

Integrated Surveillance System

GSF Computerized Backends



Founded since 2005, is the Malaysian MSC status computer engineer company in Puchong, Selangor D.E, we designs, supply and support computerized surveillance backends, visual data, IoT, artificial intelligent (Ai) applications and professional services.

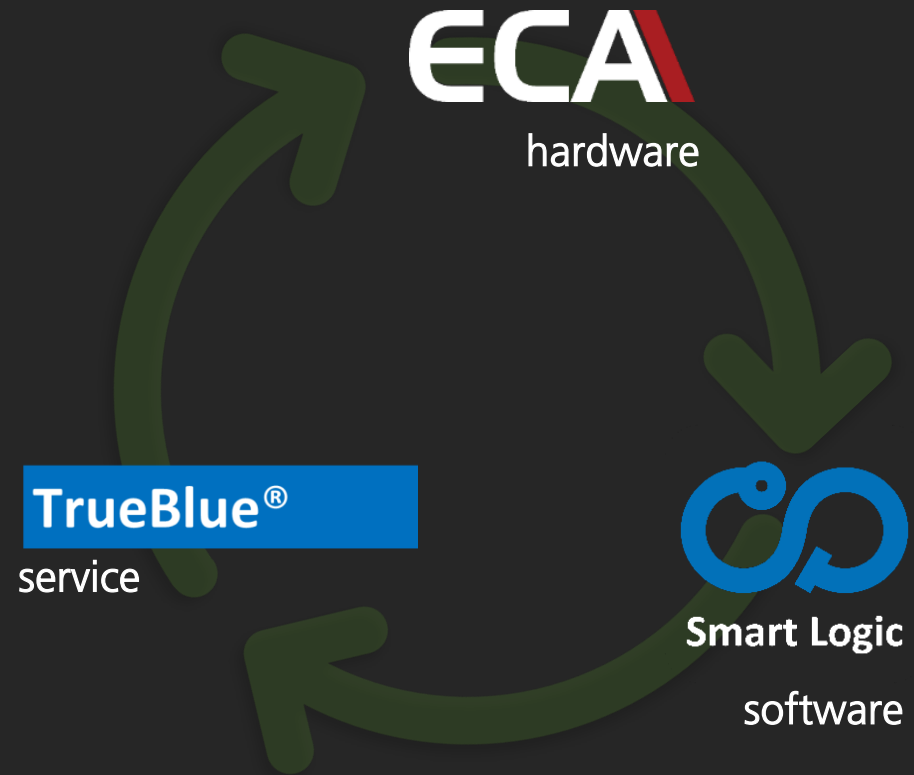


Eco-System

To handle current complex Ai/IoT integrated systems. A strong foundation is required in order we can properly served our customer.

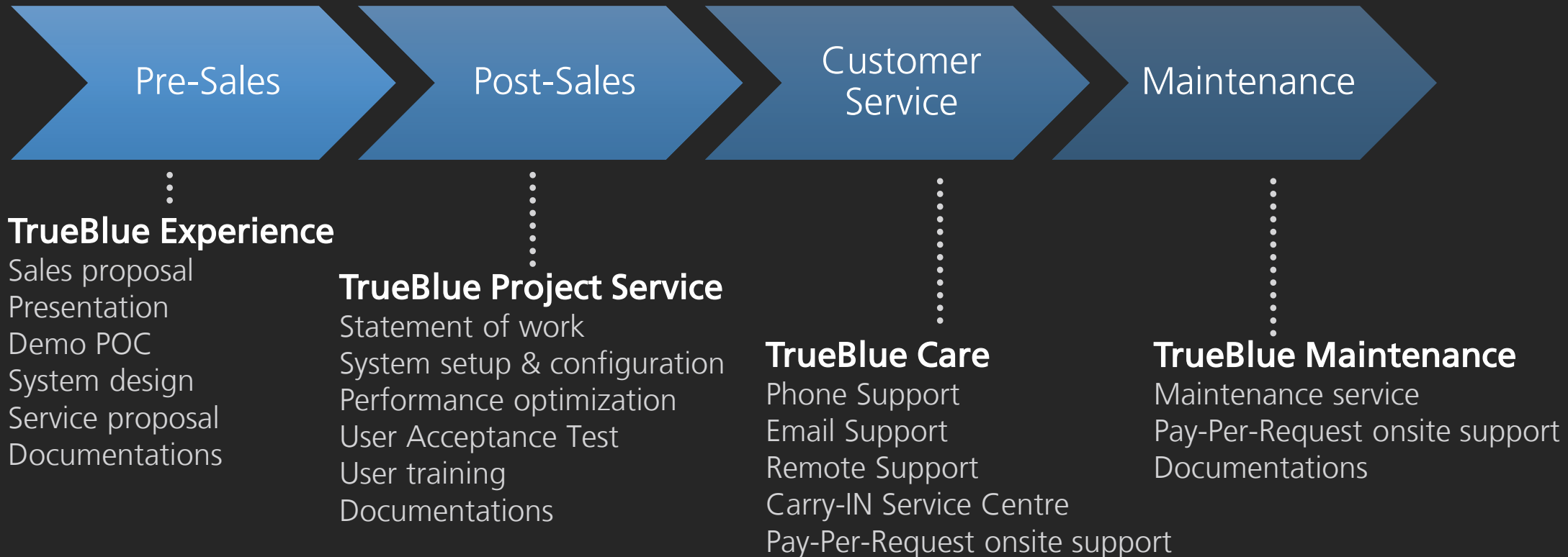
ECA computer platform and Smart Logic software foundation is properly laid in GSF techLAB for decade, many engineering time and effort has been put into study and research for both hardware and software performance.

if you are a Customer, then you deserve TrueBlue® Support from our dedicated support engineers who are committed to deliver the best for you. Don't consider this as a service, but rather an investment for enhanced peace of mind and the satisfaction of a job well done.



Customer Quality Assurance

TrueBlue services start from sales proposal stage, to ensure system quality design. We delivered what we designed in optimized performance setup during post-sales stage and continue our care with professional customer service. TrueBlue Maintenance continue customer investment for a long runs.



Specifically Built for Surveillance

ECA4 was designed specific for 24/7 surveillance usage

x64bit Architecture ecaOS-5

ecaOS-5 is much efficient, reliable and performance that ever. Redesigned from ground zero, effectively support to latest Intel® multi threading processor and Microsoft® Windows 10 Enterprise. Two times faster than 32bit. Four times more workload capacity (system memory).

Superb CCTV Workloads

ECA is capable to handles up to 200 channels of camera recordings in a single system or 162 channels of live CCTV monitoring as client workstation.

[GSF Intel Case Study PDF here](#)

Hardware Accelerated

The GPU does all video rendering, and the CPU remains available for smooth software operations. Thus, reduce hardware cost. This is applicable for both desktop and mobile app platforms.

The screenshot displays the Macula Monitor software interface. The main window shows a live CCTV feed of a man in a red jacket and face mask standing in a hallway. The interface includes a top menu bar with options like Live, Playback, Sequence, Smart Search, Alerts, Library, Video Wall, Access Control, Reports, FR, and VDS. A search bar is visible on the right. Below the feed, a search results table is shown, listing various events with columns for Time, Channel, Tag, Subject, Subject Similarity, Age, Gender, Sentiment, and Search Score.

TIME	CHANNEL	TAG	SUBJECT	SUBJECTSIMILARITY	AGE	GENDER	SENTIMENT	SEARCHSIM
31-May-21 13:33:30	Front Entrance	Jemi		72.219	38.5	M	Disgust	84.596
31-May-21 09:41:58	Front Entrance	Jemi		96.978	38.2	M	Disgust	94.102
31-May-21 09:41:44	Front Entrance			0.000	41.6	M	Disgust	47.978
28-May-21 18:16:17	Front Entrance	Jemi		94.505	36.9	M	Neutral	82.436
28-May-21 09:35:44	Front Entrance	Jemi		72.773	42.6	M	Disgust	60.748
27-May-21 13:22:47	Front Entrance	Jemi		82.362	44.4	M	Disgust	68.522
25-May-21 09:54:42	Front Entrance	Jemi		73.220	41.9	M	Happiness	65.885

Validated performance

In GSF TechLab, we have simulated real life surveillance workload in degraded and repairing RSS condition, which all hard drives at this stage will be busying on the repairing process, while still having live feed videos from surveillance cameras, we must ensure the performance must be able to handle the real-time workload without affecting the video recordings.

Model	Parity	Read	Write	Workload	Surveillance Videos (CH)	
ECA-DX48	RSS-Single	7,976Mbps	656Mbps	600Mbps	100CH @ 4K	✓
ECA-EX48	RSS-Single			600Mbps x 2	200CH @ 4K	✓
ECA-FX48	RSS-Single			600Mbps x 3	300CH @ 4K	✓
ECA-DX48	RSS-Single	8,064Mbps	717Mbps	400Mbps	200CH @ FHD	✓
ECA-EX48	RSS-Dual	16,660Mbps	872Mbps	600Mbps	200CH @ 5Mpix	✓
ECA-FX48	RSS-Dual			1200Mbps*	or 100CH @ 4K	

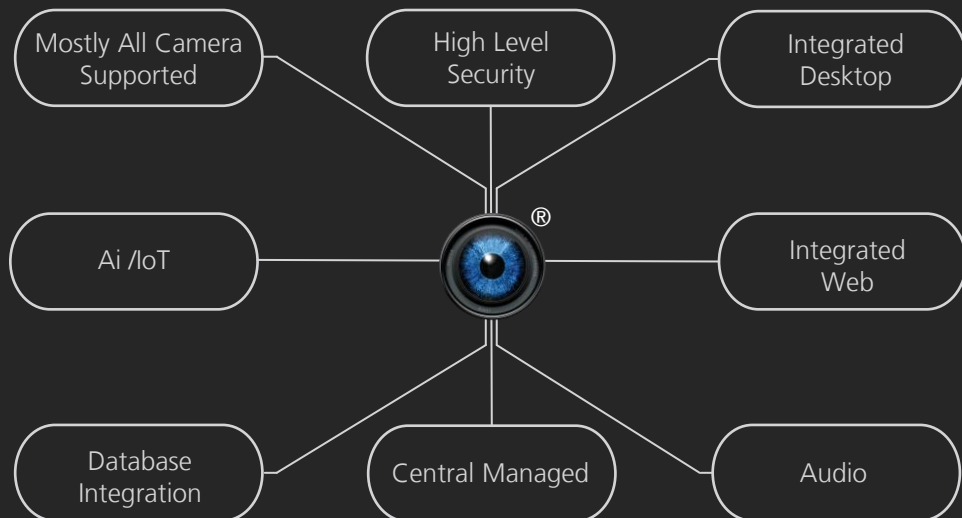
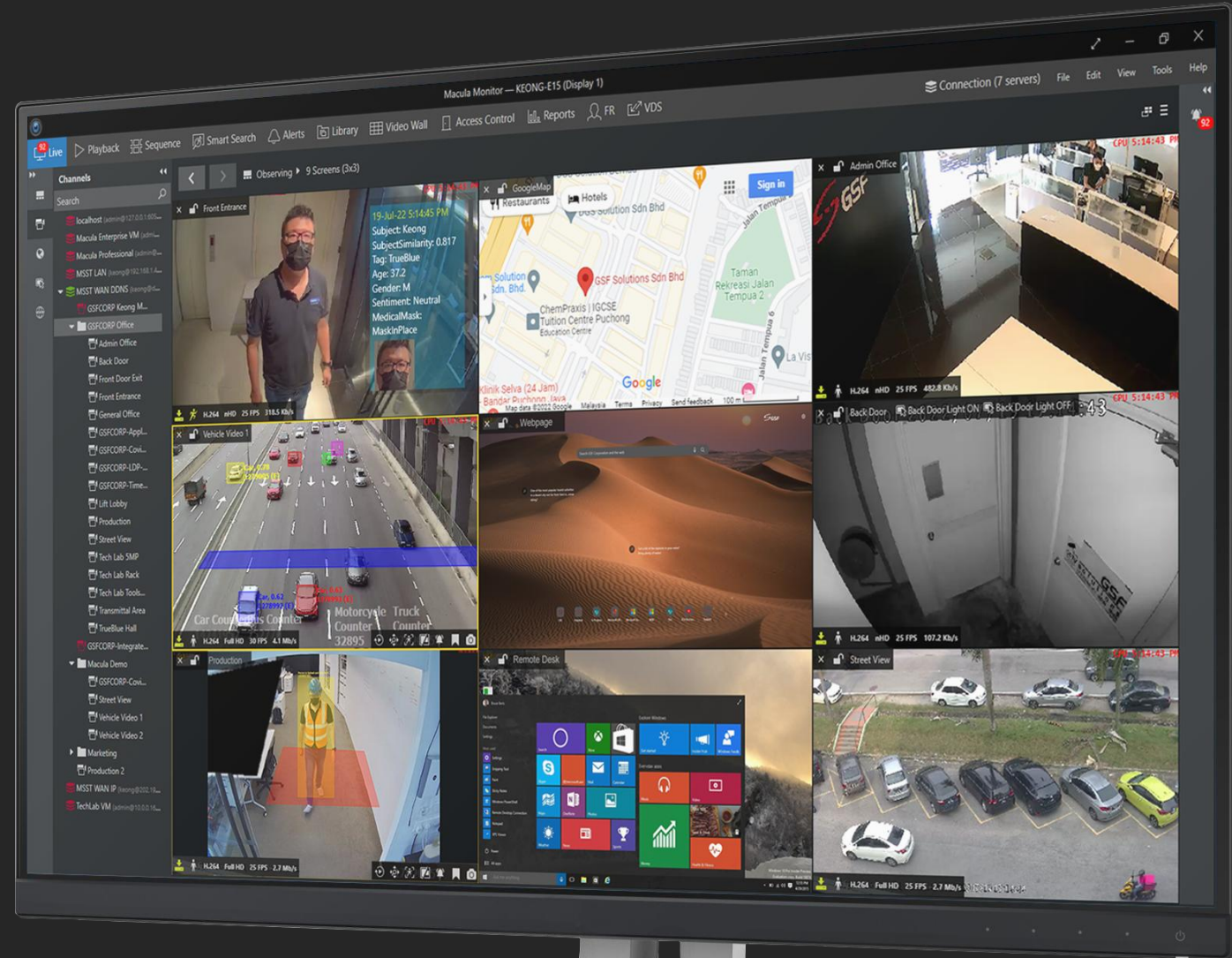
* server mode tuned by TrueBlue

Do more than just a video



Video Management Software Comes with **Service Support**

macula's key integral elements is integrating all subsystem work together as one. In modern surveillance, every data is important to create evidence meticulously. The integration with Ai, IoT sensors and Database will be taken care of.



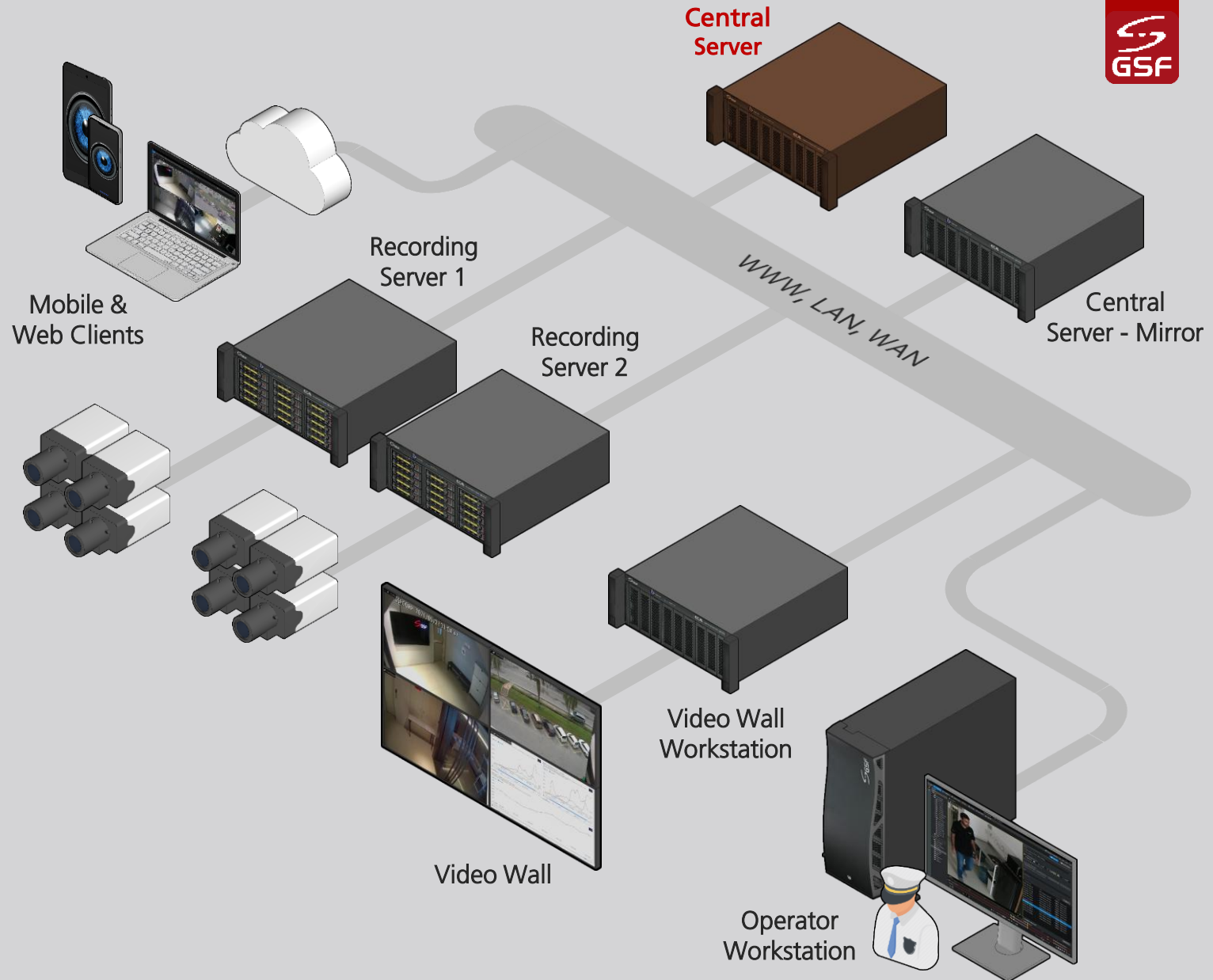
Centralized Managed Surveillance System

Effective and Efficient in Operation

Single login, multiple managed, make management of large-scale surveillance much more effective, and easier to maintain. For example, you required to change a user account password, you only changed once at central server, and it will automatically be synced to all servers. Thus, saving on human capital cost and expenses.

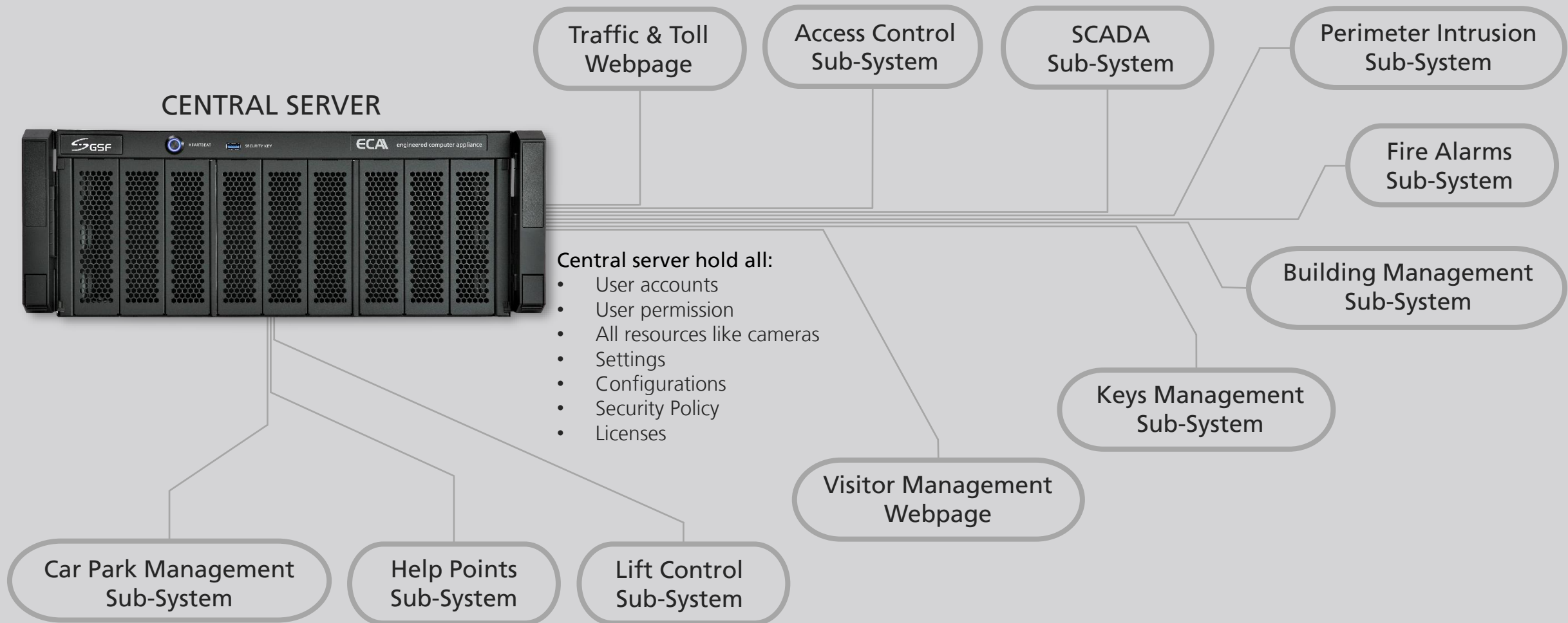
Central server hold all:

- User accounts
- User permission
- All resources like cameras
- Settings
- Configurations
- Security Policy
- Licenses

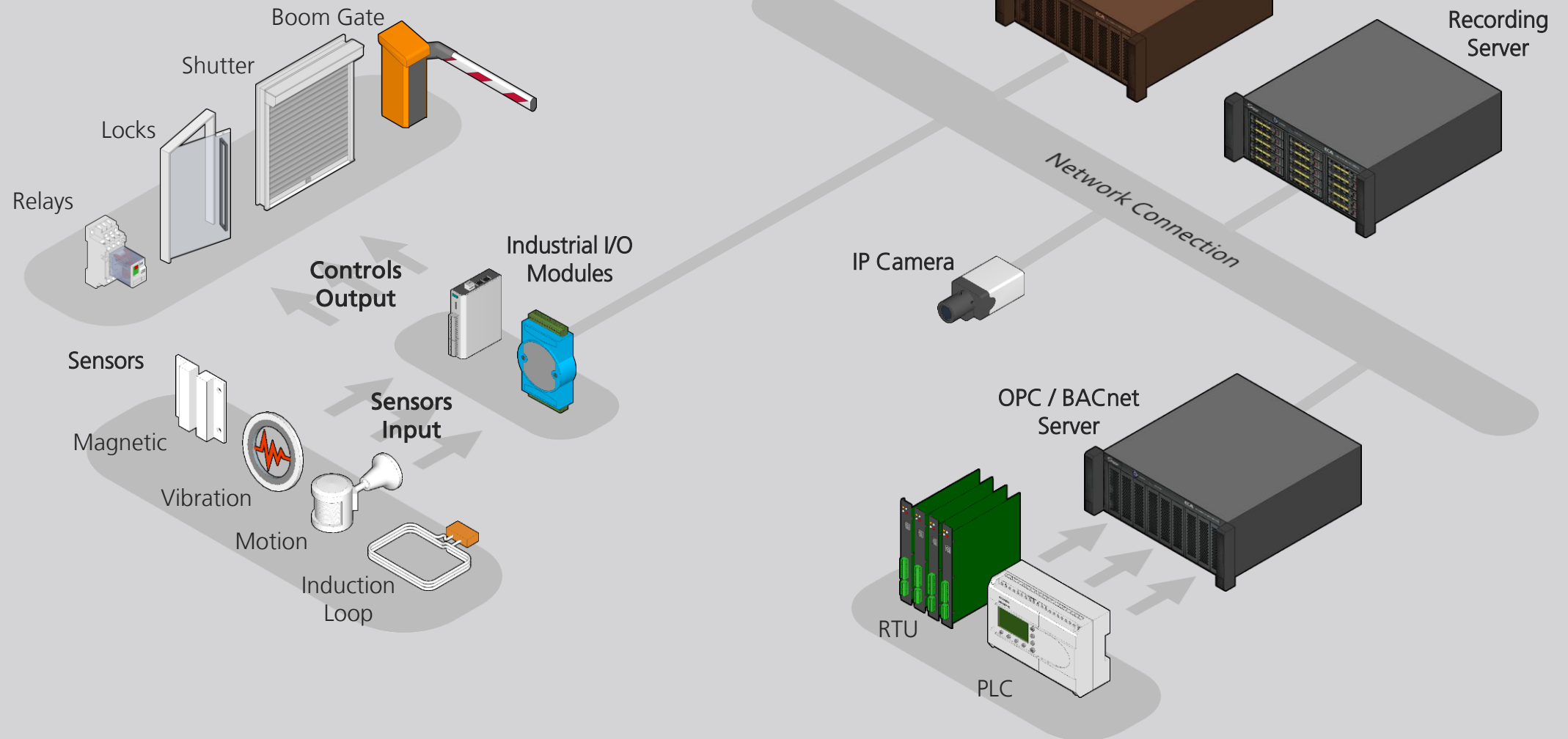


Universal PSIM & iSMS

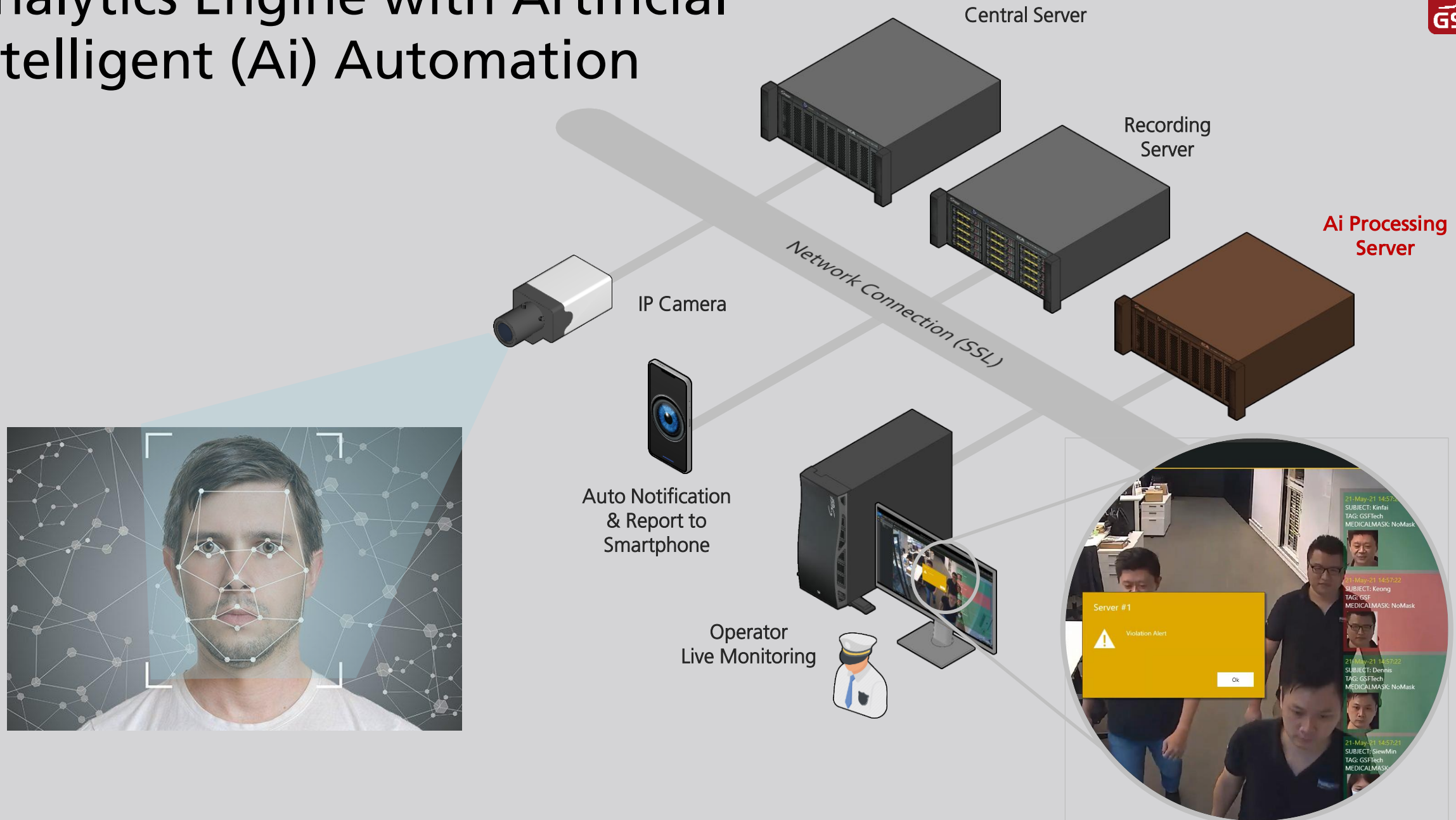
Support 3rd party sub-system desktop application integration and webpage interface into one seamless integrated physical security management system.



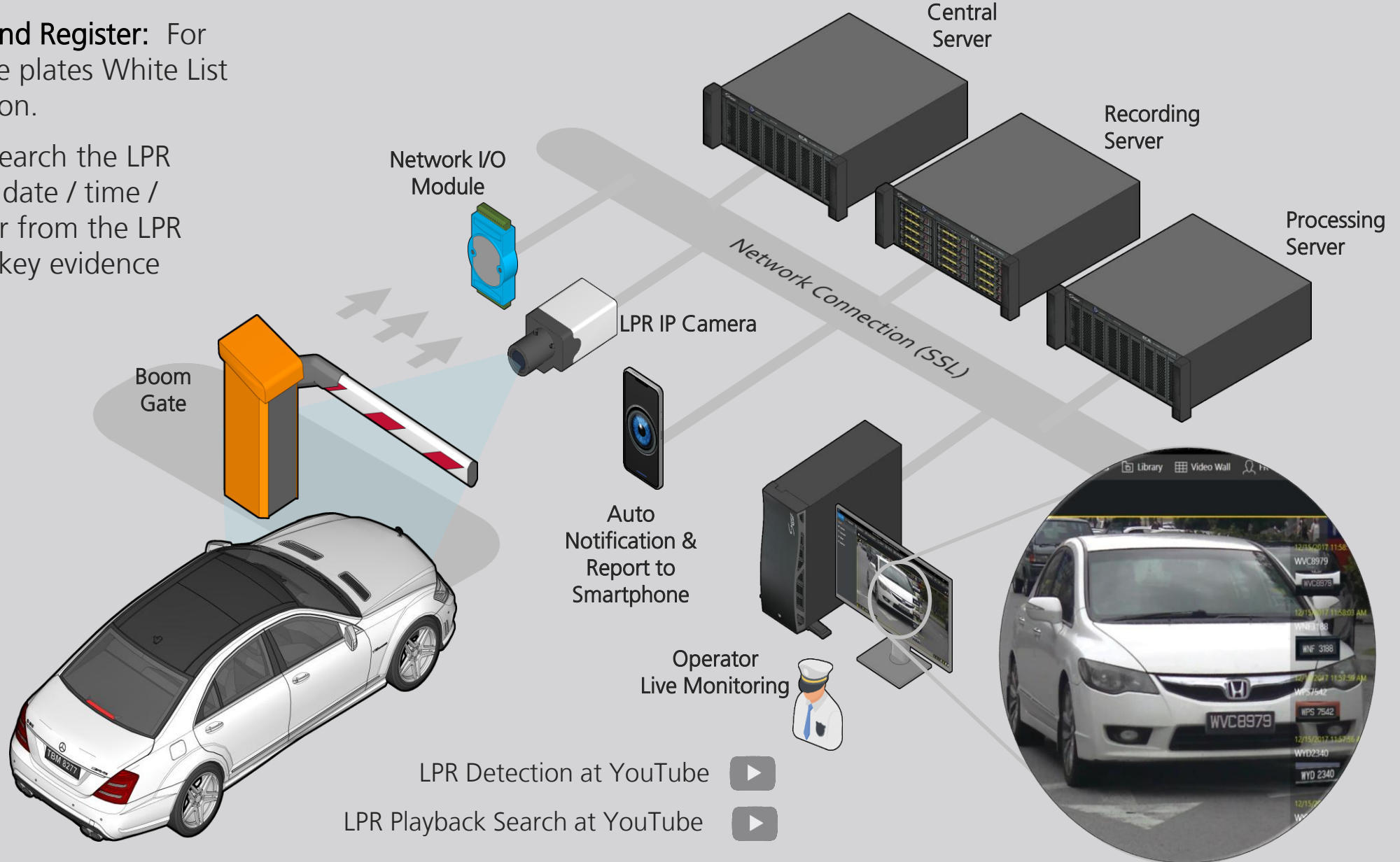
I/O Sensors, BMS & SCADA Integration



Analytics Engine with Artificial Intelligent (Ai) Automation



LPR Smart Search: Search the LPR video and image by date / time / license plate number from the LPR server to locate the key evidence efficiently.



Face Recognition System (FRS)



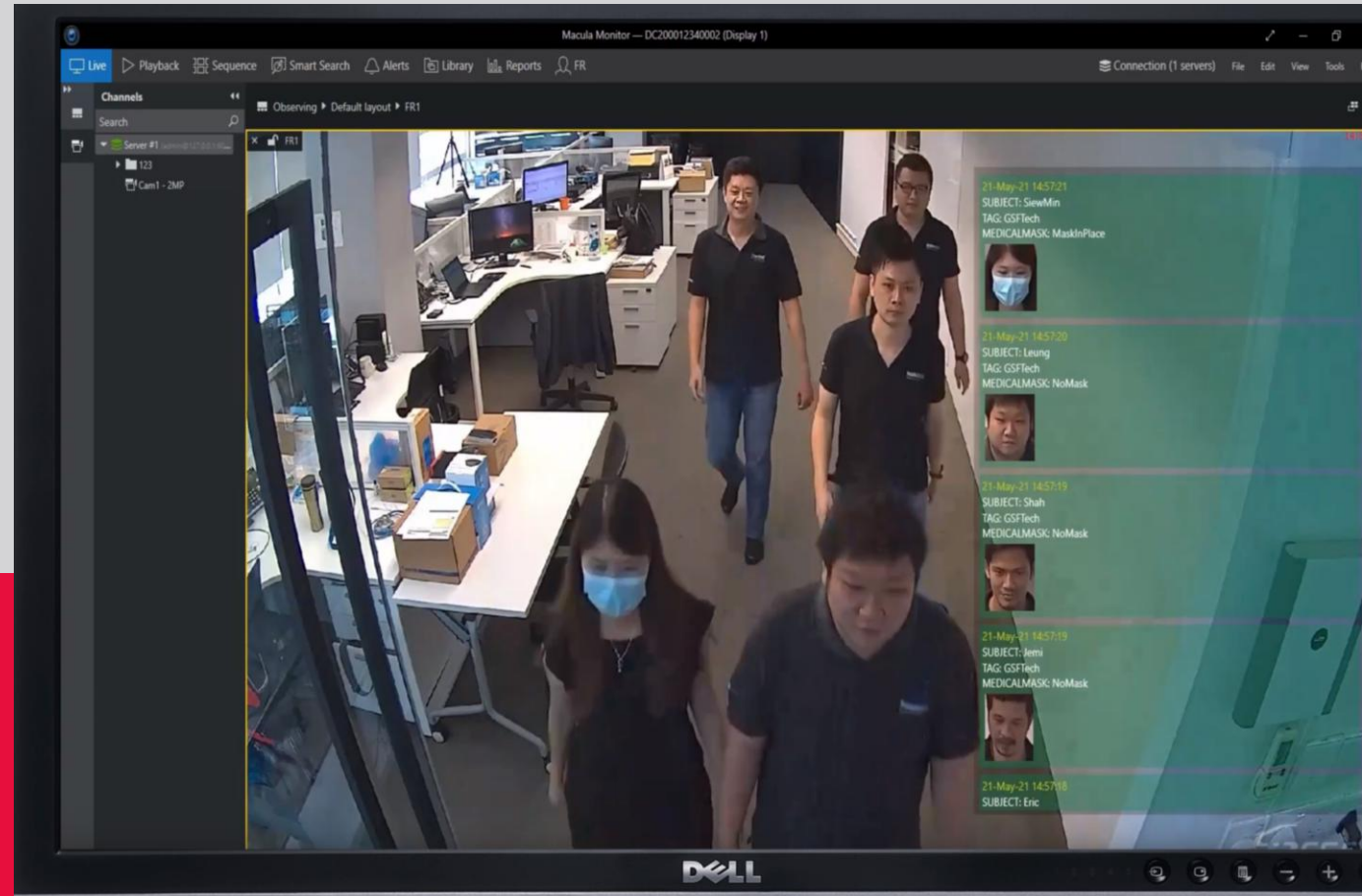
Smart Logic ® FR System rely on neural networks are faster, lighter, and more accurate at the same time also good on partial faces (which includes people wearing masks) and faces at big angles. As well as offering facial expression, gender and age information. Smart Logic ® Face Recognition System (FRS) engine is based on neural networks, featuring all the benefits of the cutting-edge FR technologies.



[FRS brochure >](#)

Liveness Detection for Anti-Spoofing

Liveness detection distinguishes live persons and non-live person such as printed photo or images from smart devices. Liveness feature is important if you are using face recognition system (FRS) for critical application like door access, or door un-locking function.



FRS in Live Monitoring

[Watch at YouTube](#)

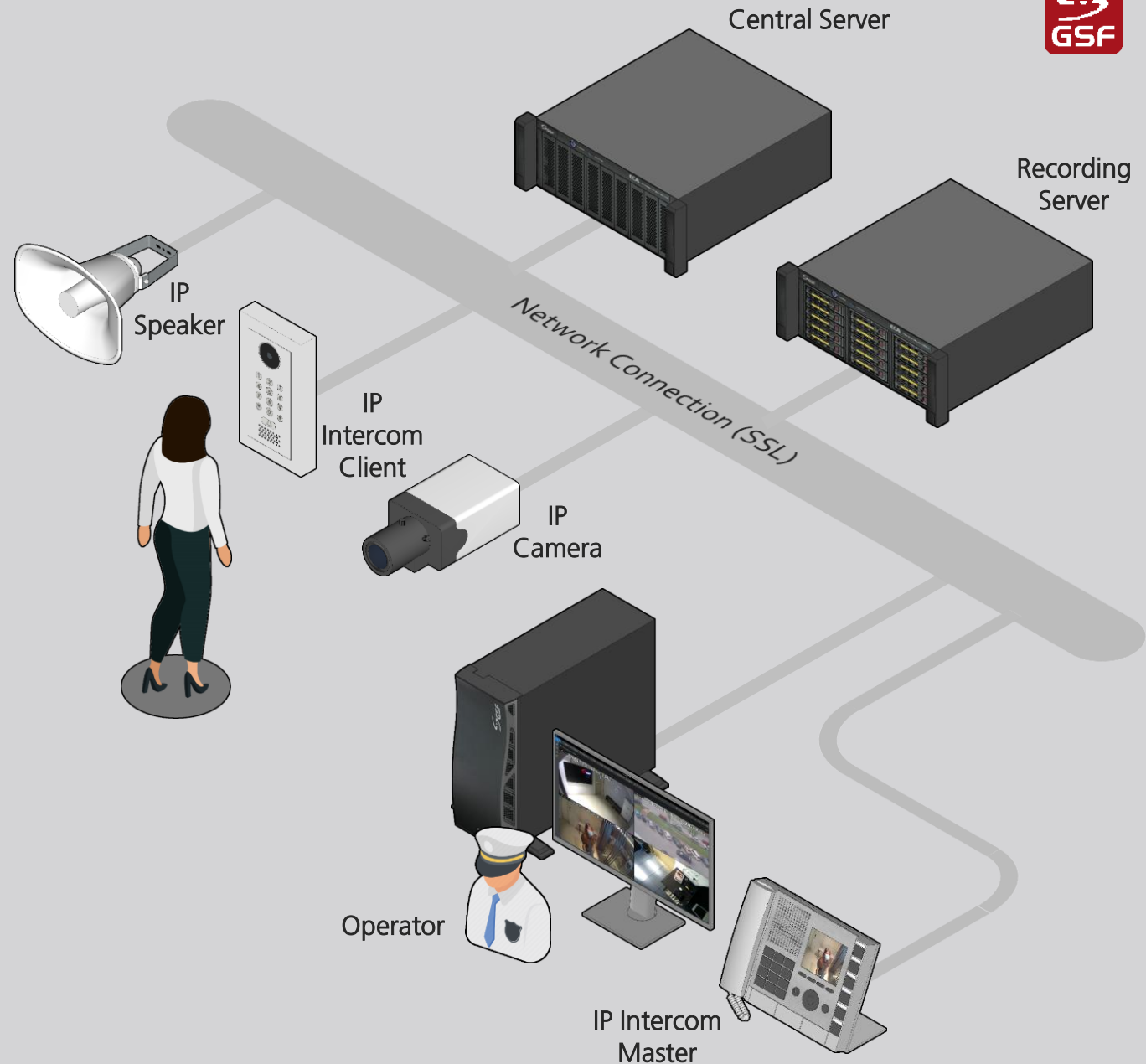


[Watch at YouTube](#)



Audio Integration

- 2-ways conversation recordings (IP intercom)
- 2-way communication to IP speaker or IP intercom
- Pre-recorded sound clip playback to IP Speaker according to events logic or as Public Announcement
- Intercom Call event Tagging or alert
- Pair any audio (IP speaker or intercom) with any IP cameras



Access Control Integration



Seamless pairing CCTV with Access Control

In one single GUI, single login access both systems for Instant search on events log plus CCTV footage simultaneously.

▶ Seamless User Experience
<http://gsf.ms/vasvideo1>

▶ Door Functions
<http://gsf.ms/vasvideo2>

▶ Cardholder Features
<http://gsf.ms/vasvideo3>

▶ Smart Filter & Search
<http://gsf.ms/vasvideo>

▶ Event Action
<http://gsf.ms/vasvideo4>

The screenshot displays the Visual Access System (VAS) interface on a Macula Monitor. The interface is divided into several sections:

- Top Navigation Bar:** Includes tabs for Live, Playback, Sequence, Smart Search, Alerts, Library, Access Control (selected), Reports, and Connection (1 servers). It also has standard menu options: File, Edit, View, Tools, and Help.
- Events Table:** A table with columns for TIME, EVENT, DOOR, and CARDHOLDER. It lists 18 events, with the first event highlighted in blue.
- Search Interval:** A section for filtering events by time, showing a range from 1/9/2019 15:50:56 to 2/10/2019 23:50:56.
- Search Filters:** Includes dropdowns for Source (Any door), Event, and Cardholder (Leung), along with a Search button.
- CCTV Video Feed:** A live video stream showing a person in a server room, with a timestamp of 16:41:27.
- Cardholder Details:** A section for the selected cardholder, Leung, showing a profile picture and a button to view cardholder events.
- Door Details:** A section for the selected door, Server Room Door, showing the event type (Valid entry access) and a button to view door events.

At the bottom right, a status bar indicates "18 event(s) found".

Visual Access System (VAS)

Info 3/9/2020 15:47:46 Human Detected Street

Info 3/9/2020 15:45:12 Human Detected Street

Info 3/9/2020 15:43:59 Human Detected Street

Info 3/9/2020 15:42:42 Human Detected Street

Info 3/9/2020 15:41:01 Human Detected Street View

Info 3/9/2020 15:40:27 Human Detected Street View

Info 3/9/2020 15:40:08 Human Detected Street View

Info 3/9/2020 15:39:35 Human Detected Street View

Info 3/9/2020 15:35:14 Human Detected Street View

Info 3/9/2020 15:33:57 Human Detected Street View

Info 3/9/2020 15:29:09 Human Detected Street View

Info 3/9/2020 15:26:57 Human Detected Street View

Info 3/9/2020 15:26:08 Human Detected Street View

Info 3/9/2020 15:22:30 Human Detected Street View

Info 3/9/2020 15:21:09 Human Detected Street View

Info 3/9/2020 15:20:56 Human Detected Street View

Info 3/9/2020 15:19:02 Human Detected Street View

Info 3/9/2020 15:18:11 Human Detected Street View

227 bookmarks(s) found

Export CSV...

15:55

16:00

3/9/2020 16:03:26

Ai-Powered Human Detection

Human is what we interested. The Ai based human detection sensor can filter or TAG the event whenever human appear in the CCTV cameras.



Ai Based Perimeter Intrusion Detection

Virtual perimeter or virtual fencing make overall site deployment a huge cost saving by eliminate expensive cabling cost. Yet it is a lot more accurate because it would alert only if human triggered the virtual line.

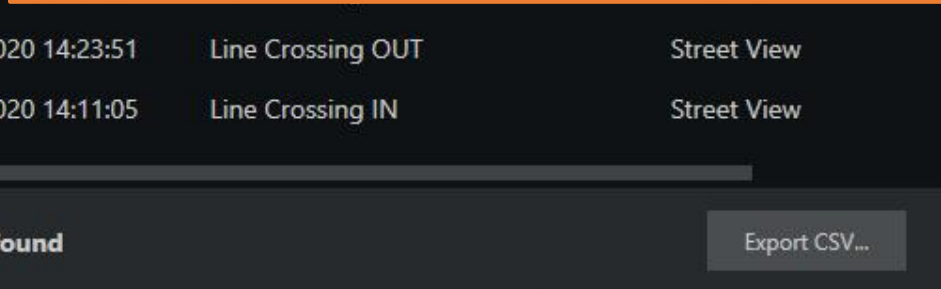


Ai Based Crowd Detection

We can set virtual Zone from any surveillance camera and set (for example) if there is more than 2 person then alert. This is useful and cost effective for control and in confined space we can use it as social distancing.

	SEVERITY	BOOK
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
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	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20
	Low	3/9/20

178 bookmarks(s) f



count when human pass IN or OUT the counting lines. This is very useful to know statistic for your premises like entrance. Now you can turn any cameras into statistic counters.

All Cameras Supported. Almost.

Virtually any IP cameras in the market were supported.
More than 4000 models of camera in the market.
As well as ONVIF Profile-S

Onvif Profile-G Edge Recording

Upon network lost, the camera (edge) will start recording in it's SD card. And automatic sync back to server when network resume.

H.265 HEVC Ready

Save almost 40% of storage space with this compression

I/O Device (Sensors)

Support Moxa, or network I/O module to collect more sensors data like magnetic or motions PIR.

Pre-recorded Video/Picture Files or RTSP

You can load any recorded videos files like AVI & JPEG as device source. This is useful as information / ADs display. Or any RTSP video source input.



Mobile Cameras

Turns any android/IOS device into surveillance cameras with audio, and manage them as one of the CCTV cameras.

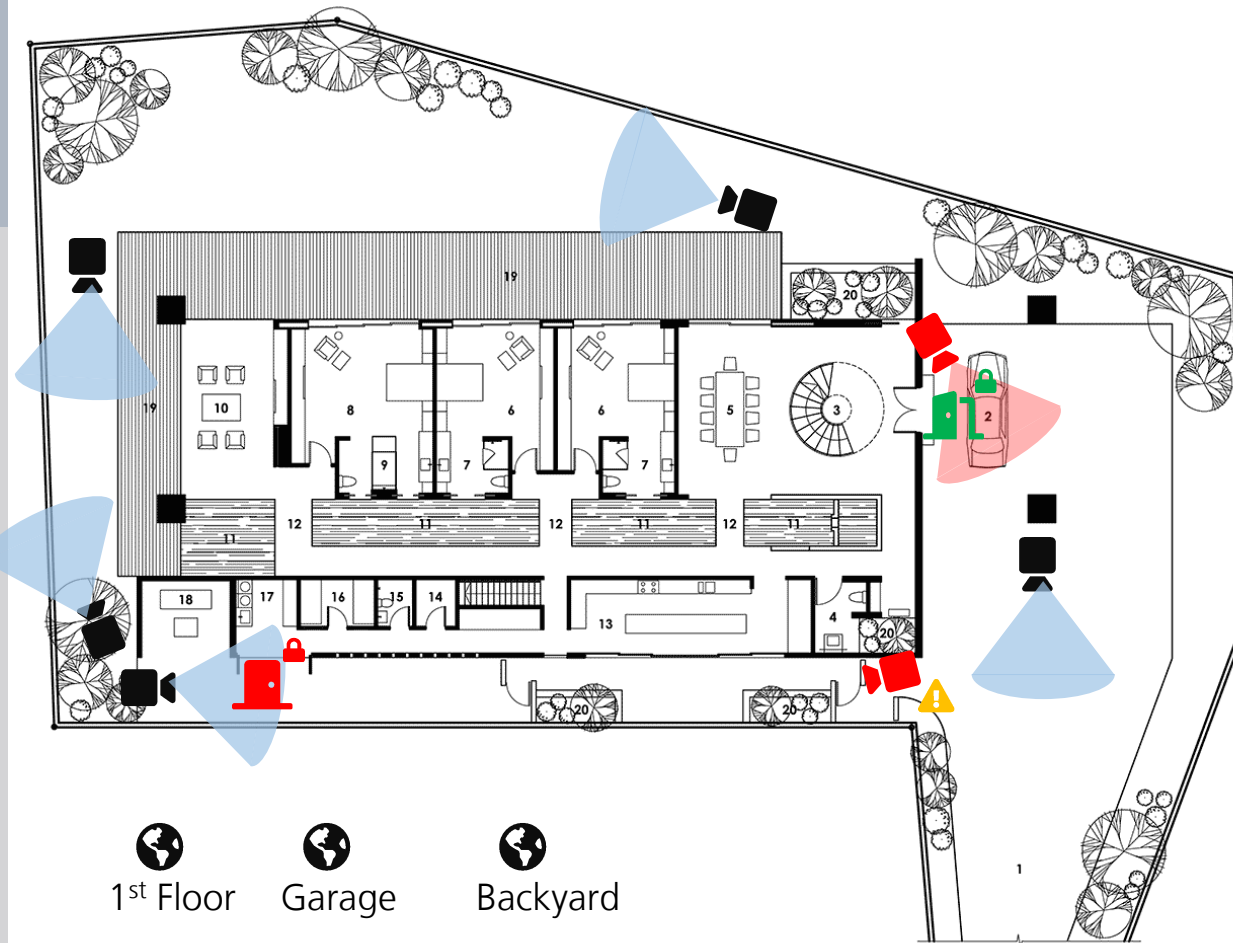


Maps

Create visual floor plan and marked every existing hardware devices visible.

Interactive Markers

Place interactive marker to mark existing hardware devices such as CCTV camera, magnetic door sensor, I/O sensor, public speaker and etc. You can set the interactive marker for viewing individual CCTV camera or set to layout for viewing all CCTV cameras from a specific area. The marker also will indicates activate or deactivate marks such as a green mark means the door is locked or camera is working, red mark means the door is unlocked or camera is stop working and will be triggered alert to notify security personnel.



User map/GEO map

macula® support JPEG file and other image format such as PNG, JPG and so on that allow user to upload user's map and do mark on user's map. Also allow to mark on GEO map. If mobile device is activated or turn on as a CCTV camera, MAPS will auto detect and mark on map based on mobile device's location.

Integrated Web Device

Improve productivity and effectiveness



Browsing web page under one roof

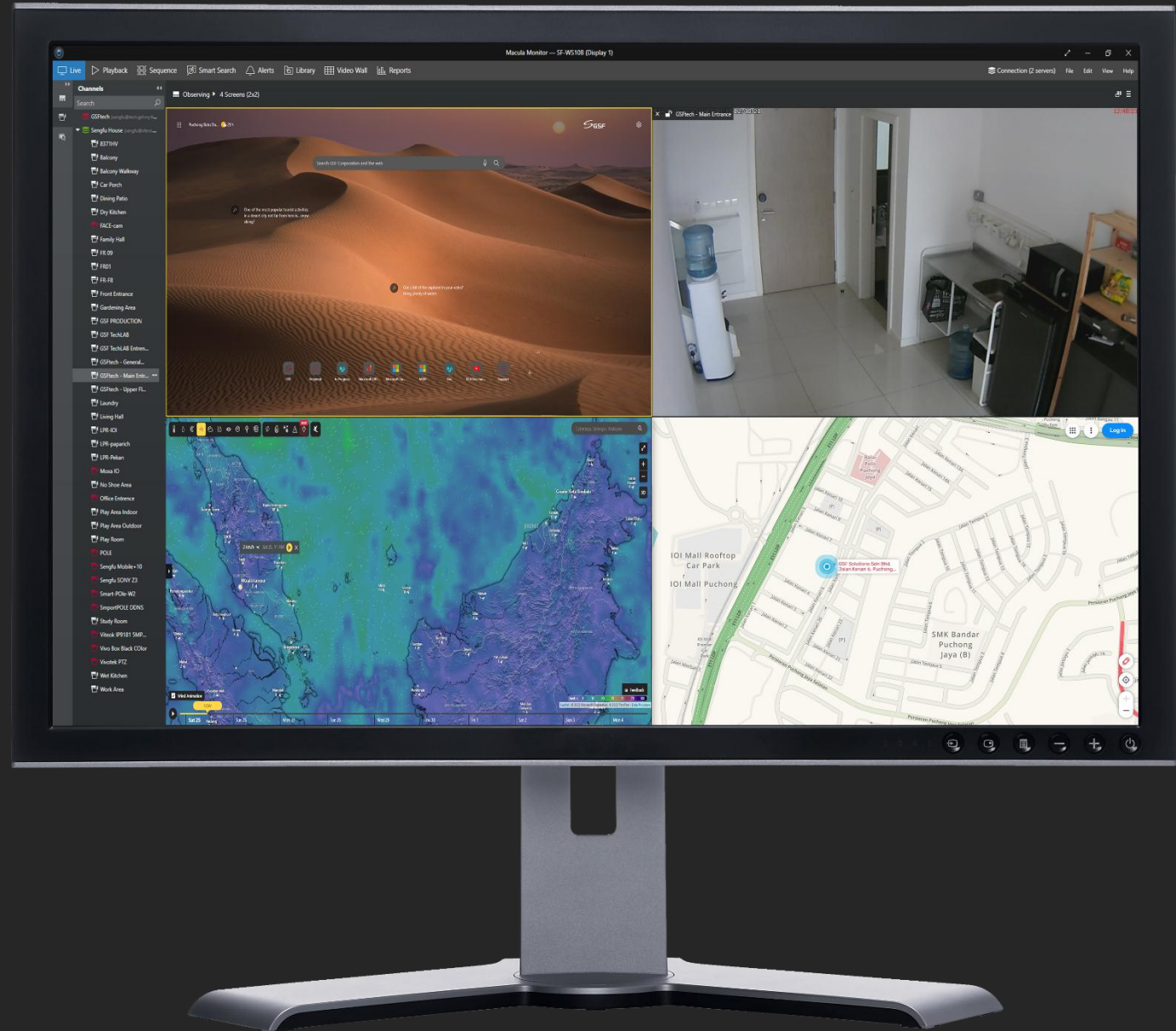
This powerful tool is connected internet that allow browsing web page and monitoring surveillance system at the same time.

Interactive webpage – A webpage enable to interact a like clickable button or web page that react to load information.

Non-interactive webpage – A webpage only for viewing information such as countdown timer, weather forecast, world clock and so on.

Enable live recording

For recording as evident purposes to keep in database as a history files also for record.



Servers

Enterprise IT friendly



Central Server

Centralized management server, keep all settings, users account, and licenses. Support Mirroring for Redundancy.

Recording Server

Able to recording surveillance system and any modern web browser at the same time. No plugins installation is required

Live Broadcast

Live Broadcast any cameras to RTMP protocol, like YouTube, Facebook

Backups Wizard

Step by step wizard easily backup any video to external storage.

Streaming Server

With multi-cast technology built-in, the server can support virtually no limitation of video stream out client connections, without increasing or CPU loads.

Replication Server

Use as temporary local buffer server. Send archive to Data Center on network availability or by schedule, in lower FPS.

Failover Server

Sometimes very unfortunate event happened. You may need the WHOLESERVER failed over as backup plan. Macula Enterprise support multi group failover servers to any recording servers, via networks.



Video Wall

Macula Enterprise support centralized managed and create comprehensive video wall environment in the control room via network.

Fall-Back Drive

In smaller scale design, where failed over server is not in place, the fall-back HDDS in individual server or NAS maybe the helper to take over the recordings when main storage is failed.

www.gsfcorp.com

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