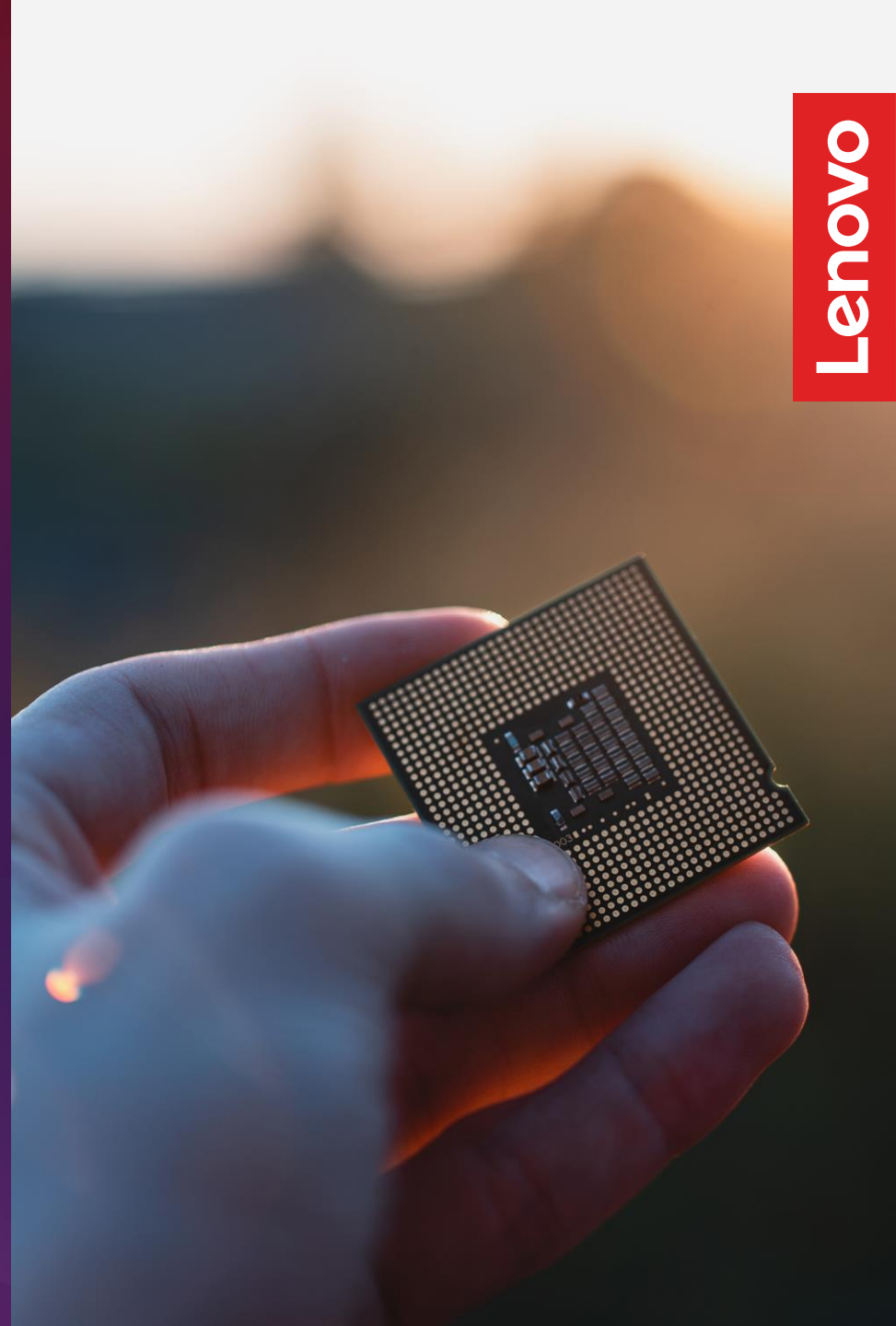
Manufacturing | South Korea

Ramping up production of sought-after semiconductors

ASICLAND

By moving manufacturing and R&D simulation workloads to Lenovo ThinkSystem servers powered by 4th Gen Intel® Xeon® Scalable processors, ASICLAND can keep production on track to meet soaring demand for semiconductors.



1 Customer background

Who is ASICLAND?

ASICLAND is a leading application-specific semiconductor (ASIC) manufacturer based in Suwon, South Korea. The company offers ASIC design services and system-on-chip (SoC) product development, integrating essential design elements across the value chain, including IP development, wafer manufacturing, and assembly.

ASICLAND is the only Taiwan Semiconductor Manufacturing Company (TSMC) Value Chain Alliance company in Korea. It collaborates closely with TSMC to provide independent design services that transform innovation into real products. As an ARM Approved Design Partner, ASICLAND also supports ARM-based solutions.

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2 The challenge

With the rapid rise of AI, Internet of Things, and 5G technologies in recent years, global demand for semiconductors is booming. This puts huge pressure on manufacturers such as ASICLAND. The company must keep its production processes running like clockwork to meet sky-high demand for its solutions.

ASICLAND makes extensive use of manufacturing and R&D simulations to reduce the time and cost of physically testing production systems. These simulations allow teams to test many different scenarios before coordinating resources and starting production, helping to avoid issues during manufacturing, meet targets, and reduce waste.

2 The challenge

So, when ASICLAND began to experience issues with the servers running these mission-critical manufacturing simulations, something had to give. Dahyeon Jung, IT Team Leader at ASICLAND, recalls: “System failures often interrupted workflows, and would sometimes take up to a week to resolve.”

> **“The system failures themselves were frustrating, but so too was the response from our previous server vendor. Delivery of spare parts was slow, and there were several instances when the vendor could not meet the requirements of our R&D teams.”**

Dahyeon Jung
IT Team Leader, ASICLAND

3 The solution

High-performance, reliable hardware

ASICLAND refreshed its R&D server infrastructure with 75 Lenovo ThinkSystem servers, including next-generation Lenovo ThinkSystem SR850 V3 and SR650 V3 servers powered by 4th Gen Intel® Xeon® Scalable processors, with the most built-in accelerators of any CPU on the market.

Deployed as bare-metal servers, ASICLAND uses the new infrastructure to run manufacturing simulations, R&D simulations, testing, and CRM operations. The IT team uses Lenovo XClarity for systems management, enabling centralized monitoring, management, and resource provisioning.

Hardware

Lenovo ThinkSystem SR850 V2 and V3 servers
Lenovo ThinkSystem SR650 V2 and V3 servers
3rd and 4th Gen Intel® Xeon® Scalable processors

Software

Lenovo XClarity
Red Hat Enterprise Linux

Services

Lenovo Warranty Upgrade

“Lenovo XClarity is a **great tool for integrated infrastructure management and monitoring**, which is helpful for a large-scale environment like ours.”

Mingoo Kang

IT Team Leader, ASICLAND

4 The results

Since migrating its manufacturing and R&D simulation workloads to Lenovo ThinkSystem servers, ASICLAND has seen a significant improvement in reliability and uptime, helping to keep operations running smoothly—and sought-after semiconductors rolling off the production line.

“System failures are a thing of the past,” confirms Dahyeon Jung. “On the rare occasion we do experience a technical issue, we always get a rapid response from Lenovo and spare parts are delivered quickly. The R&D department is very satisfied.”

- **50% faster response times**
- **40% improvement in user productivity**
- **30% lower IT maintenance costs**

[1] Data provided by ASICLAND

“The reliability, performance, and cost-efficiency of Lenovo ThinkSystem technology is excellent, with **much lower failure rates** than our previous servers.”

SeokJu Lee

Vice President, ASICLAND

Why Lenovo?

ASICLAND evaluated offerings from several technology providers, including its incumbent server vendor. Lenovo came out top in terms of reliability, performance, price, and delivery time.

Lenovo's broad portfolio of Intel-based infrastructure solutions was another key differentiator. "We follow TSMC standards for infrastructure and exclusively use Intel Xeon Scalable processors," says Dahyeon Jung. "Adherence to Intel's CPU roadmap is very important to us, so Lenovo's strong partnership with Intel was a key consideration."

How do manufacturers keep production lines running reliably?

ASICLAND runs mission-critical manufacturing and R&D simulations on Intel®-based Lenovo ThinkSystem servers to help keep production on track.

Explore Lenovo ThinkSystem Solutions