HID Facial Recognition Technology Enhances Security & Automates Border Control For Indonesia Immigration & Seaport Authorities

THE CHALLENGE

Reliable identity verification is an unwavering requirement at mission-critical checkpoints such as border crossings. Oftentimes, however, this involves slow manual processes that create a ripple effect of inefficiency and security risks. Passengers endure long wait times leading to frustration, fatigue and dissatisfaction.

Indonesia Immigration recognized this strain on travelers moving through its destinations — specifically in one of the region's busiest locations: the international seaport at Batam Center. Batam Center is one of the most-trafficked border spots between Indonesia, Singapore and Malaysia. Approximately 500,000 people move across Batam's five seaports each year.

Extremely long wait queues for international departures and arrivals were a severe pain point for the port. The root cause was the outdated manual process of handling identity verification for the tremendous number of passengers moving through the center. People had to present their documentation papers and wait to be reviewed and verified before crossing the border.

Officials sought an intuitive, contactless solution to automate border control, process passengers faster and improve the traveler experience. They also required a system with strong security measures and high performance in challenging lighting to accommodate varying traffic control and conditions.

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THE SOLUTION

Facial recognition is becoming an increasingly important tool for border security. It is fast, seamless and secure, and offers a contactless approach for identity verification.

Working through Indonesia Immigration's local system integration partner, the HID U.ARE.U™ Camera Identification System was selected as the facial recognition component for the automated border crossing (ABC) gate — or Autogate per Indonesia Immigration — installed throughout the Batam ports. Combining a self-service gate system, document reader and facial recognition camera immediately transforms border control and boosts the passenger experience.

This intuitive passenger verification begins when an individual approaches the Autogate and places their passport on the HID ATOM™ document reader to scan the data. Once confirmed, the first gate opens, and the traveler steps forward in front of the HID U.ARE.U camera to scan their face. Once the system confirms a match between the passport photo and the passenger's face, a second gate opens and the visitor is on their way — all within seconds.

The HID U.ARE.U camera stands out as an edge-computing device, delivering unsurpassed face detection, matching, identification and verification directly at the edge. The camera was selected based on its engineering excellence that met the project's many requirements, including:

- **Combined HID-patented multispectral imaging (MSI) technology with artificial intelligence (AI)** to deliver impeccable performance — even in challenging lighting conditions
- **On-device biometric processing** — face detection, capture, image quality checks and liveness detection — for the highest level of performance and maximum data protection
- **Industry-leading presentation attack detection (PAD)** with passive liveness detection to prevent fraud attempts in unattended use cases (ISO 30107-3 PAD Level 1 compliance, Level 2 pending)
- **Top NIST ranking** in matching speed and accuracy
- **Ethically trained and built AI** to reduce matching bias

THE RESULTS

Today, people passing through the Batam Center ports engage with top-notch facial recognition technology to quickly, seamlessly and securely authenticate themselves. The Autogate system helps increase efficiency, shorten passenger wait times and enhance the traveler experience. The entire identity verification process is now accomplished in seconds, greatly improving passenger throughput and operational efficiencies.

"People moving through borders really appreciate the efficiency provided by this Autogate system with facial recognition," said Silmy Karim, Director General of Immigration in Indonesia. "Wait queues are now drastically decreased and passengers are empowered by the fast and convenient self-service process that has them on their way in a matter of seconds."

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"The Autogate system verifies travelers when scanning their passports and immediately matches passport data with their e-VoA, e-Visa or visa-free data," said Karim. "Not only does it make inspection easier and faster, it also prioritizes state security by connecting the crossing system with the Interpol database and other deterrence databases. This is to prevent the entry of foreign travelers involved in crimes or other unlawful activities."

On the port side, operational efficiencies gained include reduced manual workloads for immigration officers, who can now focus on other tasks.

The use of facial recognition at border checkpoints is fast becoming a public expectation. This Autogate system featuring HID's U.ARE.U facial recognition camera is anticipated to be deployed across seaports throughout the Indonesian archipelago. They also plan to bring this progressive solution to the country's international airports to help authorities enhance security, increase operational efficiency and improve the travel experience — serving as a model for other airports and seaports seeking to modernize their border control infrastructure.

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Key Benefits Realized by Indonesia Immigration

- Shorter wait times at the checkpoints
- Improved passenger experience
- Increased operational efficiency
- Enhanced border security