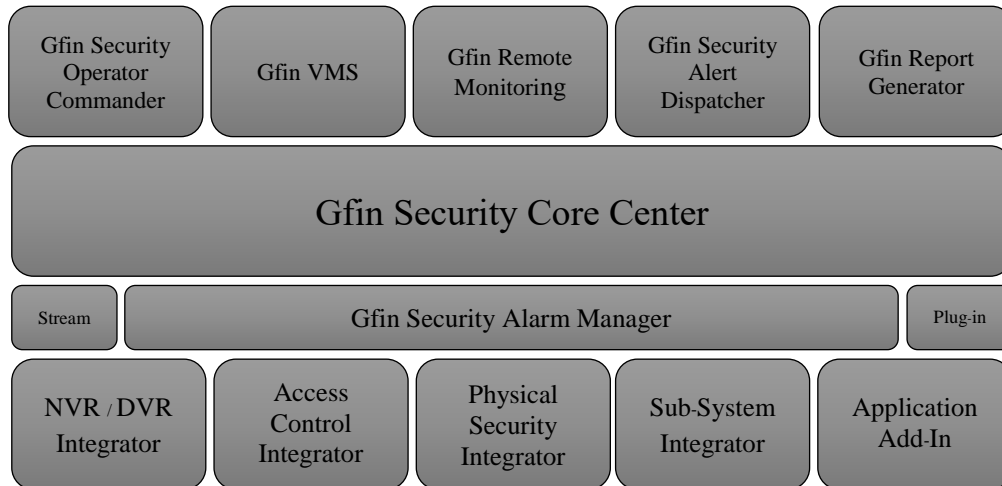


Gfin Architecture and Engineering

Gfin PSIM Software suite consists of many pieces of components work together to manage the alarm messages, keep track devices status, interact with operators and command center display.



A. **Gfin Security Core Center:** system communication bus and database management system. It link all other PSIM modules together.

- a) Gfin Security Core Center Standard Support:
 - a. Onvif: by RTSP Stream
 - b. OPC: Open Platform Communications
 - c. Modbus
- b) Intelligence and Automation: Integrated with IP Camera or CCTV, NVR, DVR, Emergency Call Point (SOS), video content analytics, Access control, Fire Alarm, Intrusion alarm, License Plate, Network I/O Module, Temperature Sensor, Air Condition Control, Lighting Control, Fan Control, Building Automation System, Visitor Management System and other physical security systems via TCP/IP server, BACnet and SMTP Server.
 - a. Can be control Network Input/Output device for On/Off and it can be also time setting these systems such as;
 - i. Air Condition System
 - ii. Ventilation System
 - iii. Building Automation System
 - iv. Lighting System
 - v. Access Control
 - vi. else
 - b. Can be Remote control and / or reception from the control device, including door opening and closing. Intruder detection device, Fire Alarm Control device, Air conditioners, fans and light bulbs via communications network.
- c) Centralized Management: A central manager console connected to the Gfin Server holds all configuration settings in a SQL database and enables the full configuration of all devices and users
- d) Health Monitoring: Centrally monitors and logs the status of all security devices include: video loss of any analog camera, connection loss of any Network IP device, hard drive failure of DVR and NVR and



microSDXC™ card 64GB up to 128GB

- e) System can check read / write status of microSDXC™ of IP Camera on the system
- f) Alarm Server: Support alert from other system integration via Network I/O Module, TCP/IP Server, SMTP Server, Mail Server, BACnet, OPC and Modbus.
- g) Alarm Management: Schedule and automatic handle alarm to Matrix Profile, control output, send alarm to Google Earth, Email, SMS, Camera Preset, send map 2D or 3D alarm to monitor and popup live camera and define alarm priority colors.
- h) Backup Recorder: backup option for NVR and DVR.
- i) Map Function: Multi-layered and interactive maps display the location of every camera, view, remote pc and offer control of the entire surveillance system, and seamless drag-and-drop integration with Gfin VMS.
- j) Logging: Logs of system, event Log, audit and rule, each log has adjustable time limitation in database. Logging system support Pivot grid for searching and related with information searched by Graphic display
 - a. It can store Event logs from various systems and send events via communications network.
 - b. Support history records including door-entry photos and can be used to display images on the screen more than 16 door passes without overlapping images for checking.
- k) Open Database: Support 3rd integration via Gfin Open Database.
- l) Network Monitoring: Integrated with Network Monitoring System and Alert to Central manager console

B. Gfin Security Operator Commander (GSOC): are the working place of security staffs to operate the security tasks such as observing the secured area verification and responding to security alarm incident, etc. GSOC are workstation for security staff. From it screens, security staffs can overview the secure area of any location or monitor any alarm message from any security subsystem.

General

- a. Live view or playback video with 1-256 cameras per view from different or same records simultaneously.
- b. Playback IP camera video record from microSDXC™
- c. Support digital zoom function for live and playback images.
- d. Multi-User operating assigned.
- e. Users authorize control access to Camera device, View, Output control and map.
- f. System login using user name and password

Live View

- a. Advanced layout: can design custom layouts runtime, drag-and drop sequence, view, HTML pages, Remote PC, video streaming (optional) and automatic alert maps and cameras to layouts
- b. Sequence function allows a specified view to rotate between pre-defined cameras and views.
- c. Support multiple monitor provides a main window and any number of either floating windows or full screen views
- d. Support Two-way audio (check audio support on support list).

PTZ

- a. Control of manual Pan-Tilt-Zoom and presets operation from clients.

Playback

- a. Search for recordings base on camera, event, date and time.



- b. Playback including fast/slow playback and single frame stop.
- c. Export single images in JPEG format and AVI format and write to external storage.

Map

- a. Map images can be in standard graphic file formats including JPEG.
- b. Support multi layered maps such as country, city, building and room.
- a. Open camera preview on 'mouse click' show views or camera on map.
- b. Map overview of operational status and object-click interactive, show icon and event / alarm form cameras, Emergency Call Point (SOS), network I/O device (Input/Output), Map, View, Temperature and Remote PC and send image to Virtual Matrix.
- c. Support drag and drop cameras, views, map and Remote PC send to Gfin VMS.
- d. Support multi-layered map alarm status.

Alarm

- a. Queue Alarm observations so that the system will automatically trigger alerts in accordance with defined events and display cameras, personal image and maps, support 1-256 queue alarm display.
- b. Alert on event such as motion detection, recorder and camera failure, input active and other event support.
- c. System can send loss connection alert for network equipment, Main Controller, Server and Computer
- d. Notify user via sound, SOP (Standard Operating Procedure), Email, SMS (Option), Output active, PTZ Control, Matrix Profile (Preset View), camera and map popup.
- e. System can automatic pop up alarm/alert on the virtual matrix monitor display and show video signal, map and alarm devices.
- f. Alarm status of microSDXC™ from IP Camera On/Off and camera failed

- C. **Gfin Virtual Matrix System (Gfin VMS):** Video Wall Controller or Virtual Matrix Display. It combines physical monitors to one display or divides one physical monitor to multiple displays. It supports any kinds of data source such as Video, Map, Graphic image, etc.
- a) Gfin VMS can be command and control any display monitor connected to the networked to display CCTV images and map shows the location of the device with the alarm.
 - b) Gfin VMS support and Integrated with Gfin NVR.
 - c) Gfin VMS can be Multi server unlimited view of MJPEG, MPEG 4 and H.264 from IP Camera, Video encoders with analog cameras and network video recorder
 - d) Gfin VMS Advance layout can design custom layouts and support snap to grid function to virtual matrix monitor on runtime.
 - e) Gfin VMS Advanced control support pixel control independent, full screen and normal screen on TV wall and Virtual Matrix Monitor with "mouse click"
 - f) Can control zooming and flexible size of window display from the control panel an independent.
 - g) Gfin VMS Matrix Profile is the system configured and provide map, video and device alerts to any monitors display in the system. Simultaneously all schedule display monitor, video signals, maps and device alerts.
 - h) Gfin VMS support Virtual Matrix Monitor function;
 - a. Can control the switching signal to other display.



- b. Monitor management system support to custom and distribute the screen display on the user requirement.
- c. The screen (Virtual Matrix Monitor) can support at least the following display.
 - i. CCTV and CCTV in Sequence format
 - ii. Camera Group of video signal (View)
 - iii. Video streaming
 - iv. Maps and alarms of the incident equipment.
 - v. Any computer screen that connects in network (Remote PC).
 - vi. Display in the form of a Web application.
 - vii. Google earth or Google map or map image file .jpg
- i) Gfin VMS Display Source: Virtual Matrix Monitor support display source as follows.
 - a. Camera of IP Camera, NVR and DVR
 - b. Group View for different camera or same NVR and DVR
 - c. Support Camera Sequence view
 - d. Map Alert Display
 - e. Remote Monitor Computer (Remote PC)
 - f. HTML Page or Web Application
 - g. Video Streaming (mms://, http://, rtsp://, over onvif)
 - h. Google Map Alert Display
 - i. Video Capture Card (USB/PCI/PCIe)
 - j. File:
 - i. Document Files (*.ppt, *.pdf)
 - ii. Image Files (*.jpg, *.gif, *.png, *.bmp)
 - iii. Video Files (*.avi, *.wmv, *.asf, *.mpg, *.mov, *.mkv)

D. Gfin Remote Monitoring: solution for security supervisor or security staff who work outside security control room.

E. Gfin Security Alarm Dispatcher: Generate alert message from PSIM software to acknowledge supervisor the incident status .

F. Gfin Report Generator :tracks all the information and steps for compliance reporting, training and potentially, in-depth investigative analysis.

G. Gfin Security Alarm Manager (GSAM) :collect alarm message, prioritize and interpret to security staff .

- a) Supported On/Off alarm devices (such as Siren) or audio signals from a computer.
- b) Supported Email or SMS notifications.
- c) Can Configured alarm priority and different colors
- d) Can show signal display by Camera queue, Map queue, Camera pop-up and Map pop-up when have alarm event such as Camera Motion detection, NVR or camera failure or Network I/O active and else.