

# SUPREMA

## case study



Industry	Government/Transportation
Client	Incheon Int'l Airport
Application	Passenger Processing System
Solution	Electronic Passport Reader
Period	Dec 2007 - May 2008
Country	South Korea
Release	Nov 2008

# The World's Best Airport<sup>†</sup> Chooses Suprema

<sup>†</sup> Incheon International Airport in Korea won ACI 'Best Airport Worldwide' award in 2005, 2006 & 2007 and IATA Eagle Award 2008.



## The Airport

Incheon International Airport (IIAC) is the nation's largest airport in South Korea, recognized as a world class airport with its excellence in services, facilities and operational efficiency. The airport is known to be the best airport in the world in terms of its level of service provided to passengers by winning ACI 'Best Airport Worldwide' awards in 2005, 2006 & 2007 and IATA Eagle Award 2008. In size, Incheon International Airport has the second largest cargo capacity in the world and 10<sup>th</sup> in passenger capacity with over 31 million annual passengers. As of June 2008, the airport employs 35,000 employees, accommodating 71 airlines to 169 cities worldwide. To achieve excellence in airport service, efficient and less time consuming passenger processing is

a key challenge for a mega airports like Incheon International Airport. A fully integrated electronic passport system enabled seamless passenger data processing & exchange between airport, immigration and airlines.

## The Challenge

The fundamental objective of the whole IACC project was to enhance passenger processing time as a system in conjunction with airlines and the Immigration Services. Performance of the passport reader in terms of speed and accuracy were the essential criteria for the selection.

The Korean government initiated project was managed by Samsung SDS, the nation's largest system integrator. The project aims to implement e-passport check-in,

autogate system, an unmanned immigration counter and automatic boarding gate, a self serving boarding gate without boarding pass.

The IIAC requirements were a major challenge for Suprema. The electronic passport reader should fit into various application throughout the whole APIS (Airport Passenger Information System) processes from check-in, autogates to the self-serve boarding gates. Also, there were number of regulatory requirements by the governments' upcoming electronic passport projects whose timeline and contents were not finalized at the beginning stage.

Technical issues raised by airlines were another major priority. While conform with current ICAO standards, the passport reader

should also be compatible with airlines' common-use passenger check-in system of ARINC. Key challenges for establishing e-passport check-in, autogate system and automatic boarding gates are to enhance accuracy of data reading, user adoptability and processing speed.

Suprema also faced challenges on the equipment design & function. To persuade customers to adopt new passport reader from a new vendor, the equipment should offer significant privileges in functionality and user convenience compare to current passport reader and/or current vendor's.

## The Solution

The key components of the Suprema contribution for IAC project were the development, production and integration of 500 units of passport readers throughout the premises for different entities such as Department of Justice, Immigration Service, airlines as

well as the airport. In response to the IAC and airline's requirements, Suprema provided 31 units of RealPass-V passport readers, 455 units of RealPass-S passport readers and 22 units of Qpass-M RF readers.

RealPass-V is a full page e-passport reader enables one-step reading of visual data page and RF chip data of ICAO standard documents and cards. Designed for high-level security in immigration clearance, RealPass-V processes variety of data such as OCR, photos, characters, and even RFID from e-passports. The RealPass-V were installed across immigration counters, autogates and self-serve boarding gates in the airport.

Realpass-S is a compact electronic passport reader for airline check-in counters. It also offers single step reading of OCR characters and RF chip data of ICAO standard travel documents and cards. The device is fully compatible with ARINC iMUSE system and adopted lay-on type scanning to enhance recognition speed and accuracy.



	RealPass-V	RealPass-S
Dimension	210 x 246 x 129.5 mm (W x D x H)	226 x 160 x 74.5 mm (W x D x H)
Window Size	127 x 90mm / 5 x 3.54" (W x L)	127 x 40mm / 5 x 1.6" (W x L)
Weight	3.7kg (8.15lbs)	1kg (2.20lbs)
Image Resolution	400 dpi	400 dpi
Image Size	127 x 90mm (24Bit True Color)	127 x 40 mm (24Bit True Color)
Illuminations	Visible, IR, UV(option)	Visible, IR
Scan Speed	<2s	<2s
RF Reader	ISO 14443 A/B chip up to 848kbps speed, PCSC Support	ISO 14443 A/B chip up to 848kbps speed, PCSC Support
Indicator	Multi-color LED	Multi-color LED
Operating Temperature	0°C-40°C	0°C-40°C
Power Supply	100-240V DC Adaptor	12V 3A DC Adaptor
Interface	USB 2.0	USB 2.0
Operating Systems	Windows 2000, 2003, XP	Windows 2000, 2003, XP
SDK	Full SDK including DLLs	Full SDK including DLLs

## About Suprema

Suprema Inc. is a leading global provider of fingerprint recognition and identity management solutions and systems. The company's range of products includes fingerprint modules, fingerprint systems, e-passport readers and live-scanners. Suprema has worldwide sales network over 100 countries and its customers include worldwide companies like Samsung, Hitachi, Siemens, and Assa Abloy.

Suprema's fingerprint algorithm was proven to be world's most reliable solution by ranking No. 1 in the international Fingerprint Verification Competition(FVC) in a row in 2004 and 2006 with the unrivalled outstanding performance. The company's fingerprint matching and extracting algorithms also ranked top in the Minutiae Interoperability Exchange (MINEX) test by the NIST (National Institute of Standards & Technology) in 2008.

Suprema is the first biometrics company listed on Korea's stock market (KOSDAQ) with its market capital exceeding US\$100 millions.

For more information, please visit [www.supremainc.com](http://www.supremainc.com)



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