Neutral Enterprise Edge. Craig Matsumoto, Senior Analyst, Datacenter Networking," August 2022.

6. 451 Research, part of S&P Global Market Intelligence, "Distributed Edge Clouds: Building a Cloud-Neutral Enterprise Edge. Craig Matsumoto, Senior Analyst, Datacenter Networking," August 2022.

7. 451 Research, part of S&P Global Market Intelligence, "Charts & Figures, Use Cases 2022: Edge Infrastructure & Services," August 2022.

8. Why You Need to Accelerate Your Business with Cloud, Cologix, October 2022.

9. Comparisons are made based on other leading PCIe Gen4 Data Center U.2/U.3 NVMe SSDs based on data center market share as noted in the Forward Insights SSD Supplier Status Q2/22 report and available data. 1GB = 1 billion bytes, formatted capacity is less.

10. Performance measured using 7.68TB SSDs at queue depth (QD) = 256 with FIO (additional details on FIO are available here: https://fio.readthedocs.io/en/latest/).