New Smart Factory Streamlines Production for World-Class Food Manufacturer

Allied Telesis supports S&B Foods with an automated smart factory network and complete operational visibility.

Customer: S&B Foods Inc.

Industry: Manufacturing
Location: Tokyo, Japan
Website: www.sbfoods.co.jp

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> Smart factories need smart devices, and device reliability is critical. We are very impressed with Allied Telesis products and solutions, particularly AMF-enabled swift failure recovery, and the network visibility provided by Vista Manager EX.
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> **Mr. Masanori Kobayashi**
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> *Unit Manager, Development and Manufacturing Group, S&B Foods Inc.*

The customer

When most people think about Japanese cuisine, the first food that comes to mind is usually sushi, or perhaps sashimi. It probably isn't curry—but actually, curry is so popular in Japan that it's practically the "national food". This is due in no small part to S&B Foods Inc. (S&B Foods). Founded in 1923 and now well-known in both Japan and around the world, S&B Foods was the first company in Japan (and globally) to successfully manufacture Japanese-style curry powder. For almost a century since, this pioneering company has provided the world with a diverse range of products, including not just curry but all sorts of spices and herbs.

Harnessing the power of IoT to support new smart factories

Like most large manufacturing companies, S&B Foods knows the importance of keeping up with network technology advances and trends. The Internet of Things (IoT) technology revolution is of particular importance to manufacturing because it brings actionable intelligence to the factory floor. With a view towards 2023—the 100th anniversary of its founding—S&B Foods made plans to embrace IoT. To enhance safety and security, update production systems and improve manufacturing efficiency, the company would build new smart manufacturing facilities and equip its existing buildings with the very latest in cutting-edge IoT devices and systems.

The first step in this process? Establishing a smart factory at the company's brand-new plant, which was being built in Ueda, Nagano. "The new Ueda Factory is the beginning of our journey towards total smart factory operation. We decided to introduce IoT technologies at Ueda first, and then gradually roll this model out to all the other factories too," says Mr. Masanori Kobayashi, Unit Manager of the Manufacturing System Development Unit at S&B Foods.

Why Allied Telesis?

Selecting a company to provide the right products and solutions was easy, once S&B Foods saw what Allied Telesis had to offer. Allied Telesis works closely with the manufacturing sector, building state-of-the-art solutions that leverage IoT technologies and provide real-time operational analysis to streamline manufacturing. S&B Foods chose numerous Allied Telesis smart technologies that work together seamlessly as an integrated smart solution, including Allied Telesis Autonomous Management Framework™ (AMF), Autonomous Wave Control Channel Blanket (AWC-CB), AMF Security (AMF-Sec), AT-Vista Manager EX, and Net.Monitor.

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> **By 2021, 20% of the top manufacturers will depend on a secure backbone of embedded intelligence, using IoT, blockchain, and cognitive analysis, to automate large-scale processes and accelerate execution times by**
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> # up to 25%.
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> *Industry Week*

The ultimate goal: unmanned factories

S&B Foods already had a Manufacturing Execution System (MES) in each of its factories to track and document the journey from raw materials to finished products. While MES was helpful for manufacturing decisions, the existing networks weren't IoT-ready. Mr. Keigo Maruyama of the IT Planning & Promotion Unit at S&B Foods Inc. explains: "To enable IoT manufacturing devices and smart factories moving forward, we needed secure intelligent networks for easy management and control."

Adds Mr. Satoshi Yoshiuda of the IT Planning & Promotion Unit at S&B Foods: "The new networks needed top notch automation. Because we are based in Tokyo, remote visibility, speedy isolation and zero-touch recovery from failure are incredibly important."

To build truly smart factories, S&B Foods needed a totally different kind of network from those it had used in the past. "Our ultimate production goal is to create completely unmanned factories. An essential step towards achieving this is to connect all of our production equipment via the network," says Mr. Kobayashi.

An automated Allied Telesis manufacturing solution

The introduction of the brand-new Ueda network was perfectly timed to coincide with the building's completion. All switches and routers on the new network are centrally controlled with AMF, which provides simple network management and automation to allow plug-and-play networking with zero-touch recovery. AWC-CB enables efficient manufacturing and smooth product distribution by ensuring seamless wireless connectivity for all production lines and right across the whole factory. The entire wireless network acts as a single virtual AP, eliminating any unstable connections or poor performance and providing hand-held manufacturing devices and production terminals with flawless service.

Complementing AMF and AWC-CB, Vista Manager EX provides a complete view of the entire wired and wireless network, with powerful features like traffic monitoring, and wireless floor and heat-maps to visually monitor AP operation and performance. Easy graphical management reduces the burden of network administration for IT staff and lowers S&B Foods' ongoing operating costs.

"Smart factories need smart devices, and device reliability is critical. We are very impressed with Allied Telesis products and solutions, particularly AMF-enabled swift failure recovery, and the network visibility provided by Vista Manager EX" says Mr. Kobayashi.

Allied Telesis AMF-Sec gives S&B Foods the ultimate in integrated security. This state-of-the-art solution features an intelligent SDN controller that works with security devices to instantly respond to any malware alerts, and automatically block the movement of threats by quarantining suspect devices.

Finally, S&B Foods chose Net.Monitor to employ Allied Telesis knowledge and experience to support their smart factory with ongoing remote monitoring services. The factory team have peace of mind knowing that expert help to resolve any problems is always right at hand.

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> Introducing AMF, AWC-CB, and Vista Manager EX has allowed us total visibility of network traffic, operation and performance. This real-time visibility into factory processes means we can maintain high levels of production efficiency.
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> **Mr. Keigo Maruyama**
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> *IT Planning & Promotion Unit, S&B Foods Inc.*

Real-time data enhances factory operation

The new Allied Telesis network solution has created the truly smart factory that S&B Foods had envisaged, with automation features that ensure a secure and stable network with integrated management and zero-touch recovery in the event of any issues. "By connecting our production equipment to the new network, we have built a system that responds to the factory's operational status in real time, is intelligent, and so easy to manage," says Mr. Kobayashi.

Factory personnel, who use wireless tablet devices to interface with MES and other production devices, have reported zero issues with poor connectivity or delays. Mr. Yoshiuda says, "There have been no problems—AWC-CB on the factory floor works flawlessly." Meanwhile, AMF-Sec gives S&B Foods automatic protection against internal malware threats, and data-leakage prevention to boot.

Mr. Yoshiuda is also pleased to report that S&B Foods' Tokyo staff can now easily view the operational status of the Ueda Factory remotely with Vista Manager EX, as well as check production lines via video. "Installing multiple digital cameras around the factory for equipment status monitoring has allowed our remote personnel to quickly visualize the situation," he adds.

Looking to the future

"Thanks to Allied Telesis, we have complete visibility into the real-time operational status of the factory and its equipment, and we can now constantly improve our process agility with advanced data collection and analytics for efficient manufacturing. The Ueda Factory is our first step towards smart factory support nationwide," says Mr. Kobayashi.

As the company works to transform all of its production plants, Allied Telesis will continue to actively support S&B Foods by providing products, technologies, and support services—building smarter networks to support smarter factories.