

Logistics

# Keeping parcels moving using AI

## Peak Analytics

Lenovo edge computing solutions, powered by NVIDIA® A2 Tensor Core GPUs and customized by the Lenovo OEM Solutions team, enable Peak Analytics to bring AI-powered image recognition direct to the warehouse floor, ensuring better quality control processes and an improved customer experience.

Lenovo  
AI



Lenovo

Powered by



1

## Who is Peak Analytics?

Founded in 2013, Peak Analytics (formerly Siena Analytics) is on a mission to transform the logistics and support chain industries by helping businesses harness the full potential of artificial intelligence (AI), including the up-front identification of damaged or mislabeled packages to save time and resources.

Peak Analytics is owned by Peak Technologies, which serves over 13,000 customers, including some of the leading players in the supply chain, warehouse, and logistics sectors in Europe and North America.



2

## The Challenge

For many years, supply chain and logistics companies have planned their operations by calculating volumes, throughputs, and other key metrics using median and historical data—an approach that is time-consuming and limits visibility.

Peak Analytics is revolutionizing the supply chain industry with a powerful AI and image recognition solution for high-volume logistics. By utilizing sensors placed at the edge within warehouses, the solution delivers real-time data about the condition of every parcel, allowing companies to identify problem inventory at the source.

Until recently, Peak Analytics had used an industrial product as the hardware component of its appliance. To take the solution to the next level, the company recognized the need for a rugged server-class edge device.

John Dwinell, Founder of Peak Analytics, elaborates: “We needed an edge device that could deliver the powerful compute and graphics processing power needed for AI, while being able to withstand the harsh environmental conditions of the distribution center floor.”



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“AI offers a whole new world of possibilities for logistics companies to evaluate, enhance, and improve their business. We’re here to help them get the most out of this technology so they can stay competitive, improve customer service, and reduce cost.”

**John Dwinell**

Founder, Peak Analytics

# Designing first-of-a-kind solutions

After evaluating the edge computing solutions available on the market, Peak Analytics decided that Lenovo ThinkSystem SE350 was the right fit.

“Lenovo’s edge computing offering truly stood apart from the competition,” comments Dwinell. “No other vendor we evaluated could deliver the right combination of resilience and processing power.”

Featuring powerful NVIDIA® A2 Tensor Core GPUs in a rugged, compact design, the Lenovo ThinkSystem SE350 is the ideal solution for AI deployments, offering extremely high performance in a small package. A 1U-high, half-width, and short-depth case mean the ThinkSystem SE350 can be installed anywhere, and it is able to withstand temperatures between 0 and 55 degrees Celsius, as well as dust and vibrations from heavy machinery.

## Hardware

Lenovo ThinkSystem SE350  
powered by NVIDIA® A2 Tensor  
Core GPUs  
Lenovo OEM custom-designed  
front security bezel

## Software

Red Hat Enterprise Linux

## Services

Lenovo factory integration  
services to load custom software

Engineers from the Lenovo OEM Solutions team designed and are delivering a custom security bezel per the requirements of Peak Analytics to accommodate its specific connectivity needs while retaining the dust-filtering function of the standard ThinkSystem SE350 bezel.

Peak Analytics worked closely with teams from Lenovo, NVIDIA, Red Hat, and Intel to finetune the solution design and custom-build components by Lenovo's OEM Solutions team to meet the specific needs of AI at the edge. "We are grateful to Lenovo for handling the liaison with all the partners so well," recalls Dwinell. "In particular, they did a lot of work with NVIDIA to secure the latest-generation GPUs to give us the level of performance we needed."

Today, Lenovo ThinkSystem SE350 edge servers form the basis of Peak Analytics' plug-and-play Package Intelligence appliance for AI at the edge. The OEM-customized edge servers are loaded with Peak Analytics software before being shipped out to customers and installed directly on various scan points in their distribution centers.





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“Lenovo has a strong partnership with industry leaders such as NVIDIA, Red Hat, and Intel. Knowing that Lenovo could bring these partners onboard to help us build a powerful edge solution was a huge plus for us.”

**John Dwinell**

Founder, Peak Analytics

3

## Results

With Lenovo and NVIDIA technology underpinning its Package Intelligence solution, Peak Analytics can provide suppliers, manufacturers, and logistics companies with game-changing visibility into their operations in real time.

“Our solution enables customers to see everything moving through their distribution center,” says Dwinell. “They can share package images upstream and downstream for traceability and quality assurance, and search by barcode, tunnel, facility, and time period.”

Every day, Peak Analytics scans over 50 million packages—a number that is expected to increase as the company expands. The solution delivers real-time, six-sided package images and dimension data, enabling customers to automate and accelerate quality control.



50+ million packages scanned daily

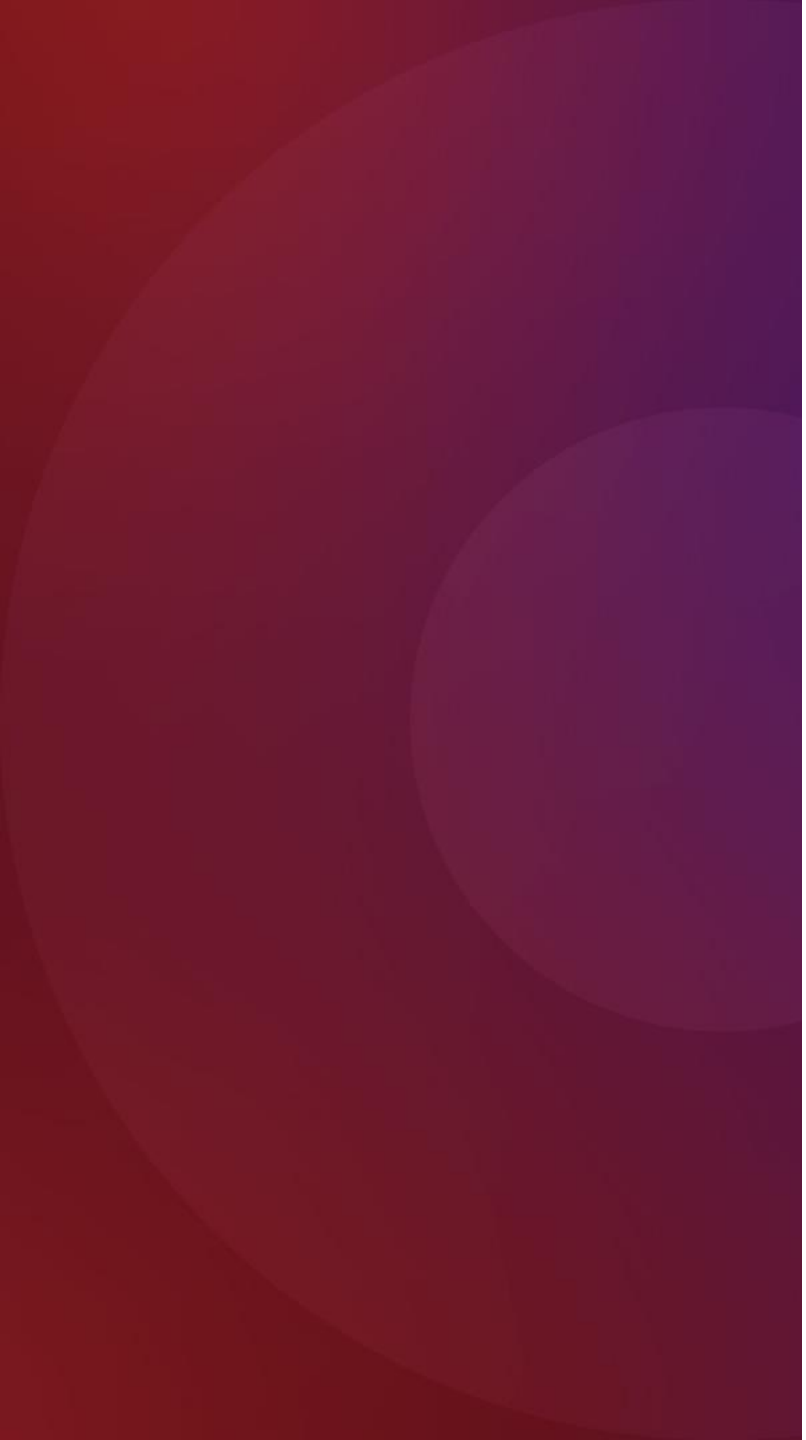


1,000+ edge appliances shipped to customers



200+ installations of Peak Analytics to date





“Humans are not well suited to repetitive manual package inspections; we inevitably make mistakes and miss things,” says Dwinell. “AI-enabled image recognition technology can scan every side of a package and make split-second decisions based on well-defined parameters. Lenovo edge computing enables us to bring revolutionary technology directly to our customers, so they can operate more effectively and profitably while also driving up customer service.

“So far, we’ve shipped more than 1,000 appliances based on the Lenovo ThinkSystem SE350, and installed them in customer sites in more than 200 different buildings—and that’s just the beginning. We’re already working with some of the biggest names in logistics, including leading retail and delivery companies, and we expect our customer base to grow in the years ahead. With Lenovo by our side, we’re well placed to scale to meet this rising demand.”

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**“Working with Lenovo’s OEM Solutions team, we can offer an end-to-end, plug-and-play edge solution that empowers our customers to realize the full potential of AI.”**

**John Dwinell**

Founder, Peak Analytics

# Why **Lenovo**?

With plans to expand its operations globally in the coming years, Peak Analytics was eager to work with a partner with a truly international reach, as well as long experience in edge computing and AI.

“One of the key reasons we partnered with Lenovo was because they are a widely respected company in the technology world, with a long track-record of successful edge computing deployments,” comments Dwinell. “And it soon became clear why. The Lenovo team really understood the challenges of installing hardware in harsh factory and warehouse environments, they were transparent about the process every step of the way, and liaised closely with stakeholders from NVIDIA to design us a solution that met our needs.”



# How do you keep goods moving rapidly through complex global supply chains?

Bringing AI-powered image recognition to the warehouse floor with Lenovo edge computing and NVIDIA® GPUs.

[Explore Lenovo Edge Computing Solutions](#)

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