



Smart Factory, Non-Stop Network: Hitachi Builds a High-Performing Factory Network in Thailand

Hitachi High-Technologies Corporation gets a reliable and high-performing solution featuring AMF and AWC for its brand new Smart Factory, in Thailand.

Customer

Hitachi High-Technologies Corporation

Location: Tokyo, Japan

Industry: Electronic Systems

www.hitachi-hightech.com/global

Established in 1947, Hitachi High-Technologies Corporation (HHTC) is a subsidiary company of the Hitachi group. HHTC have developed a brand-new business model called “Smart Factory”, in which multiple Japanese-owned small and medium-sized enterprises (SMEs) share a factory overseas. HHTC launched Smart Factory as a Service (SFaaS) in 2018, utilizing its abundant experience of both overseas manufacturing, and advanced IT and Internet of Things (IoT) technologies.

The Smart Factory concept enables Japanese companies—without the local resources or the necessary know-how—to successfully do business abroad. Each SME manufactures its own products using shared resources and smart technologies, and costs are kept low thanks to a small capital investment and shared ongoing costs.

Smart Factories allow Japanese SMEs to make use of Hitachi’s cutting-edge technologies. Production status is recorded via multiple cameras and sensors, and comprehensive real-time camera surveillance offers monitoring of the overseas factory in the Japanese office. Japanese staff can give factory staff real-time support and direction.

Challenge

The Smart Factory was set up in Bangkok, Thailand as a Proof of Concept (PoC) Field Trial Project. The PoC Field Trial Project aims to study the commercial feasibility of the shared factory business, and has been certified as a “Project for Nurturing New Industries in ASEAN and Japan by the Japan External Trade Organization (JETRO).” HHTC commenced the PoC Field Trial Project in October 2017.

The Smart Factory needed a network infrastructure that could support both wireless LAN for the camera surveillance system, and wired LAN for monitoring displays, cameras and other IoT devices. It had to be extremely reliable—providing non-stop production and monitoring—and very high-performing to support the numerous technologies required for a Smart Factory.

In addition, the entire wired and wireless network infrastructure had to have centralized management, to enable support staff to easily monitor the network, and manage the switches, firewalls, wireless Access Points (APs), cameras and other devices that make up this converged IT solution.

HHTC considered proposals from multiple vendors, and after careful consideration selected Allied Telesis products and solutions.

“ We selected Allied Telesis after comprehensively evaluating numerous vendors. Allied Telesis was the clear choice thanks to their proven product reliability, excellent cost-performance, cutting-edge features and superior customer support.

HHTC staff

Solution

Allied Telesis designed and implemented a brand-new network for the Smart Factory, with advanced switches and wireless APs for seamless connectivity, and a Unified Threat Management (UTM) firewall that enables secure Internet access, while protecting against cyber threats.

The new network features Allied Telesis Autonomous Management Framework™ (AMF) and Autonomous Wave Control (AWC), for centralized management and automation of their wired and wireless devices. Vista Manager EX provides single-pane-of-glass visibility and control for the new AMF and AWC network. Lastly, Net.AMF delivers network automation as a service—for reduced total cost of ownership, and improved performance, reliability and security.

AMF™

Featured products

AMF

AMF delivers real and immediate value to businesses by solving one of IT's most pressing needs. It provides a converged infrastructure, where all switches, routers and firewalls can be managed as a single entity, reducing complexity and TCO, and allowing more to be done with less. Powerful features—like auto-backup, auto-recovery, auto-provisioning and auto-upgrade, along with centralized management—enable plug-and-play network expansion and zero-touch recovery.

AWC_{control}

AWC

AWC is an advanced network technology that utilizes game theory to deliver significant improvements in wireless network connectivity and performance, while reducing deployment and operating costs. AWC addresses the complex and rapidly-evolving environment of the IoT world, by reducing the need for costly human involvement in the deployment and tuning of a wireless network

Net.AMF

By minimizing coverage gaps and reducing AP interference, AWC delivers a high-quality wireless experience that automatically reconfigures the network for maximum performance.

VISTA MANAGER™ EX

Net.AMF

Net.AMF leverages the capabilities of AMF for truly inclusive network automation. Allied Telesis professionals collect and analyze your network data, to highlight unusual trends and working conditions that could lead to future failures and/or security threats. When delivered as a managed cloud service, Net.AMF reduces a customer's infrastructure operating costs, as there is no dedicated hardware or dedicated staffing requirements. Cloud deployment is also eco-friendly, as it requires no rack space, cooling or power.



Vista Manager EX

Vista Manager EX ties a whole solution together with graphical monitoring and management of the entire wired and wireless AMF and AWC controlled network. This powerful central management system not only enables live reporting of network health, and visibility of all network devices, it also provides powerful tools like the traffic monitoring map, showing live and historical utilization of all links, which enables proactive network management.



x230 Series Layer 2 plus Gigabit Edge Switches

Maximum network performance for even the most demanding applications, the x230 family offers an impressive set of features in a compact design, ready for flexible deployment.

AR4050S UTM Firewalls

Powerful firewall and threat protection is combined with routing and switching to provide an innovative high-performance security solution. The addition of AWC Lite for autonomous wireless control creates the ideal security platform for today's SMB networks.



“ We highly recommend Allied Telesis products and service. AMF has greatly reduced the cost of switch installation and configuration, as well as ongoing maintenance. We also feel totally confident in the factory operation, because AWC will optimize the wireless LAN.

HHTC staff

TQ4600 Enterprise-Class Wireless Access Point

The Allied Telesis TQ4600 features an IEEE 802.11ac 3ss dual-band 2.4/5GHz radio and embedded antenna, capable of 1750Mbps raw wireless capacity.

Success

Highly-reliable products and solutions support the Smart Factory network infrastructure. The Smart Factory now enjoys a cutting-edge combination of the latest technologies providing non-stop access to all their online systems, along with simplified and automated network management. The Japan office enjoys seamless and secure network access to surveillance footage and monitoring data.

Together, Vista Manager EX, AMF and AWC have delivered a solution that has eased the burden of administration, and made up-to-the-minute network management information always available. This has reduced the time and cost of managing the new network.

The cost-effective new solution has met all of HHTC's requirements, and is prepared for the future adoption of any new technologies.

Allied Telesis continues to support the Smart Factory with cutting-edge service and support.

About Allied Telesis

For nearly 30 years, Allied Telesis has been delivering reliable, intelligent connectivity for everything from enterprise organizations to complex, critical infrastructure projects around the globe.

In a world moving toward Smart Cities and the Internet of Things, networks must evolve rapidly to meet new challenges. Allied Telesis smart technologies, such as Allied Telesis Autonomous Management Framework™ (AMF) and Enterprise SDN, ensure that network evolution can keep pace, and deliver efficient and secure solutions for people, organizations, and “things”—both now and into the future.

Allied Telesis is recognized for innovating the way in which services and applications are delivered and managed, resulting in increased value and lower operating costs.

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