

Adani Mundra Port (APSEZ) *Access Control Management System*

An advanced and innovative security solution to secure widespread physical property, control access to the premises, manage the flow & head count of workforce/visitors, and control the inflow or outflow of vehicles on the port.



- ◆ 300 + Hand Held Access Authentication
- ◆ 350+ Gate Automation Implemented
- ◆ 1000+ Access Control Devices Installed
- ◆ 1.5 Lakh Daily Transactions
- ◆ 3 Lakh Workers Enrollment

About Client

Adani Ports and Special Economic Zone Limited (APSEZ) is the largest commercial ports operator in India accounting for nearly one-fourth of the cargo movement in the country. Over the years, APSEZ has evolved into a provider of integrated port infrastructure services, of which the Mundra SEZ in Gujarat is a landmark validation. An infrastructural marvel, the mega port at Mundra is the flagship port of APSEZ, which runs nine ports and terminals on India's eastern and western coasts accounting for 24 percent of the country's port capacity. The Port has 225,000 sq. metres of closed godowns and 3,150,000 sq. metres of open storage yards for storage of import or export cargo within the port premises.

Identifying the Challenges

A need for high-tech, robust and centralized access control & vehicle management system

Spanning over 8,000 hectares of land, Adani's Mundra port employs workers in a large amount including contract labours, contractors, officials, in-house employees, workforce on the dock, etc. Controlling and keeping track of workers on board a significant project was the initial key driver for Mundra port to engage with Mantra. To minimize the complexity of managing access within the Mundra port, APSEZ felt the need of an easy to manage and reliable solution of improving the port's security whilst monitoring the movements of permanent as well as temporary workforce, contractors, staff, visitors, etc. within the premises. The port also required a centralized access control monitoring system and a robust gate automation system for securing the premises.

Another challenge was keeping track of the vehicles entry and exit to the premises and managing the access of vehicles within the premises. Thus, APSEZ's Mundra port saw the urgency to a vehicle access management system that could secure multiple sites on the port and monitor it on a single system. Thus, APSEZ required an advanced vehicle access management solution which permits the entry of only authorized vehicles in the premises or the highly secured areas within the port; automatically records the entry/exit of the vehicles and identify drivers through biometric fingerprint at every gate of the port.

A Smart Solution

Mantra's comprehensive access control & vehicle access management system

To secure the day-to-day operations of the largest commercial port in India; control the access of visitors, workers and staff on the port, monitor & manage working hours of employees/workers on the field, as well as control the entry of vehicles to the premises, Adani selected Mantra's end-to-end access control management solution. The port having covered and open storage areas with the enormous capacity required a robust and advanced security management solution with advanced centralized access control systems, boom barriers, and biometric identification systems for multi-layer bifurcation based on different yards or areas within the port.

Mantra's access control solution was extremely effective for APSEZ's Mundra port in providing security, efficient monitoring of time-attendance & head count of workers, contractors, staff and controlling the access of visitors, contract labours, helpers, etc. within the premises of the port.

The Mantra's access control management solution deployed at Mundra Port consists of an access control system for visitors, and staff; time-attendance & access control for contract labours, and the vehicle access management system. Currently, over 1000+ access control devices and 350+ gate automation, 300+ Hand held access authentication devices offered by Mantra are installed across the entire site of a port with daily transactions of more than 1.5 lakh. Furthermore, to secure the logical boundaries of the port, container trucks and their drivers gain access to selected portions of the port via gate automation which controls the gate's in-and-out traffic. Port buildings and facilities are also restricted to pedestrians and are controlled utilizing multi-modal biometric access system with fingerprint, facial, palm-vein and access cards.

1. Visitor Access Control System

An advanced solution to identify, monitor and manage the flow of visitors.

Security requirements of Adani's mega port at Mundra is challenging and growing increasingly. To monitor and control the flow of access of visitors to the premises and secure the premises from potential threats from unknown visitors, Mantra offered an advanced visitor management solution to APSEZ for securing their infrastructural marvel i.e. Mundra port.

Mantra's visitor management system is a complete visitor management solution, designed to replace the manual ledger visit. Our visitor management system implemented at Mundra port is used to register the visitors or guests



arriving at the port & keep a track over their activities right from their entrance to exit on the premises. Enhanced with the latest web technologies and multi-modality biometric devices (a full web application that needs Internet browsers to operate), Mantra's visitor management system assists APSEZ in streamlining the operation of examining visitors at Mundra port.

2. Access Control System for Staff

Managing the access of staff for improved security and control over the premises

Limiting the access of staff to sensitive areas or zones became significant for Mundra Economic Hub – the major economic gateway that caters to the northern end of India. Thus, the high-security areas, including the Mundra port's server room and equipment warehouse, are secured with Mantra's biometric access control systems, requiring biometric verification or card access for the entry/exit of only authorized staff.

Layered approach to manage entry to various location of port is adopted by geography, e.g. Entry Layer Gates, Inter Mediate Layer Gates, Most Interim Layered Gates, etc. At every layer entry locations, tripod turnstiles are installed which are operated through biometric devices.

Mantra's access control system not only provides restricting the entry of unauthorized staff members to restricted zones or rooms but also ensures more security where an additional level of biometric verification is required. This provides Mundra port with full details/log of entry of staff members to their warehouse and helps prevent the loss of valuable equipment and tools.

3. Time Attendance & Access Control for Contract Labour

Convenient way to track contract labours' time-attendance for increasing their productivity along with controlling their access within premises of port for enhanced security.

Enrollment is a first and critical step to ensure secure and reliable registration of contract labours (permanent and temporary), contractors, etc. before providing access to them based on their identity and entity. A field-proven, robust and flexible biometric enrollment solution is a key to enhanced security and real-time monitoring.

Dissatisfied with the traditional methods of managing multiple contractors and a huge quantum of contract labourers, APSEZ implemented Mantra's robust and reliable time attendance and access control system at its Mundra port. Mantra's contract labour management system enables Mundra port authorities to efficiently carry out the registration or enrollment process of the workers/contract labourers using Mantra's cutting-edge biometric devices to store the identity of workers in the system and identify them based on their identity.

With the help of Mantra's time attendance and access control system, the managing authorities at Mundra port not only marks the attendance of contract labourers but also ensures that only registered and authorized labourers can obtain access to the premises of the port proclaiming enhanced security.

4. Vehicle Access Management System

An automated, advance and rapid vehicle access management system

Controlling vehicle access became as important as high-security human identification at the Mundra port following heavy vehicle inflow and outflow on the port on a daily basis. With the manual vehicle access management method, recording and managing the vehicle details such as the purpose of visit, vehicle number and driver details become difficult for the port authorities at Mundra.

To meet with these challenges, APSEZ implemented Mantra's unique solution, vehicle access management system at its Mundra port. This solution includes installation of boom barriers at every gate, which manages inflow and outflow of personal vehicles, commercial vehicles, container trucks, etc. Mantra's vehicle access management system coupled with biometric devices helps the port authorities in enrollment, mapping & authentication of vehicles' drivers & helpers through fingerprint recognition. It also helped Mundra port in optimizing their parking space & inculcating security within the premises.

Salient Features

- ◆ Efficiently manages huge attendance data of workers, staff, employees, etc on the port premises
- ◆ Checks Biometrics De-duplication to record past history during every new worker enrolment
- ◆ Restricting unauthorized entries within the premises
- ◆ Biometric enrollment of workers and contract labours working in different zones such as free trade warehousing zone (FTWZ), domestic industrial zone, etc.
- ◆ Track and trace each and every user such as workmen, visitors, employees and contractors
- ◆ Online monitoring of total workforce's present strength at Mundra port
- ◆ Online monitoring of all the vehicles present on the Mundra port
- ◆ Random authentication check for suspicious users
- ◆ Scalable and robust system
- ◆ Gate automation for monitoring the flow of vehicles and turnstiles for efficient pedestrian access to the premises



STAFF	CW	TW	VISITOR	DRIVER	HELPER

LEVEL 1	175	11480	84	00	01	0
LEVEL 2	105	2408	07	03	101	0
LEVEL 3	05	38	00	02	27	0

* CLICK ON THE 'BACK' ICON TO RETURN TO MAIN DASHBOARD . * CLICK ON 'COUNT' ICON FOR TRANSACTION DETAILS OF AN ENTITY.

PEOPLE

VEHICLE

HEAD COUNT

14510 **4231**

NUMBER OF VEHICLE

1286 **1118**

REFRESH IN 25^{SEC}

Benefits of Mantra's Access Control Management System

1. Enhanced Security

Access Control Systems provide many additional utilities; however, their most important task is security. Mantra's end-to-end access control solution provides a top-notch access control system which runs 24x7, keeping a log on each person that enters or leaves the vicinity, make sure system data is automatically backed up, automatic alerts and alarm systems are always online, and in case of a security breach, provide useful information in finding the culprit.

Also, assigning access to only authorized workers or staff to certain areas of a port, site or building is easy and automatic with Mantra's access control system that leverages the demographic and biometric data of existing workforce.

2. Convenience

Convenience is one of the best features provided by Mantra's access control system. Whether it's swiping access card, biometric scanners, automation, or how much time they save, they make operators as well as the workers or users' life easy, leading them to work more productively. Imagine a time when keys were used to lock each room and door, and how taxing it was to manage and organize hundreds of keys.

3. Accurate Identification and Accountability

Biometric-based access control management system provides more accurate identification, lowering the risk of unwanted breaches. With this type of security system, access is granted not by passwords but by biological characteristics like fingerprints or palm-vein which are difficult to duplicate or forge.

Mantra's access control management system helps in securing the premises as well as enhancing the accountability. Logging activity through a biometric security system helps connect personnel with specific actions or events that can be referred to in the unfortunate case of a security breach.

4. Increased Productivity

Mantra's modern access control management solution is designed to control more than just doors and gateways, with their capacity to be configured for controlling boom barriers, turnstiles, and parking gates among other things.

Additionally, by integrating access control system to multiple areas of a facility, security processes are substantially improved as threats and unwelcome visitors would be required to gain authorization, increasing the likelihood of their presence on-site being detected.

5. Vehicle and Parking-lot Management

Mantra's access control management system is not just used for building security; but it also offers a vehicle access management system to monitor the inflow and outflow of vehicles within the premises of a port, plant, organization, public buildings, etc. The system is also capable of ensuring the security of parking-lot, and that the employees or workers get the facility of a hassle-free parking space. Mantra's access control system can make sure along with employees; visitor's vehicles are also monitored.