



Hong Kong Science Park

The prestigious new Hong Kong Science Park (HKSP) has already established itself as a world-class location for product R&D, incubation and production activities for some of the world's leading organisations. The park provides the support services and infrastructure needed to facilitate the collaboration between industry and academic / research institutions elevating Hong Kong as a major centre of innovation and technology.

“Every aspect of the HKSP has innovation and forward thinking to the fore, making it no surprise that they have chosen CEM Systems as the premier supplier of access control for the 22 hectare campus”, says Andrew Fulton, Business Development Director at CEM. The CEM AC2000 Standard Edition (AC2000 SE) system is an ideal solution to control and monitor the movement of personnel within the park and secure sensitive areas within each of the facilities. The system was chosen due to the wealth of features it possesses and its virtually limitless expandability, allowing the HKSP to control access to each new facility as the park grows.

CASE SUMMARY

Location:

Hong Kong, China

System:**CEM:**

AC2000 SE (Standard Edition)

Nixon Technology Company Limited, the designated system integrator, installed the AC2000 SE system. Nixon is recognized as leaders in providing Ancillary Systems to the Building Services Industry in Hong Kong. With experience in commercial, industrial, residential and government sectors and through winning major contracts throughout Asia, Nixon could see the benefit of using the CE M AC2000 SE system for such a major, high profile site as the HKSP.

Access control solution...

The first of three phases within the park began construction in 2001, and consists of 9 buildings, with a total gross floor area of 120,000 mm² and an additional staff car parking facility. Each building is linked to the main access control system but is capable of operating independently. AC2000 SE allows each section to have control over their own access restrictions and transactions through the use of Local Database Computers (LDCs), whilst still remaining a part of the overall system. It is this modular architecture that allows the park to expand the system at any given time, simply by adding another LDC.

Linked to the LDCs are distributed controllers called S9020 Controllers. These controllers are intelligent, embedded, networked devices that simply hang on a LAN or WAN and support up to two multi-drop networks of card readers.

This simple plug and play capability combined with the individual onboard database gives an extra level of resilience that makes the S9020 Controller perfect for a multi-building access control system. These controllers are very low maintenance and extremely cost effective for both the installer and the end-user.

Access granted.... a smart option!

Each building in phase 1 contains an average of 100 card access points, including lift readers to control the movement of staff between floors, which will eventually bring the total number of card readers for the first phase to just under 1,000.

HKSP decided that they required a multifunction smart card based system and it was up to CEM to provide the solution. Using the intelligent S600 card reader, CEM integrated a Legic proximity smart card read head and keypad, allowing the cardholder to have a dual function card.

The outstanding feature of this S600 reader configuration is that it can operate even if communications are broken between the reader and the controller, allowing the system to function as normal with the readers' onboard database performing validation checks until communications with the controller is restored.

The HKSP security team are taking full advantage of the alarm monitoring functionality of AC2000 SE using the new CEM Input/Output controller (IOC). A wide variety of alarm points are monitored through the CEM system, namely door contacts, lifts, motion detectors and water/flood detectors to name a few.

Securing the site and monitoring alarm events is not left to chance with IOCs being used in every building, ultimately providing a conclusive alarm monitoring system.

Security is paramount on the science campus and it is the HKSP's responsibility to display this security to the number of high profile tenants. The park has designated security guards to patrol the park and respond to any

alarm event, which makes the 'Guard Tours' module within AC2000 SE an ideal management solution.

This module provides facilities to define a list of readers that guard(s) must visit in a certain order and swipe their card within a specified time. If the Guard does not swipe at a reader within the pre-defined tour time, an alarm message will be sent to the security manager/supervisor. This module is used very effectively and is another security function managed by the AC2000 SE system.

[A customised solution...](#)

CEM developed a number of customised software solutions specifically for the HKSP, highlighting the fact that CEM is an innovative supplier of access control systems with the ability to custom design a solution to meet a clients needs.

CEM developed an open database link to the IT infrastructure allowing the access control card to integrate with the park's clients IT systems. CEM also developed links to the centralised building management system in both serial modbus protocol and networked BACnet IP.

Innovation and technology are the mandates for the development of the Science Park, which is testament to CEM Systems' ability to provide such an innovative and technologically advanced access control system to secure this prestigious site within Hong Kong. CEM is proud to be part of the design that attracts enterprises and professionals from all over the world to work comfortably and securely in such a state of the art, environmentally friendly facility.

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Andrew Fulton

*Business Development Director,
CEM Systems*