Lenovo EPC300

Smart, automated Internet of Things (IoT) applications streamline your industrial operations. They speed up production and help you trim costs. Sometimes, they even make the impossible possible.

Rapidly roll out your own smart IoT applications with a Lenovo EPC300 edge computing infrastructure.

MORE POWER, BETTER PRICE
The EPC300 has the power to handle all your real-time data aggregation and processing with higher-performance CPUs than the competition—yet at a better price—so you can confidently scale your IoT environment as your business grows. The EPC300 even doubles as an IoT gateway, with cost-effective, diverse wired and wireless connections built right in.

BANDWIDTH AND STORAGE SAVINGS
Use the Lenovo EPC300 to aggregate and analyze real-time data from your distributed IoT devices. It’s able to filter and forward only relevant IoT data across the WAN to the cloud or your data center. That adds up to big savings for you in network bandwidth and northbound storage costs.

BUILT-IN RELIABILITY AND VERSATILITY
True to the Lenovo brand, the fanless EPC300 is rugged, built to withstand industrial environments from 0° to 50°C. Flexible mounting options paired with real-world digital I/O connectors allow you to install the EPC300 just about anywhere.
POWER AND RELIABILITY AT THE EDGE

The latest Intel® 8th WHL-U processing platform combines with up to 256GB of SSD storage, up to 1TB of HDD storage, and native digital I/O connections to create a robust IoT edge infrastructure. The EPC300 will keep pace with your real-time Smart Edge applications, whether they’re improving efficiencies for you on a factory floor, in a warehouse, in a smart building, or in any other industrial environment.

STAYING SECURE

Lenovo helps you reduce the risk of IoT devices becoming unwanted entry points into your network. You can partition the EPC300’s dual Ethernet ports, using one for local communications and one for the WAN, to block intrusions originating at remote IoT devices.

RICH COMMUNICATIONS

Your EPC300 can communicate with local and remote IoT devices, management systems, the cloud, and your own or third-party data centers over wired and wireless Internet connections. The EPC300 can serve as an IoT gateway, connecting devices supporting dissimilar communications protocols across a network connection.

MANAGEABILITY

The EPC300 is compatible with the Microsoft® Azure IoT Edge and Amazon Web Services (AWS) IoT Greengrass platforms. It’s able to locally process data generated by Azure and AWS cloud services, while still using the cloud for management, analytics, and longer-term storage.

EPC300 Edge Gateway

RECOMMENDED USE CASES

smart manufacturing: factory floor
• Rugged PC with customized I/O for machine connectivity
• Barcode scanning
• Interactive display
• Quality verification from camera vision
• Edge reporting

smart retailing: warehousing and vending
• Rugged PC with customized I/O for machine connectivity
• CAN-Bus connected manufacturing OT to IT convergence
• Conduct transactions over secure wireless
• Embedded motion sensors
• Camera vision and analytics
• Trigger automated alert or action based on machine status
• Workload consolidation in retail and containerized “Back of Store” virtualization

smart buildings: facilities
• Local data collection from motion sensors, clocks, surveillance cameras, and other machines
• Trigger lighting systems, thermostats, HVACs, sprinklers, alarms, and other systems to take automated action, depending on whether people are present, time of day, temperature, humidity, smoke levels, and other variables
**Surface Area of a Cylinder**

A cylinder is a three-dimensional geometric shape with two parallel circular bases connected by a curved surface. The area of a cylinder can be calculated using the formula:

\[ A = 2\pi rh + 2\pi r^2 \]

where:
- \( A \) is the total surface area of the cylinder,
- \( r \) is the radius of the base circle,
- \( h \) is the height of the cylinder,
- \( \pi \) (pi) is a mathematical constant approximately equal to 3.14159.

1. Calculate the area of the two circular bases:
   \[ 2\pi r^2 \]

2. Calculate the area of the curved surface:
   \[ 2\pi rh \]

3. Add the areas from steps 1 and 2 to get the total surface area:
   \[ A = 2\pi r^2 + 2\pi rh \]

This formula can be applied to finding the surface area of a cylinder with any given radius and height.