## Case Study – Wireless Network Solution for Smart Factory



## Overview

Along with the worldwide trend of automation, many factories in China have been progressing towards automated and smart manufacturing. The worldly famous automotive brand, SAIC Volkswagen, is also upgrading its systems of the manufacturing plants in Shanghai, China.

Altai's distributor in China, Nodes, was approached by SAIC Volkswagen for a wireless solution suitable for manufacturing plant. Nodes has recommended the solution of Altai Super WiFi. With the patented smart antenna technology, Altai's base station can provide wireless coverage for a much larger area than any normal AP. Therefore, for the same area, the required number of devices would be much smaller with Altai's products.

For the situation of SAIC Volkswagen, the whole deployment requires a total of seven A8-Ein base stations only. In contrast, for the same area, Siemens needed to install more than 30 units of AP. Given SAIC Volkswagen's factory could only allow 4 hours per day for deployment, if Siemens' solution was selected, the deployment process will take at least 30 days. But with Altai's A8-Ein solution, the whole process has taken only 6 days. The quick deployment and professional manner have amazed the management of SAIC Volkswagen.

## Customer Name:

SAIC Volkswagen Nodes (Distributor)

## **Deployment Location:**

Shanghai, China

#### Application:

WiFi network for automotive manufacturing plant

#### Products used:

A8-Ein, AWMS

#### Result:

In such a complicated environment, the average signal strength is over -60dBm at 200m away from the base station.

A8-Ein is able to maximize signal strength and minimize interference and packet errors.

With the new wireless network, the realtime data is able to transfer from production line to the Control Room.



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# **The Challenge**

- Harsh environment
- Network reliability and redundancy
- Limited site for installation
- Full coverage for 80,000 square meter workshop



## The Solution

Seven A8-Ein's are mounted on the ceiling. AWMS is used for access and network management.

## The Result

The WiFi network is required to support the whole MES system in the manufacturing plant with high reliability and redundancy.

As a result, Altai's solution using 7 x A8-Eins has been chosen over Siemens one with 30+ AP for the same area of coverage, and the deployment process was quick and professional even the technical team was only allowed to work on the deployment max 4 hours per day. Using less devices has another advantage; it reduces the times of roaming handover, hence improves the stability of the terminal application.

Despite in such a harsh and complicated environment, Altai's A8 can still remain the average signal strength over -60dBm at 200m away from the base station.

With support of Altai's wireless network, production line and control room of SAIC Volkswagen have been connected, which helps improve the operational efficiency greatly.



## About Altai

Altai Technologies is a leading supplier of carrier-grade Wi-Fi products and technologies with a distribution network reaching 100 countries. Altai Super WiFi is the leading solution for vertical industrial markets, covering over 200 terminal ports and airports globally.

The Altai Super WiFi Solution includes a complete portfolio of indoor and outdoor products for carriers, WISPs, and enterprises to support a wide range of applications such as mobile data off load, public access, WLAN access, and backhaul.

Utilizing patented smart antenna technology, as well as a cloud-based management system called AltaiCare, the Altai Super WiFi Solution is designed from the ground up to deliver WiFi networks that have unprecedented performance, reliability, scalability, and manageability.

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