

Woodlands Checkpoint

ST Elect supplies integrated security management system



The new Woodlands Checkpoint was built to accommodate the increasing traffic volume of vehicles and travellers crossing the causeway each day. Located just west of the existing Checkpoint, it has a total site area of 16 ha and consists of 5 clearance buildings linked together as a single mega structure.

Singapore Technologies Electronics (ST Elect) was contracted to supply and has successfully completed an advanced security system for the Singapore Immigration, Customs, Central Narcotics Bureau, Police and Land Transport Authority for this entire new Checkpoint. The system had to be designed to the extremely stringent security requirements of our clients. This included a sophisticated intrusion detection and alarm handling system, a highly secure access control system for maximum protection, and an extensive closed circuit television coverage for surveillance and monitoring. In addition, the system must have compatibility with the PS21 Smart Cards.

System Configuration

This security system consists of a control and monitoring centre together with many sub monitoring stations dedicated to the various departments. Over two hundred access control points and cameras were carefully located at the site to provide total closed circuit television security coverage and access control.

The security system was designed to be fully compatible with the latest Public Service PS21 smart cards, including the necessary security coding and encryption to provide a tamper proof security system. ST Elect's R&D team provided significant customization of the security system including using P521 Smartcards and linkage to Electronics Bulletin Boards.

Functional Performance Intrusion Detection System

Once armed, the Intrusion Detection System using motion detectors detects the unauthorized presence of intruders in the offices.

Alarm Handling System

The Alarm Handling System is responsible for monitoring, controlling and reporting of alarms from panic alarm buttons, door break-ins and other unauthorized intrusions. Detection of an alarm will trigger a series of alerts to the operator on duty and the graphics layout will indicate the location of the alarm, as well as display instructions for the operator to carry out.

Electronic Access Control System

Access to designated locations such as the control rooms and offices is controlled by card access readers. Using contactless smartcards, a cardholder is granted access to such locations based on security privileges assigned to him. The system is also integrated to the Fire Alarm System so that upon activation of a fire emergency, pre-designated fire escape doors will be automatically unlocked.

Closed Circuit Surveillance System (CCTV)

The CCTY system provides general surveillance of the open areas such as the car examination area, duty payment area, and car and bus lanes. It is integrated with the Intrusion Detection System such that upon detection of an alarm, the nearest camera will be activated to display the view of that location on the monitor in the control room.

ST Elect's Integrated Security Management System, which is already proven in many other high security installations such as prisons and banks, will undoubtedly, provide the necessary infrastructure to achieve an unprecedented level of security at the Woodlands Checkpoint.

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