



## Gatwick Airport

Handling over 34 million passengers per year travelling to around 200 destinations in 90 countries, Gatwick Airport is the UK's second largest airport.

CEM Systems airport specific access control solution, AC2000 Airport provides Gatwick Airport with a fully comprehensive security solution.

Gatwick Airport has been using the CEM AC2000 Airport system for more than 16 years, providing the airport with a flexible security solution to meet its unique and changing security needs and demands as the airport continues to grow.

## CASE SUMMARY

**Location:**

London UK

**Systems Installed:**

AC2000 Airport access control and security management system

AC2000 AED (Alarm Event Display)

AC2000 T&A (Time & Attendance)

AC2000 VIPPS (Visual Imaging Pass Production)

**Hardware Installed:**

1500+ S600 series readers

50+ S3030 portable readers

emerald intelligent access terminal

**Card holders:**

80,000+ card holders

## Introduction

Of the many global airports using the CEM AC2000 Airport system, Gatwick Airport more than most illustrates the systems comprehensive capabilities, resilience and true flexibility in its ability to be tailored to meet customer needs.

From its initial installation, CEM has worked with Gatwick to develop the system in response to its changing needs and to offer more than simply an access control solution. Over the years, functionality has been added to the system in response to changing legislation in the aviation industry and as the airport expanded.

Today, the system provides an integrated business solution that is continuously developed to help Gatwick operate the airport more efficiently.

## Solution

### **£100 million Pier 6 Extension**

One of more recent developments at Gatwick Airport includes an extension of the system to cover the Pier 6 development. Gatwick's Pier 6 is a £100 million project that provides vital extra pier service at the airport's North Terminal.

Gatwick reported the project will create a satellite building providing 11 pier served aircraft stands and includes the largest air passenger bridge crossing an airfield in the world. Standing at 197m long and 32m high, the bridge spans the runway allowing aircraft the size of a Boeing 747-400 to pass underneath, with travelators and walkways in both directions, and a glazed façade giving passengers unique and spectacular views across the airfield.

### **CEM Hardware**

The CEM AC2000 Airport system has been expanded to include an additional 260 CEM S600 card readers to provide access control and monitoring at Pier 6 including control of common use passenger lifts, covering four levels of the Pier including an arrivals level and departures level.

Using special door operation modes available with the S600 reader, lift operation to the Gate Rooms will be linked so that if the Gate Room S600 reader is in Departures Mode the associated lifts will go to Departures Mode, ensuring the lift parks itself at the departures level for use by departing passengers only.

Likewise if the reader status is changed to Arrivals Mode the Reader signals the Lift Controller to Arrivals Mode ensuring the lift parks itself at the Arrivals level for use by arriving passengers. With the new Pier 6 extension the installed CEM AC2000 Airport system will include almost 1000 card readers and almost 80,000 operational cardholders.

## **Gatwick's Sustainable Development Strategy**

The Pier 6 project forms part of Gatwick's Sustainable Development Strategy to manage environmental impacts.

"The CEM AC2000 Airport system assists with Gatwick's strategy for energy conservation by allowing us to enable equipment such as Escalators and Heat Curtains only when they are required." said Kim Hayler, Access Control Services Manager at Gatwick. "When the Gate Room reader is enabled for Arrivals Mode, as well as controlling the Lifts, it also enables the Escalator in readiness for arriving passengers. This ensures that when the Gate Room is not in use the escalator is automatically shut down for energy conservation," according to Hayler.

Estimated to accommodate 3.5 million passengers in its first full year of operation, the pier will save 50,000 coach movements, used to transport passengers between the North Terminal and aircraft stand, reducing fuel emissions and ground noise on the airfield.

## **Airbridge Control**

As well as controlling and monitoring staff and passenger movement the system at Gatwick also allows for control and monitoring of loading bridges (sometimes referred to as an air jetty).

The system has been designed to reduce maintenance costs and control the use of loading bridges. There had been concern that it was difficult to track the use and status of air bridges throughout the airport, with growing maintenance costs due to damage. To address this, the AC2000 Airport system was developed to link a loading bridge to a CEM S600 card reader. Before the bridge can be used, the driver must make a valid swipe on the CEM reader.

Besides controlling who is using the air bridges, the system provides an immense amount of data for reporting. Resulting information includes a list of air bridges, with the number of faults for each bridge, as well as the number of each type of fault over time. The airport knows the hours of operation for each air bridge as well as how long each air bridge has been in maintenance, standby or fault. A list of operators with their number of faults is also provided.

## **Upgrade**

In 2014 Gatwick underwent a major upgrade of their AC2000 Airport solution. The project was phased throughout 2014 and involved an upgrade of AC2000 Airport software, as well as the upgrade of more than 700 card readers throughout the airport terminals to support PicoPass smart card technology.

"We have worked with CEM Systems to seamlessly upgrade our existing AC2000 security system, which has proven to be highly reliable and powerful. With a large system and the critical nature of the airport environment we needed a phased upgrade that ensured zero system downtime", said David Rees, Business System Manager for Operations. "CEM support was second to none with the AC2000 Airport software upgrade performed remotely and quickly".

"CEM Systems has been working in partnership with Gatwick Airport for over 25 years, during which time their AC2000 security management system has been continually upgraded and customized to meet their unique aviation requirements" said Philip Verner, Regional Sales Director, EMEA, CEM Systems. "This recent upgrade was a significant project that required all existing CEM S610e card readers to be upgraded to support highly secure PicoPass smart card technology."

With the major upgrade now complete, London Gatwick Airport has a truly innovative, future proof security platform that provides resilient access control, and improves card user experience at the door and enhances airport operations.

## Introducing emerald

As part of their upgrade Gatwick Airport installed emerald, CEM's revolutionary intelligent access terminal; providing a modern, innovative solution that goes beyond access control.



The first of its kind in the industry, emerald is a touch screen reader, door controller, VoIP Intercom and system terminal all in a single box. The innovative touch screen LCD greets cardholders by illuminating as they approach and provides a user friendly security experience. As an intelligent multifunctional IP access terminal, emerald provides London Gatwick Airport with more than access control at the door. Airport security can use remote apps on the terminal to update personnel records, perform reader maintenance and display airport adverts and messages.

Gatwick Airport are also using the unique emerald flight arrivals door mode, which enables flight arrival gates in both the North and South Terminal to intelligently route domestic and international passengers accordingly. Upon a valid card swipe, flight agents intuitively select a predefined flight carrier number on the emerald terminal. emerald then interlocks the appropriate doors to allow international passengers to be routed to passport and border controls, with domestic passengers simply routed to baggage collection.

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