

VAST Face Manager

Facial Recognition System

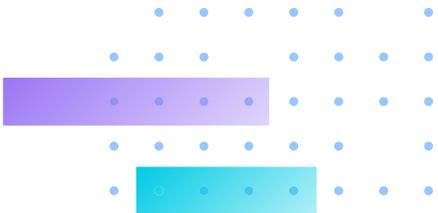


Key Features

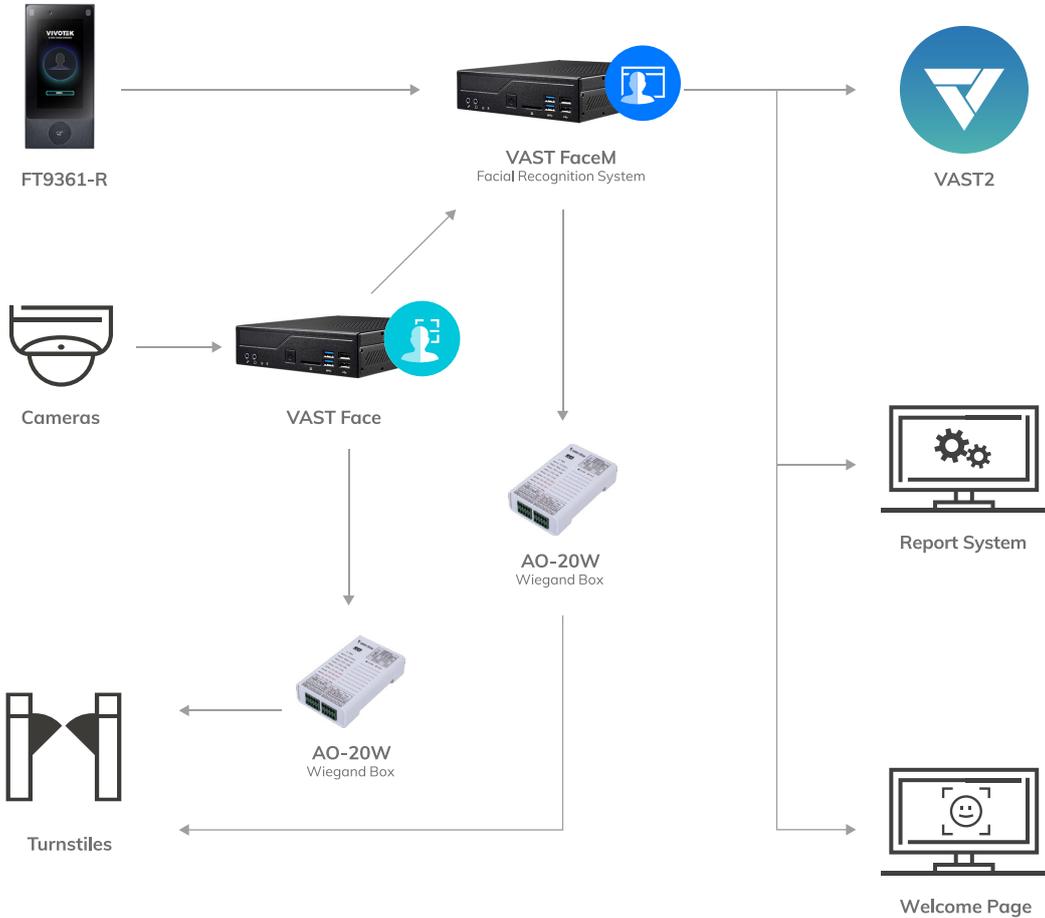
- Centralized Management System
- Accurate Authentication
- High Security
- Rich Infographic Reports

Overview

VIVOTEK VAST Face Manager is an advanced AI-based system that utilizes facial recognition technology for access control and management. Registered users no longer need to worry about forgetting access cards or blurry fingerprints, simply present their face to a facial recognition camera, or tablet, to gain entry. VAST Face Manager provides a secure and seamless authentication mechanism by utilizing each user's face as a non-transferable biometric token. Thus, it can apply to a wide range of applications such as security checkpoints, staff attendance records, automated identity verification, and compliance with building occupancy levels.



System Architecture



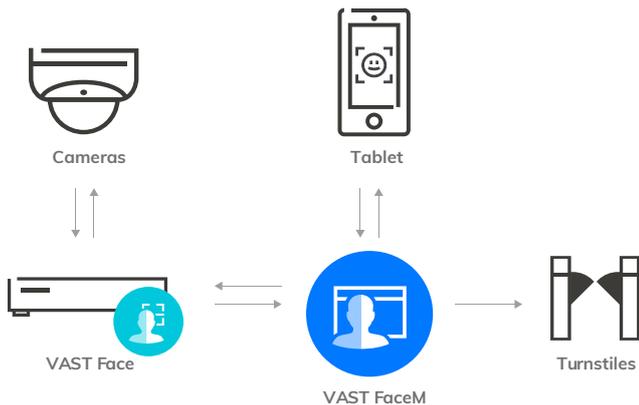
Key Features

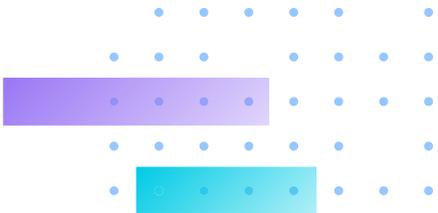
Centralized Management System

VAST Face Manager is a centralized system, capable of managing a maximum of 128 connected facial recognition devices (camera, tablet, or other hardware). Through VAST Face Manager's single interface and person lists, entry conditions can be established, action definitions can be used for post searches, attendance investigations can be conducted, and facial profiles can be easily managed.

Accurate Authentication

Facial images are captured and verified in real-time with biometric authentication. Furthermore, deep learning analytics can accurately verify a person's identity even through makeup, beards, hats, glasses, or surgical masks, providing accurate authentication for a safe and secure environment.

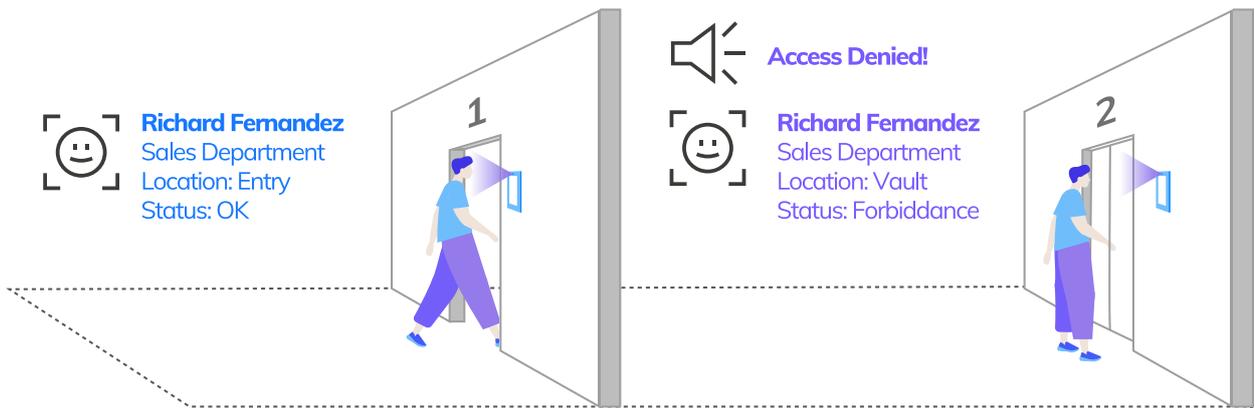




Key Features

Highly Secure

Unlike with access control cards, facial recognition uses biometric credentials that cannot be transferred to others, thus greatly reducing the risk of fraudulent access or "buddy punching" for employees clocking in. Going a step further, VAST Face Manager allows users to define customized access authentication rules and schedules by area or by user group, providing more flexibility than traditional card-based access systems. Additional security checks such as body temperature levels and face mask detection are also available on VAST Face Manager.



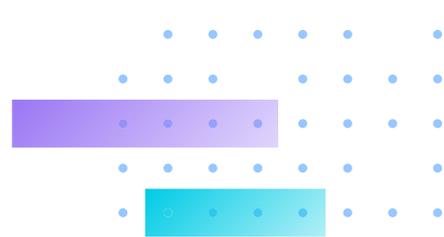
Rich Infographic Reports

Facial images are captured and verified in real-time with biometric authentication. Furthermore, deep learning analytics can accurately verify a person's identity even through makeup, beards, hats, glasses, or surgical masks, providing accurate authentication for a safe and secure environment.

The screenshot shows the VAST FaceM web interface. The left sidebar contains navigation options: Account, Investigation, Monitoring, Review, Action, Attendance (highlighted), Access Group, Person, Devices, Schedule, and Greeting. The main content area displays an attendance report table with the following data:

NO	Person Type	Person	Tags	Entry Date	Departure Date	Stay Time	In Snapshot	Out Snapshot
1	Staff	Derek	• Staff	2021/11/02 10:19:12	2021/11/02 14:16:33	03:57:21		
2	Staff	zake	• Staff	2021/11/02 11:18:07	2021/11/02 12:02:22	00:44:15		
3	Staff	A02084	• Staff • Tony	2021/11/02 10:22:58	2021/11/02 13:48:27	03:25:29		
4	Staff	A01599	• Staff	2021/11/02 10:09:43	2021/11/02 14:29:21	04:19:38		

Copyright © 2009-2021 VIVOTEK INC. All rights reserved. Web Version: v1.08.03 Server Version: v1.08.03



VAST Face Bundle Kit

VAST Face Manager Workstation- IE8213-FM

Model	IE8213-FM
Hardware	Intel CPU: i7-10700Memory: DDR4-2666 32GB RAM, HDD: 2.5" 500GB SSD
OS	Linux
Maximum Number of Faces in Database	50,000
Maximum Number of Connected Devices	Up to: 128
Power Input	100-240V AC
Power Consumption	Max. 90W
Dimensions	190 x 165 x 43 mm (LWH)
Weight	1.3 kg net and 2.1 kg gross
Safety Certifications	CE, FCC

Technical Specifications

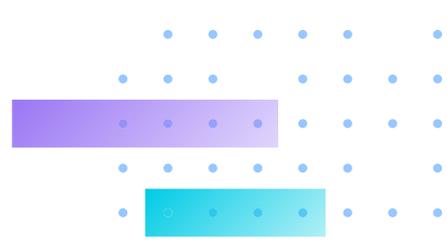
Minimum Hardware Requirements*

CPU	Intel Core i7 (8th Generation) or higher CPU
RAM	32 GB or above
HDD	500GB or above
Network	10/100 Mb Network

* The above configuration can support up to 128 facial recognition cameras/tablets

System

Architecture	Three Tier Server-client system: <ul style="list-style-type: none">· Web Server· Application Server· Database Server
Supported OS	Ubuntu Server 20.04
Supported Protocols	HTTP & HTTPS
Supported Hypervisors	VMWare, Hyper-V, Virtual Box
Container Type	Docker
Database Type	MongoDB
System Security	<ul style="list-style-type: none">· Single device login· Renewable session token· Hardened HTTPS



Technical Specifications

Management Interface

Interface Using Web client

Supported Browsers

- Google Chrome
- Mozilla Firefox

Languages

- English
- Traditional Chinese

Environment Adaptability

Camera Installation Height

- 3.0 meters max. camera height
- Mounting position within 10 degrees incline

Supported Image Modes Color & Monochrome

Robust Against

- Large expressions
- Beards, moustaches and different hairstyles
- Eyeglasses
- Caps and scarfs
- Irregular lighting
- Partial face obstruction

Supported Devices & Integrations

I/O Relay

- Large expressions
- Beards, moustaches and different hairstyles
- Eyeglasses

IP-to-Wiegand Converter

- Doorcard DCT-4TW26
- VIVOTEK AO-20W Wiegand Box

HTTP Notifications Send customized GET/POST HTTP messages

Others Use VAST Face RESTful API

Persons of Interest (POI) Management

POI Management

- Enroll person using Web client.
- Manage face profiles database through Web Portal

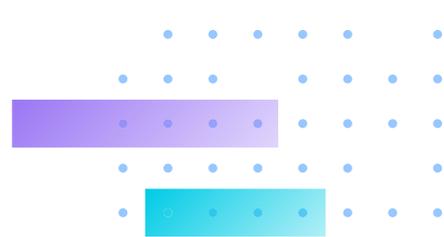
POI Authentication

- Using Face as a credential
- Using Card Number

POI Groups

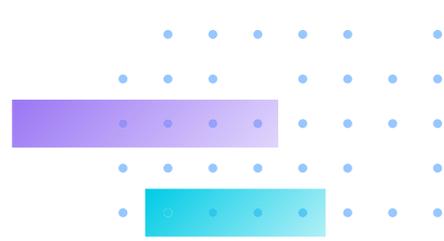
- Default groups: VIP, Blacklist, Staff
- User defined person groups

POI Batch Enrollment Supports bulk enrollment using Excel & JPEG files



Technical Specifications

Enrollment Photo	Min. face size = 200 x 200 pixel
Requirements	1MB Max. photo size (.JPG or .PNG)
POI Profile Information	Name, ID #, card #, job position, email, phone, POI group(s), and expiration date
POI Reports	
Investigation Reports	Generate facial recognition reports and filter events by:
	· Location
	· Time period
	· Name
Attendance Reports	· POI Group
	· POI type (enrolled or stranger)
	Generate staff clocking reports and filter events by:
	· Clock-in time
Actions Reports	· Clock-out time
	· Stay length
	· Late Arrival
	· Early Leave
Export Data	Export results to Excel file
Trigger Rules and System Actions	
Rule Engine	Rule based engine to trigger single or multiple system actions based on:
	· Event Location
	· Schedule
	· Detection time period
	· Specific POI profile
	· POI face group affiliation
	· Person type (enrolled or stranger)
Supported System Actions	· POI is (not) a member of a group
	· Trigger I/O Relay
	· Trigger IP-to-Wiegand converter
	· Send HTTP GET/POST command
	· WebSocket notification



Technical Specifications

System Users Management

System Users	Register user accounts using Name, E-Mail address & Phone number
	<ul style="list-style-type: none">· System Administrator
System User Groups	<ul style="list-style-type: none">· Administrator· VAST Face Manager

System Inter-compatibility

Supported Products	<ul style="list-style-type: none">· VIVOTEK VAST2 VMS/ CMS· VIVOTEK VAST FaceManager· VIVOTEK VAST FaceVisitor
--------------------	--

Facial Recognition Verticals

Possible Applications	<ul style="list-style-type: none">· Identify potential troublemakers (shoplifters, criminals or any other barred individuals)· Detect VIP members upon arrival to deliver a tailored experience· Provide physical entry to commercial buildings, residences, and other rooms· Contactless staff clock in system· Verify visitor's identity
-----------------------	--