



Datasheet Face Detection



Version 3.6

This Specification Sheet gives the details of system requirements, features and other salient points of AllGoVision Face Detection & Face Capture application.

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INTRODUCTION

This specification sheet gives the details of system requirements, features of AllGoVision Face Detection and Face Capture application.

The product analyses rapidly the video data, detects human face in the camera's field of view, sends alarms on face detection, captures the face image, tracks it and stores it in database and can be reviewed and searched later.

SYSTEM REQUIREMENT

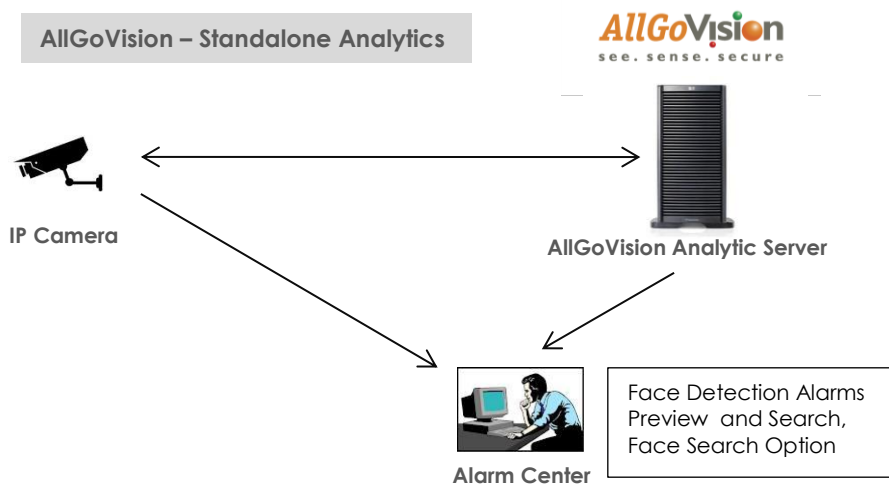
AllGoVision analytics has the following system hardware and software requirements.

CATEGORY	REQUIREMENT
Operating System	Windows Server 2003, 2008, 2012 Window 7, 8
Hardware configuration	GPU: NVidia GTX 780 + i7 3930 6 core, 32 GB RAM, 1 TB HDD, Windows 7/8 can support up to 8 channels For Client: i7 3930 6-core, 8 GB RAM, 1 TB HDD machine Database: 2 TB HDD (Minimum)
Network	Ethernet, 100 Mbit or higher recommended.
Hard Disk Space	50 GB for 1 week storage for alarm files (images & videos)
Database	MySQL 5.5.2
Resolution & Frame Rate	640x480 and above up to 1080p. Frame rate: 10 fps and above
Stand Alone Version Camera support	Models from Axis, Honeywell, Sony, IndigoVision, Bosch, Arecont Vision, Acti, IQInvision, Brickcom, Hikvision, Vision, Pelco, Panasonic
Alarm Management Software	Alarm Center - AllGoVision's Alarm Management Client
VMS Support (Optional)	Milestone, Genetec, IndigoVision Note: With any other VMS supported through Alarm Center

ARCHITECTURE

Below schematic shows architecture of the Video Analytics System

- It is a standalone application.
- It can work independent of VMS (However, VMS Integration option is also available)
- Directly takes the video feed from camera.
- The statistics and alarms are seen in Alarm Center – Alarm Management Client

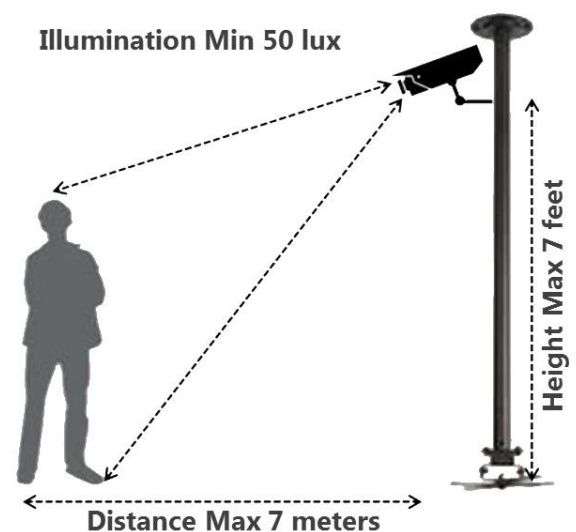


INSTALLATION

The software is easy to install and simple to use with intuitive GUI. The AllGoVision Face Detection supports face detection of people moving towards camera or facing the camera from front.

Camera Installation

- The camera installation should be Angular at a height of about 1.7 m facing the region where people can walk towards camera.
- The camera installation should be generic IP cameras with good quality at Angular direction.
- The illumination should be above 50 lux.
- Good constant illumination should be maintained throughout the day.
- The height of installation depends on resolution. The pixel distance between eyes should be above 40 pixels for detection.



FEATURES

- People face should be visible in front of the camera. Typically the faces of people who are walking towards camera are detected and captured.
- Upon detection of human face in camera FoV, alarms (image and video clip) can be sent.
- Detected face can be captured and stored in the database, and can be reviewed.
- The detection accuracy is greater than 90% depending on the constraints
- Environment: Indoor/Outdoor
- The camera is able to track the detected face when it is moving, without multiple alarms
- The face detection is for frontal profile, and allows ± 20 degree tilt in both x and y direction.
- Works at various resolutions above 640x480 and frame rate above 10 fps.
- Works simultaneously with video analytics for other cameras
- Additional Features for other applications:
 - Face Tracking: Tracks the face in camera FOV
 - Face Counting: Counts the number of faces in the camera FOV at an instant and over a period of time.
 - Face Presence: Detects the time span when any face is in camera FOV

Software Features

- Application to run as service
- The settings for Direct Camera connection
- The settings to send alarms to supported VMS clients and Alarm Center
- Scheduler to enable scheduling of Video Analytics
- Its own viewer (alarm search, preview), reporting and analysis of software

Applications

- With Face Capture option capture faces, store in database for future review and identification.
- Maintain Visitors Image log in terms of Captured Face Images
- Option for Face Forensic Search (Search by Face Image)
- Other applications for other sectors:
 - Face Counting (for footfall statistics) at entrances and exits, service counters.
 - Eye gaze detection for analysing viewing of different shelves in retail store.
 - Viewership detection for digital signage
 - Business Intelligence (Customer tracking and statistics), demographics (age, gender)

Face Detection (Overlay Video) and Face Detection Alarm (in Alarm Center)



AllGoVision – Overlay Video

AllGoVision Alarm Center 192.168.0.44

Filters

Retrieve Alarm files other Networks as well

AlarmID	TimeStamp	AlarmName	ObjectType	CameraName	SourceLocation	AlarmDescription	ObjectColor	ObjectSize
3507	24-10-2013 11:33:43	FACE_DETECTOR	Unidentified	Axis1	Entrance	FACE_DETECTOR	Red	Tiny
3506	24-10-2013 11:33:35	FACE_DETECTOR	Unidentified	Axis1	Entrance	FACE_DETECTOR	Unidentified	Tiny
3505	23-10-2013 09:21:05	OBJECTS_COUNTING	Pedestrian	192.168.0.188 - Cam	Entrance	IN = 761 OUT = 111	Unidentified	Unidentified
3504	23-10-2013 09:15:48	ILLEGAL_PARKING	Unidentified	192.168.0.188 - Cam	Entrance	ILLEGAL_PARKING	Unidentified	Tiny
3503	23-10-2013 09:15:10	OBJECTS_COUNTING	Pedestrian	192.168.0.188 - Cam	Entrance	IN = 761 OUT = 111	Unidentified	Unidentified
3502	23-10-2013 09:14:45	LOITERING	Unidentified	192.168.0.188 - Cam	Entrance	LOITERING	Unidentified	Tiny
3501	23-10-2013 09:14:15	OBJECTS_COUNTING	Pedestrian	192.168.0.188 - Cam	Entrance	IN = 761 OUT = 110	Unidentified	Unidentified

3400 3600

Alarm Preview

Alarm PopUp

24-Oct-13 11:33:43 AM FACE_DETECTOR Axis1

AllGoVision Alarm Center – Face Detection Alarm

ALLGOVISION GUI

AllGoVision product offers a graphical user interface with windows-oriented, tab based, point and pick interface. Extensive use of graphical icons, pull-down menus, buttons, check boxes, and radio-buttons are incorporated to reduce typing work to the minimum possible extent.

AllGoVision product GUI consists of tabs:

Server Setup Tab

The server setup tab consists of setup for VMS connection or camera connection.

Analytics Setup Tab

The Analytics setup tab gives options to set the analytics fields for different features. The face detection settings are completed here.

Advanced Setup Tab

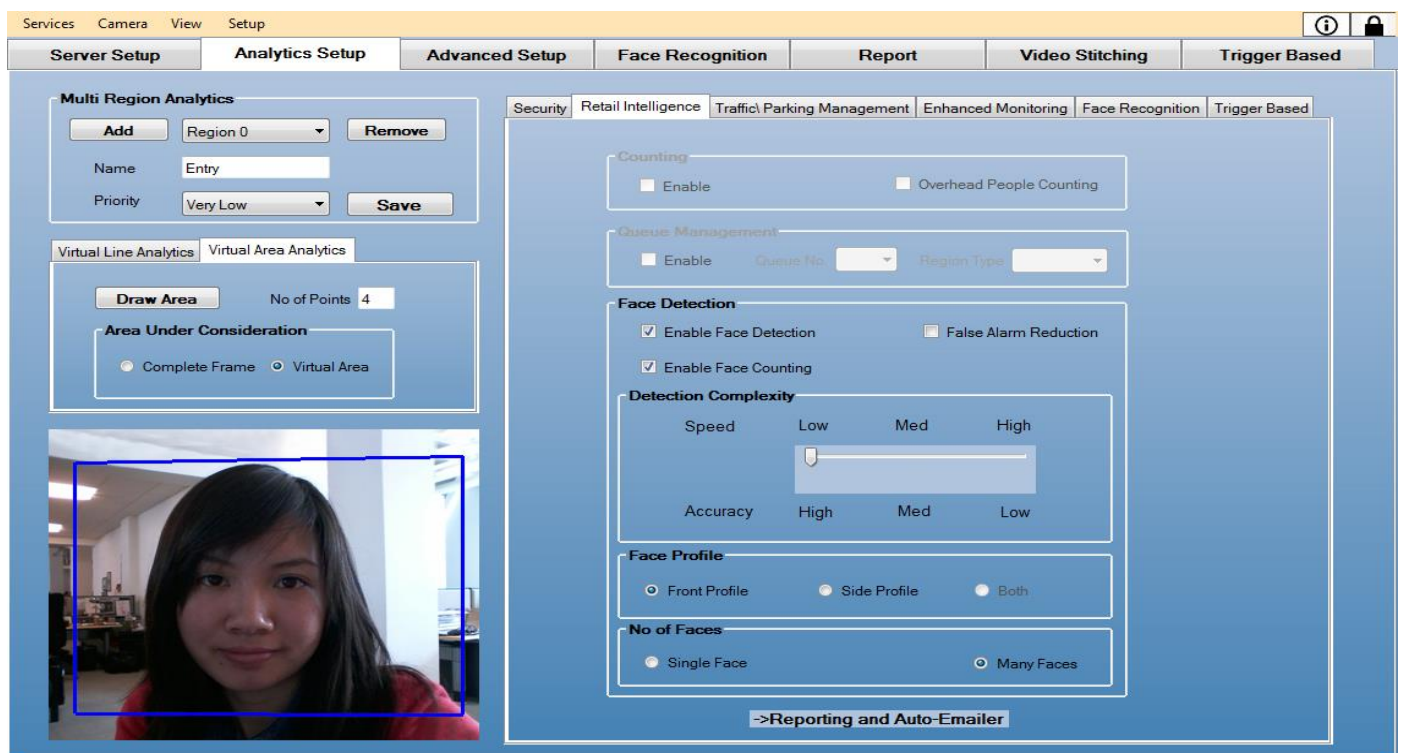
This tab gives options to select advanced settings like camera environment, analytics processing complexity, shadow removal sensitivity, camera view, predefined object size and minimum object size.

Report Tab

This tab gives option to plot the statistics of counting features. Both line and bar charts are possible. This also has auto e-mailer and export of plots and report.

Face Recognition Tab

This tab is used for Face registration.



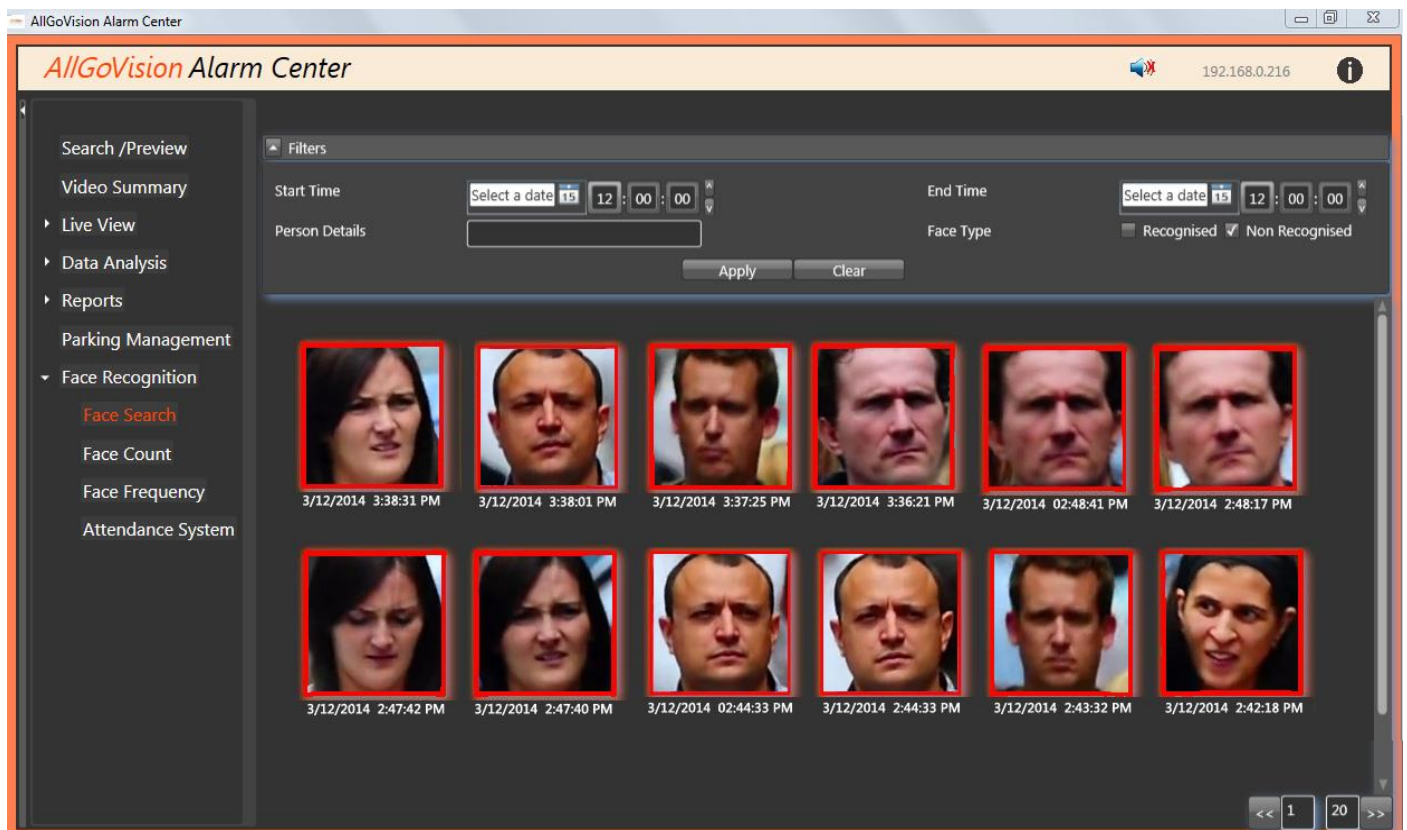
AllGoVision Analytics Setup Tab

ALLGOVISION ALARM CENTER

AllGoVision Alarm Center is a Client to view all the Face Detection alarms generated by AllGoVision analytics running on different systems across a LAN. It captures faces, stores in database which can be reviewed as needed.

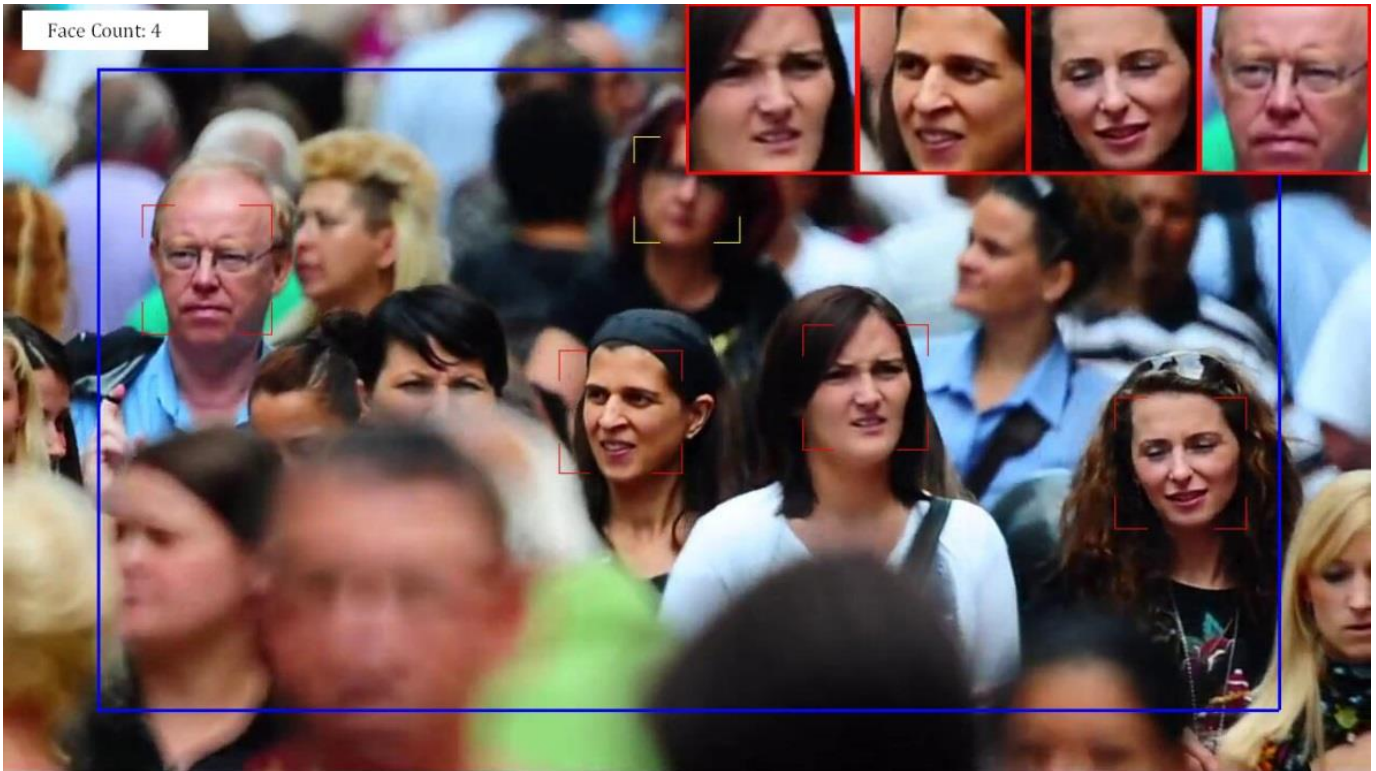
Features

- Alarm Popup & Alarm Video Playback
- Displays alarms with date and time stamp
- Search: Filters to search alarms based on it types and properties, Face search option
- Plot and Export of reports in JPEG, Excel and PDF format
- Schedule of Report, Auto Report Emailer, FTP upload of Reports
- Report of Face Counting with different time duration, interval and plot options.
- Report of time span for Face Presence
- Database is MySQL

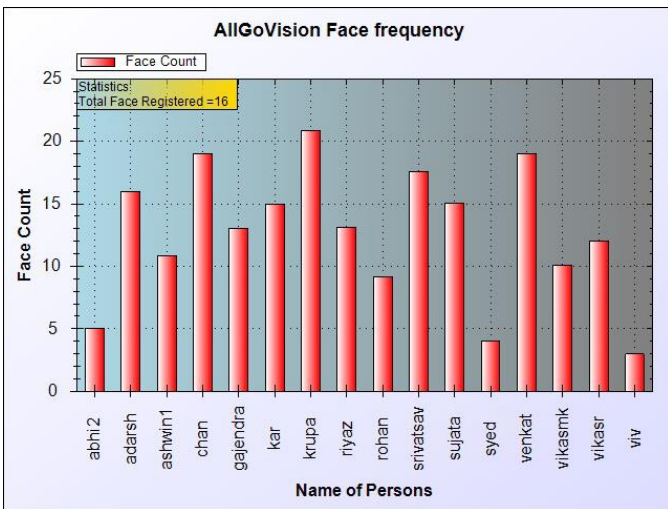


AllGoVision Alarm Center – Option for Face Search from Database of Captured Faces

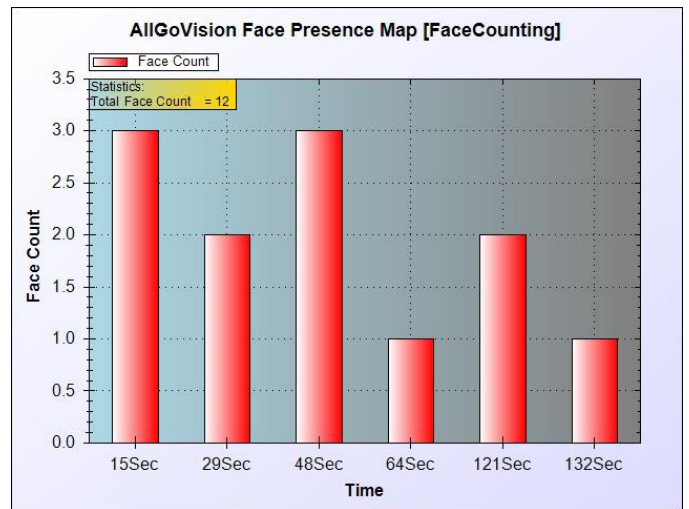
OPTIONAL FEATURES - FACE COUNT, FACE PRESENCE, FACE FREQUENCY



Face Counting – Seen on Overlay Video



Face Count Distribution Map



Face Presence Distribution Map