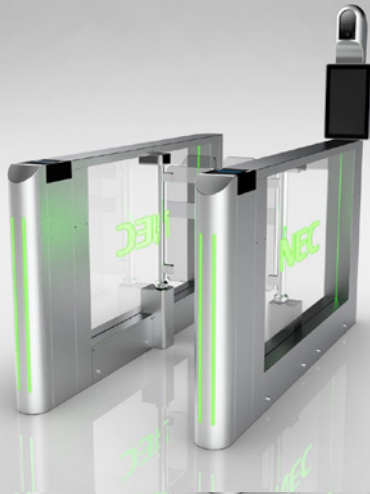\Orchestrating a brighter world

NEC

NeoFace® eGate

Intelligent Boarding Solution

At a Glance

- Uses body, facial and gate sensor fusion to streamline the boarding process
- Intelligent face capture uses dual cameras to ensure a quick and accurate match
- Integrates with existing airline systems using extensible application programing interfaces (API)
- Optional built-in thermal printer for seat assignment receipts
- Built-in boarding pass reader, local display and central gate management
- Configurable for multiple and ADA-compliant lanes
- NEC platform provides seamless integration to U.S. Customs and Border Protection (CBP) facial recognition matching platform

Overview

Transportation should be about getting to a destination as quickly and safely as possible. With airports around the world serving record numbers, travelers seek a better experience as they proceed through the terminal. Higher demand for airline services results in long lines and delays that create frustrations and potential missed fights. Today's airports are busier, more congested and stressful than ever, and demand for air travel is expected to double over the next 20 years.

Using NEC's industry-leading advanced facial recognition technology, NeoFace® eGate helps airport travelers easily navigate through various checkpoints in the airport. NeoFace eGate provides a fast and accurate facial matching capability that is adaptable to pose, angle and lighting variants. With NEC's advanced recognition platform, passengers can self-check baggage, successfully navigate through multiple security checkpoints, and more quickly board the plane at the gate—all without pulling out their passports or boarding passes. The result is a more convenient, secure and pleasant traveler experience.
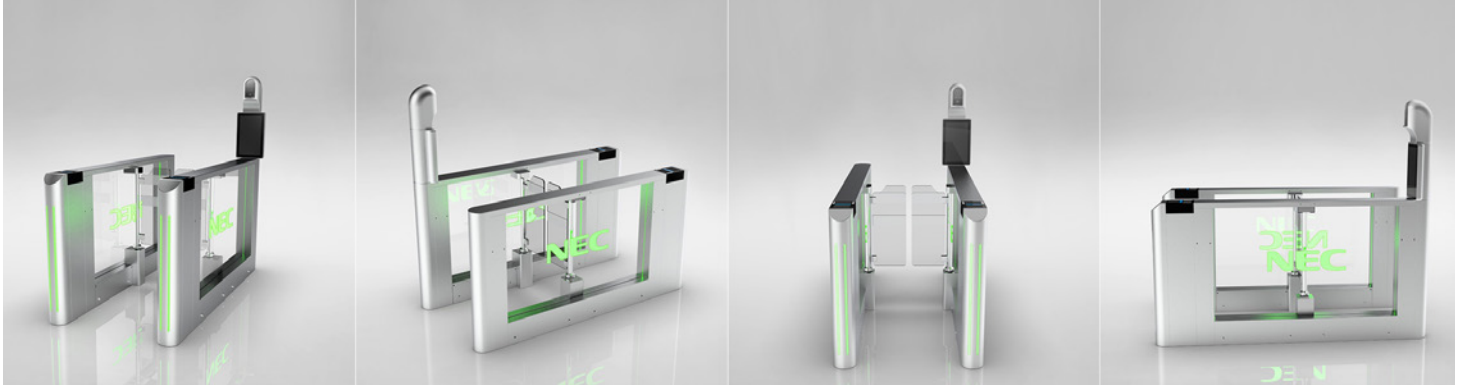
Solution

NEC's Advanced Recognition Systems provide a secure and more convenient way to improve the processing of airport passengers at check in, baggage drop, airport security, during the boarding process and other airport checkpoints. NEC's intelligent gate, NeoFace eGate, can help reduce wait times to facilitate a seamless journey.

Travelers proceed casually to NeoFace eGate equipped with NEC's advanced facial recognition technology, which boasts the world's #1 facial recognition accuracy*. NeoFace eGate quickly and accurately verifies the passenger's identity through a simple image capture of the face. The image is matched against passport files and security watch lists as well.

At airline check-in and baggage drop, facial recognition eliminates manual ID verification and matches passengers digitally to their boarding passes and baggage to eliminate delays. Moving to security, most travelers wait an average of 16 minutes in the security line, though depending on security alerts or seasonal travel factors, the wait can be much longer. NEC's facial recognition technology helps move travelers quickly and securely through security as well as customs and border checkpoints. Once at the gate, NeoFace eGate speeds-up the boarding process as well. No need for passengers to show IDs or boarding passes. Ultimately, reducing passenger stress by relieving congestion and shortening wait times during the boarding process.

Intelligent Image Capture

NEC's NeoFace eGate incorporates a series of sensors to capture body and face images along with stopping tailgating and imposters, suitcase sensing, etc. The solution uses dual cameras to capture body tracking + face and close proximity images as passengers approach, and proceed through the eGate. It can also be configured for specific throughput requirements, which enables the gate to be left open or closed if passengers are not authenticated. The images are compared to local and cloud-based image databases from CBP or other identity management resources to verify identity. The captured images can be matched to known watch lists as well.

APIs for Integration with Airline Solutions

The intelligent gate technology from NEC also includes APIs that enable integration with existing airline solutions. Airlines can enroll their loyal customers in the intelligent gate program so that they can have a seamless, more frictionless and personalized travel experience.

Transforming the Screening Experience

Security screening is probably the most important security step in the traveler's journey. With NEC's facial recognition software, airport security personnel are able to speed up the identity verification process while still maintaining accurate results and a high level of security. Not only can passengers be on their way more quickly, but security personnel are able to focus more attention to addressing other potential and actual threats.

World-class Biometric Recognition Technology

NEC's face recognition research began in 1989 and continues to invest heavily in facial recognition research and development. The design objectives of this technology are to provide:

- Greatest accuracy
- Fastest speed
- Most tolerance to environmental, ethnic diversity and behavioral conditions
- Most flexible platform on which to build highly capable solutions for society

*NEC has participated in benchmark tests conducted by the National Institute of Standards and Technology (NIST) and has consistently garnered first place in the past four tests, namely the Multiple Biometric Grand Challenge (MBGC) in 2009, the Multiple Biometric Evaluation (MBE) in 2010, the Face Recognition Vendor Test (FRVT) in 2013, and the Face In Video Evaluation (FIVE) in 2017, visit, https://www.nist.gov/programs-projects/face-video-evaluation-five

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