



VAST Face

Facial Recognition Software



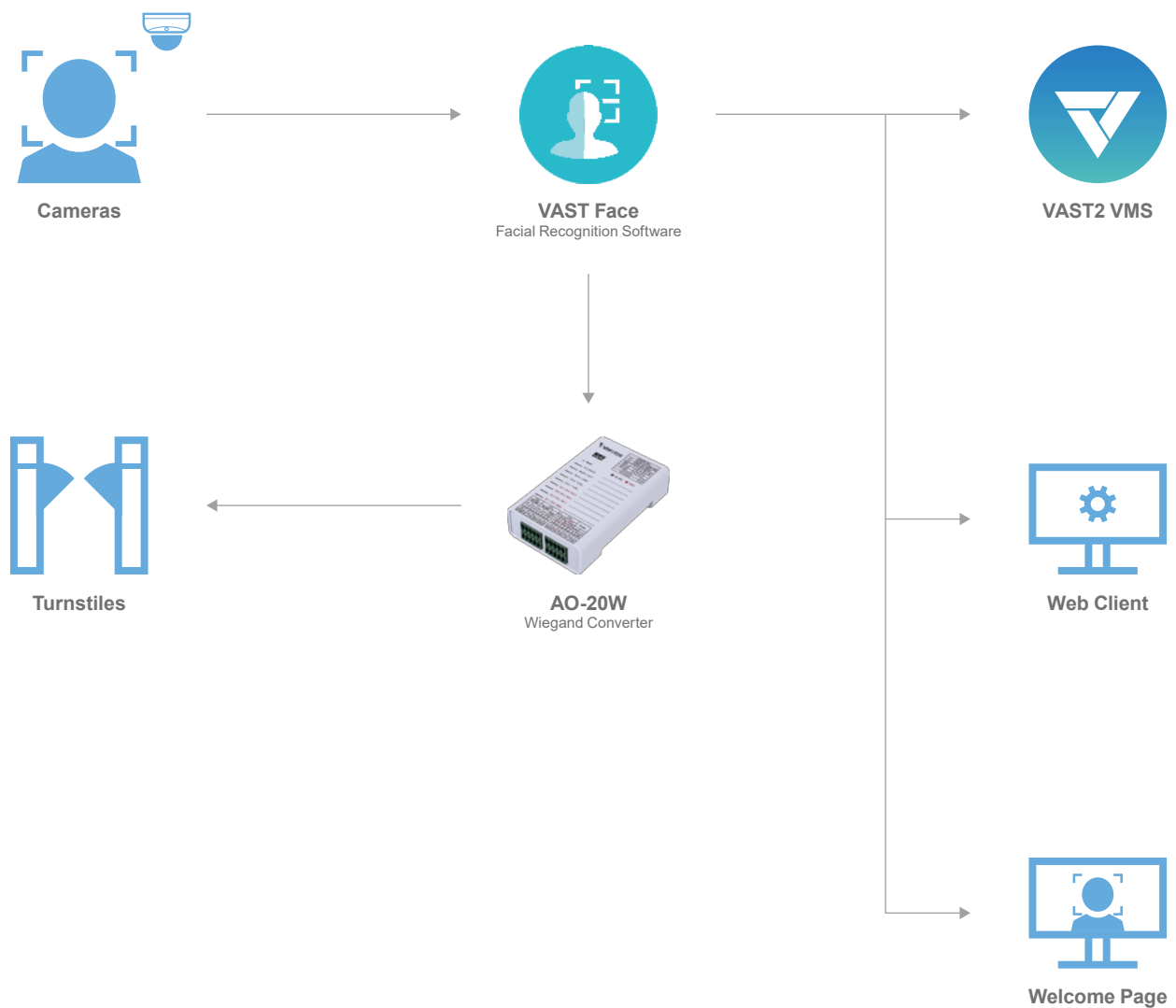
Key Features

- Open Platform for Facial Matching
- Persons of Interest (POI) Management
- Live Notifications and Alerts
- Comprehensive Reports
- Flexible Design & Easy Configuration
- Reliable on Different Environments
- Secure User Management

Overview

VIVOTEK VAST Face is an advanced A.I based facial-recognition engine and integration platform, embedded with deep convolutional neural-network algorithms. It is capable of recognizing faces in complex environments and under changing ambient light conditions, resulting in fast performance and reliable results at a low CPU cost. Its flexible architectural design allows for facial image acquisition from a variety of sources such as: IP Cameras, specialized tablets, still images, and Video Management Systems (VMS). VAST Face provides a wide array of integrations with external devices and ancillary systems, empowering users to implement intelligent facial recognition systems, or develop novel applications across multiple industries.

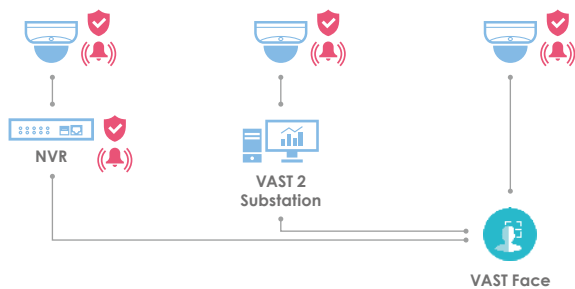
System Architecture



Key Features

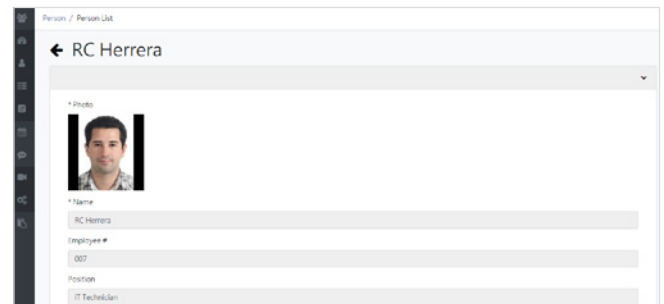
Open Platform for Facial Matching

Use VAST Face in conjunction with VIVOTEK's own Facial recognition engine, or to manage a 3rd party facial recognition system, while enjoying the user-friendly UI and powerful integrative capacities of VAST Face.



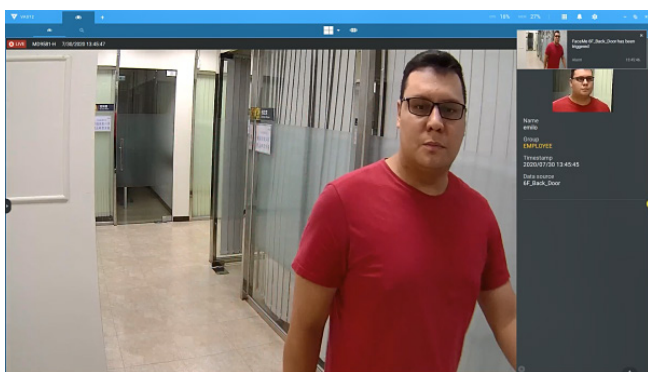
Persons of Interest (POI) Management

Users can assign each person into one or more groups for easier identification (i.e., VIP, Blacklist, Staff, Visitor) and auto-delete POI profiles based on a pre-defined date.



Live Notifications and Alerts

Real-time Notification on VIVOTEK VAST 2 whenever a POI has been identified.



Comprehensive Reports

VAST Face provides detailed reports for recognized and unknown faces and automated clock-in reports for staff, with exception-based filters: No-Show, Late Arrival, Early Leave. It also stores system-triggered action logs. Users enable to search filters and events sorting for seamless and rapid investigation and export results to Excel files for further analysis.

The screenshot shows the 'Investigation / Person' interface. It displays a table of recognized faces with columns for No., Date, Time, Name, Card #, Score, Snapshot, and Video Source.

| No. | Date | Time | Name | Card # | Score | Snapshot | Video Source |
|-----|------------|----------|--------------------|----------|--------|----------|--------------|
| 1 | 2020-08-28 | 18:44:58 | stherik.reisco | 00002144 | 96.98% | | TL_L1_Main |
| 2 | 2020-08-28 | 18:44:55 | stherik.reisco | 00002144 | 99.21% | | TL_L1_Main |
| 3 | 2020-08-28 | 18:53:09 | Suk Lee Mi | 00001566 | 93.11% | | TL_L1_Main |
| 4 | 2020-08-28 | 18:27:26 | Yijun Wu | 00002364 | 95.87% | | TL_S1_Main |
| 5 | 2020-08-28 | 18:21:36 | Jamessa Lee | 00001428 | 91.1% | | TL_L1_Main |
| 6 | 2020-08-28 | 18:56:30 | IV WENYI TCHERNJ | 00002478 | 99.06% | | TL_S1_Main |
| 7 | 2020-08-28 | 18:48:27 | Vetriehvi Rajamani | 00002114 | 99.23% | | TL_L1_Main |

Key Features

Flexible Design & Easy Configuration

VAST Face does not require specialized cameras or other hardware. It provides a configurable recognition threshold, capture frequency, face size, capture area, and the single profile or bulk enrollment for flexible setup. Built-in Face Merging function and supports enabling full-frontal facial captures only. Moreover, users can manage multiple VAST Face servers with VIVOTEK Face Manage.

Secure User Management

Supports HTTPS connection and multiple system groups and user roles, single device login connection.

Reliable on Different Environments

VAST Face can keep accurate under different ambient light conditions and support image analysis in Color & B/W mode, recognize faces within 3.0 meters camera height mounting location. Besides, the dockerized application is capable of running in virtual or physical machines.

VAST Face Bundle Kit



VAST Face Workstation - IE8221-F

| | |
|--------------------------------------|--|
| Model | IE8221-F |
| Hardware | Intel CPU: i5-10400Memory: DDR4-2666 16GB RAM, HDD: 2.5" 500GB SSD |
| OS | Linux |
| Maximum number of faces in database | 20,000 |
| Maximum number of devices connecting | (Build-in 1CH) Up to: 2 |
| Power Input | 100-240V AC |
| Power Consumption | Max. 90W |
| Dimensions | 190 x 165 x 43 mm (LWH) |
| Weight | Weight: 1.3 kg net and 2.1 kg gross |
| Safety Certifications | CE, FCC |

VAST Face Workstation - IE8231-F

| | |
|--------------------------------------|--|
| Model | IE8231-F |
| Hardware | Intel CPU: i7-10700Memory: DDR4-2666 32GB RAM, HDD: 2.5" 500GB SSD |
| OS | Linux |
| Maximum number of faces in database | 20,000 |
| Maximum number of devices connecting | (Build-in 1CH) Up to: 8 |
| Power Input | 100-240V AC |

VAST Face Bundle Kit

| | |
|-----------------------|-------------------------------------|
| Power Consumption | Max. 90W |
| Dimensios | 190 x 165 x 43 mm (LWH) |
| Weight | 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 | 16GB or above |
| Disk | 500GB or above |
| Network | 10/100 Mb Network |

* Above configuration can support up to 4 Face recognition cameras / tablets

System

| | |
|-----------------------|----------------------------------|
| Architecture | Three Tier Server-client system: |
| | 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 | Single device login |
| | Renewable session token |
| | Hardened HTTPS |

Management Interface

| | |
|--------------------|------------------|
| Interface | Using Web client |
| Supported Browsers | Google Chrome |
| | Mozilla Firefox |

Technical Specifications

| | |
|---|---|
| Languages | English |
| | Traditional Chinese |
| Supported Image Sources | |
| Supported IP cameras | Any H.264 ONVIF IP Camera |
| | Any H.264 RTSP IP Camera |
| Supported face recognition tablets | Tigerwong |
| | Smarfid 5 |
| | Smarfid 8 |
| Supported still image formats | JPEG, PNG, BMP, Base64 |
| Video Sources Configuration | |
| Region of Interest (ROI) | Setup ROI area for face capture |
| Face Capture Parameters | Minimum capture face size |
| | Frame capture interval |
| | Side face filter |
| | Biggest face only filter |
| Face Verification Parameters | Minimum face recognition threshold |
| | Merge recognized faces interval |
| Environmental Adaptability | |
| Camera Installation Height | 3.0 meters max. camera height |
| | Mounting position within 10 degrees inclination |
| Supported Image Modes | Color & Monochrome |
| Robust Against | Large expressions |
| | Beard and hairstyles |
| | Eyeglasses |
| | Caps and scarfs |
| | Irregular lighting |
| | Partial face occlusion |
| Supported Devices & Integrations | |
| I/O Relay | Moxa E1214 |
| | Advantech ADAM 60XX |
| | VIVOTEK AO-20W I/O Device |
| IP-to-Wiegand Converter | Doorcard DCT-4TW26 |
| | VIVOTEK AO-20W Wiegand Box |
| HTTP Notifications | Send customized GET/POST HTTP messages |

Technical Specifications

| | |
|---|---|
| Others | Use VAST Face RESTful API |
| Persons of Interest Management (POI) | |
| 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 |
| 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 face recognition reports and filter events by: Location Time period Person's name POI Group POI type (enrolled or stranger) |
| Attendance Reports | Generate staff clocking reports and filter events by: Clock-in time Clock-out time Stay length Late Arrival Early Leave |
| Actions Reports | Generate a report for which pre-defined actions were triggered in response to an event. |
| Export Data | Export results to Excel file |
| Trigger Rules and System Actions | |

Technical Specifications

| | |
|-----------------------------------|---|
| 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) |
| | POI is (not) a member of a group |
| Supported System Actions | Trigger I/O Relay |
| | Trigger IP-to-Wiegand converter |
| | Send HTTP GET/POST command |
| | WebSocket notification |
| System Users Management | |
| System Users | Register user accounts using Name, E-Mail address & Phone number |
| System User Groups | System Administrator |
| | Administrator |
| | VAST Face Manager |
| System Inter-compatibility | |
| Supported Products | VIVOTEK VAST2 VMS/ CMS |
| | VIVOTEK VAST FaceManager |
| | VIVOTEK VAST FaceVisitor |
| Face Recognition Verticals | |
| Possible Applications | 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 |