Elevator Wireless Monitoring in Fujian Province of China
Requirement Background

With the improvement of living standards, the importance of personal safety and the surrounding living environment are paid more and more attention, and the quality of property unit operation and supporting facilities is required to become increasingly high. But in recent years, with frequent elevator accidents such as trapped people and wounding occurred, the safety problem of elevator has become the focus of community and the media attention. The question that how to understand the fault information of the elevator at the first time (lift unit, floor, fault phenomenon etc.) plays a vital role in rescuing passengers in the elevator and elevator maintenance. From the national perspective, the degree of attention to elevator safety operation management and public security has increased year by year. It can be expected that mandatory standard of installing video surveillance in the national public places and property elevators is not a long period.

Requirement Analysis

Status quo of elevator monitoring

As the elevator is a moving object, the cable is easy to break. Traditional elevator video monitoring often uses the accompanying cable as the transmission channel, and uses the simulated and low resolution video camera which image quality is poor, the signal transmission attenuation is big and is easy to be affected by the electromagnetic interference. Due to the use of analog video, video content occupy a lot of space of hard disk storage, information is difficult to be searched and edited, system integration, scalability and compatibility are bad and construction wiring is difficult in well, so after a period of time, the elevator monitoring system has to be replaced, resulting in secondary construction, large amount of work, high cost, not easy maintenance and construction cycle is long.

Using the wireless transmission mode will not be limited by the factor of mobility, and is convenient to install and transport video easily, even if there is a barrier wall, within a short distance of the through wall can guarantee the stability bandwidth, simple installation, low cost and maintenance is simple too. At the same time, with the growing and changing requirements, devices connected by the elevator car and the dissemination of the contents are gradually increasing, the use of wireless devices can be very successful to meet the requirements of more and more extended functions.
System Topology

Installed a pair of wireless transmission equipment at the top of the elevator shaft and the top of the car, the wireless device at the top of the elevator is connected to the monitoring center through the wired network, and the video data transmission in the elevator can be easily transferred to the monitoring center.
Throughput

![HT 40 Throughput (Mbps)](chart)

Power consumption

![TB2 Power consumption](chart)
Application Case