

## DTV FHD Surveillance System in the Beautiful Minhu Elementary School

Site Name	Minhu Elementary School
Country/ City	Taipei, Taiwan
Industry	School
Solution	DTV FHD Digital Surveillance System
Solution Provider	A-Tec Subsystem Inc.
Reasons of Adoption	■ Retrofit without recabling ■ Full HD video quality



### CUSTOMER NEEDS AND PROBLEMS

More than a decade ago, Minhu Elementary School had installed a CCTV analog surveillance system. The coaxial cables that transmit analog feeds ran in conduits and was mostly embedded. Over time, the cables started aging, resulting in signal deterioration. The deterioration was so serious that nothing clear was shown on the monitor. Security became a challenge with such video quality. The school authorities thought replacing the surveillance system meant replacing the cables. Talking about replacing cables, there were concerns in addition to the cost and schedule. For example, the slabs that cover the cable conduits had to be removed, the construction work would definitely cause impacts to school activities, the children might wander into dangerous work areas, and so on. With these concerns, the school authorities were very hesitant about improving the surveillance video quality.

For traditional CCTV system, when the video becomes blurry, not only the equipment but also the cables have to be replaced. In this digital and high-definition era, if one chooses IP system to upgrade, it requires replacement of coaxial cables with network cables. It may also require additional router boxes, which means higher cost. If one chooses analog HD options available in recent years, such as AHD/TVI/CVI, it seems that the upgrade is immediate because it is claimed that cable replacement is not required. Considering the fundamental characteristics of analog transmissions, when the original cables still maintain a certain level of quality, one can indeed enjoy the upgrade. However, if we are talking about aged cables or the aging issue is not far away, the clarity of the videos can drop significantly. Since the cables in Minhu Elementary School is more than a decade old, analog HD solution may not be an option.

Fortunately, the school authorities approached A-Tec through a connection. A-Tec's security and surveillance solution had solved the problem which bothered the school for years.

## CUSTOMER BENEFITS

A-Tec conducted a campus survey and reached a preliminary conclusion: "Although the cables are old and aging, there are no cable cuts. The impedance matching in aging cables is an issue and it affects the video quality of analog systems seriously. However, since the DTV digital HD surveillance system uses 'digital' TV technology instead, there are still margins to transmit 1080P Full HD videos in the existing cables."

The work started in the afternoon of a Wednesday in March and took less than half a day to finish since only the cameras and video servers need to be replaced. With the old system, it was able to tell how many people came in and out at the main entrances and the lobby. Now with the 1080P DTV system, not only faces, but also the name and number on the children's shirts are clearly shown on screen. At some locations such as the lobby, wide-angle cameras are used and the angle of viewing is more than doubled as opposed to the old system, enabling much better control over the entire school lobby. In addition, thanks to DTV's "multi-channels over one coax" feature, it is easy to add cameras at places like less travelled campus corners, perimeter parapets, and garage, where there used to be no cameras. The installation of extra cameras required no additional cables at the server end, which saves time and money for the school. Amazed by the DTV HD system and what it can do after the installation was completed, the principal of Minhu Elementary School said, "the video is incredibly clear," "it took little time to finish the installation," "the video is as clear at night as in daytime." He went on presenting a citation to A-Tec recognizing its social responsibility of protecting campus as a good citizen.