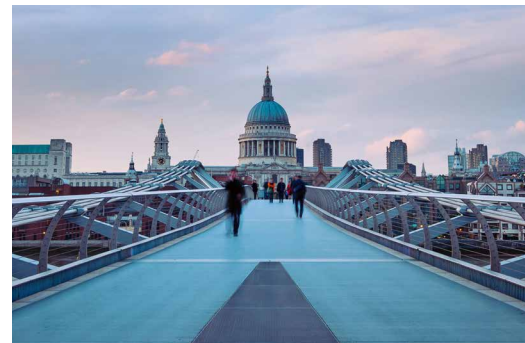
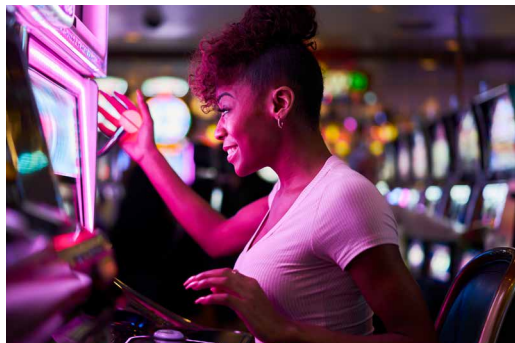
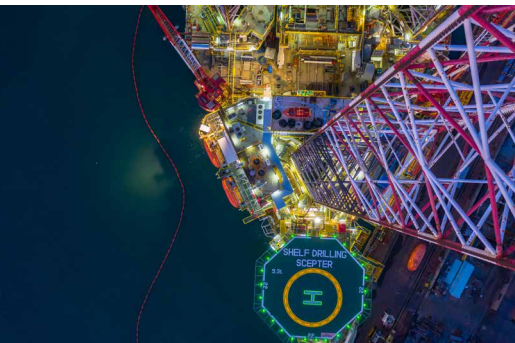


SYNECTICS



Synergy

Surveillance at the Heart of Control Rooms



Protecting what matters, where it matters most



Intelligently Integrated Security Management

The latest evolution of Synectics' security and surveillance platform, Synergy is the result of years of industry experience and sector expertise.

Synergy delivers an open software platform that mitigates risk, improves operational efficiency, and provides peace of mind for security managers.

Synergy is the foundation of Synectics' intelligently integrated turnkey solution, which reflects our continued commitment to customisable security and surveillance systems that seamlessly integrate with third-party products.

Created with exceptional levels of performance and functionality that users have come to rely upon, it introduces new and enhanced features that expand its proven capabilities. It's designed for professional security and process control operations that require maximum flexibility, scalability, and reliability.

Synergy delivers a range of features and can be cost-effectively implemented across a single or multi-site operation.

This flexible, modular approach enables you to assign appropriate system access and functionality based on user or site-specific requirements. Software can be upgraded with enhanced features as requirements grow.

As control room environments become more complex and diversified, Synergy offers streamlined access to commonly used functions accelerating response to critical events and presenting you with vital situational information to proactively manage threats quickly and appropriately.



Whether you require command and control of stand-alone or enterprise-wide systems; IP, hybrid or legacy analogue video; or integration to multiple sub-systems, (e.g. access, fire, intruder, and process), Synectics offers field-proven solutions to meet your operational needs – all from a single integrated and customisable platform.

Synergy continuously monitors itself and generates reports and audit trails of operator activity, incidents, alarm management, system faults, and configuration changes. Security and operations managers have all the information they need to professionally supervise system performance and track employee use (or abuse).

Intelligent hardware, software and database failover, backfilling video data from edge-based devices, and virtualised server resiliency makes Synergy the system of choice.

Features

- **Flexible, modular-based licensing to fit any size application**
- **Integrated video, data, and alarm command and control**
- **Map-based navigation for simplicity**
- **Proactive and automated incident management and collaboration**
- **Database-driven, user-definable, on-screen forms and customised reports**
- **Secure and customisable user access rights and layouts**
- **System fault and alarm management, automated workflows, and reporting**
- **Open standards compatible with ONVIF, PSIA, OPC, MODBUS, and SNMP compliant devices**
- **Customisable third-party system integration**
- **Set-up wizards for rapid deployment**
- **Multi-site management and remote access**
- **Uncapped scalability to accommodate system growth**
- **Multi-tiered resilience and redundancy for maximum system uptime**

Easy, Intuitive, and Customisable



User Friendly Graphical Interface

Intuitive Navigation between Live and Recorded Video

Easy-to-Use Incident Management

Customisable Drag and Drop Configuration

Engineered with a common-sense approach that prioritises frequent user operations, Synergy is easy to install, configure, and use, even for inexperienced operators.

Yet, it also offers the most powerful security management tools available.

To get you up and running quickly, installation wizards simplify and expedite the installation process with auto-device discovery, centralised administration, and drag-and-drop configuration. Once the system is operational, even first-time users can intuitively access fundamental operational tools.

Operators may choose from a range of standard and customisable user interface layouts ranging from simple camera and video control, alarm handling, and incident management. Each default layout has been developed based on user-feedback and provides logical, streamlined access to commonly-used operator functions.

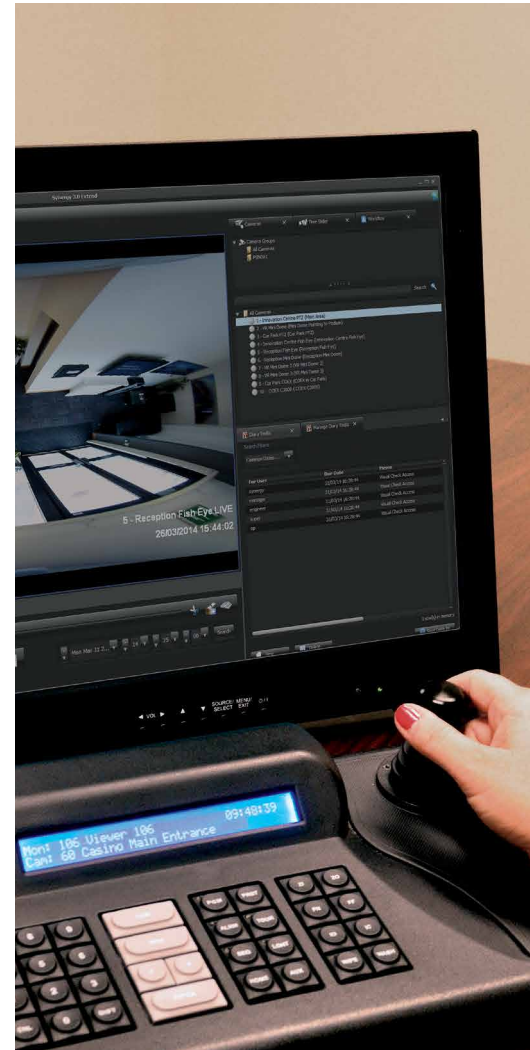
For more specialised requirements, Synergy custom layout builder enables system managers to personalise screen layouts with just the information and tools they require. For instance, surveillance operator layouts will emphasise video and incident management, while security management layouts may prioritise alarms and alarm resolution forms. Technician layouts may monitor maintenance activity while manager layouts display key operator statistics and productivity. With Synergy, one size does not have to fit all.

In addition, layouts can be dynamically changed using pre-configured macros in response to system alarms and events. In the event of a high threat level incident, for example, the layout could graphically present vital alarm status on site maps and then guide operators through step-by-step responses.

Improve operator effectiveness with custom layouts featuring all the information and tools required for site-specific needs.

Busy surveillance rooms monitoring critical assets require immediate access to cameras and video. With Synergy, camera selection is as simple as pointing to a map of your facility, typing a camera number or name, or moving your joystick in the desired direction. Cameras and other system devices may also be grouped by location or category and automatically presented through alarm-triggered macros. Synergy empowers users to recognise threats sooner and respond more consistently.

Operators can easily move between live and recorded video with a single click and instantly retrieve video by date and time, alarm event, motion, or change of scene. Fast, flexible access to recorded footage minimises time spent searching for relevant video and expedites reviews, incident creation, and audits.



Operators can seamlessly move between live and recorded video with a single click.

Professional and **Flexible** **Video Display**



Enhance critical communication and coordination in the control room environment with dynamic video displays.

Synergy provides a multitude of client and display wall options that can be tailored to the needs of any surveillance operation.

Whether viewed on a mobile or desktop device, on a multi-monitor display wall, with live or recorded video, Synergy ensures that the video and alarm data is presented in a unified format that is most useful to particular operators or applications.

Each workstation can present video in a variety of user-selected layouts. Anything from full screen to sixteen camera views can be presented simultaneously, and each can be controlled independently or in synchronisation. Video layouts can be controlled manually or automatically displayed in user-defined configurations based on specified alarm events.

Since Synergy tracks the relative geographic position of one camera to another, it can display a primary camera view surrounded by all of the cameras in proximity to give operators a complete situational view. If a suspect being monitored moves to an adjacent area, a single click creates a refreshed camera proximity overview for optimum navigation and efficiency.



Dynamic Threat Level Display

Display System Reports and Statistics

Show External Web Content

Live Ticker Tape of System Activity

Synergy extends well beyond video monitoring. It also improves critical communication and coordination between operators, security personnel, and management. Display wall management tools are designed to show essential video, alarm, and situational awareness data for surveillance and security teams to act in concert.

Multiple video walls (controlled by a standard Synergy client) display video in any number of layouts that can be automatically populated by user-defined alarms and workflows. Threat levels may be assigned based on a combination of alarms or manual intervention to ensure response procedures are escalated when a series of suspicious events occur at the same time.

Relevant security data such as persons of interests, alarm status, live weather or news feeds, can be displayed alongside video to keep the entire control room informed of potentially related events or information. All monitor wall video and data activity can be recorded and readily retrieved at a later date for audit or training purposes.

Integrated Incident and Alarm Management

Synergy empowers operators in high demand surveillance environments to quickly and easily create and manage incidents.

Incident Management

One click initiates a “live” incident that tracks every action the operator takes until the incident is closed. Clips are automatically dubbed, notated, stored, and can later be accessed and amended with additional evidentiary data.

For ongoing investigations and prosecutable events, Synergy’s customisable incident management system will store maps, snapshots, observer notes, transactional data, and video in user-categorised case files for long-term storage, retrieval, reporting, and export.

Multiple operator collaboration on live incidents is available for scenarios where dynamic team contribution is required. For example, if several perpetrators flee in opposite directions, the surveillance operator can request assistance from one or multiple other Synergy operators. Video and notes from all participating agents is combined into a single case file for efficient incident creation.

Alarm Management

Synergy connects alarm events to video and situational management processes. It delivers colour-coded visual (and audio) messages for internal (system) failures and external alarms (access control, intrusion, point of sale).

It also presents associated maps and video, and even displays management-defined procedures that guide operator response to incidents.

Process Management Workflows

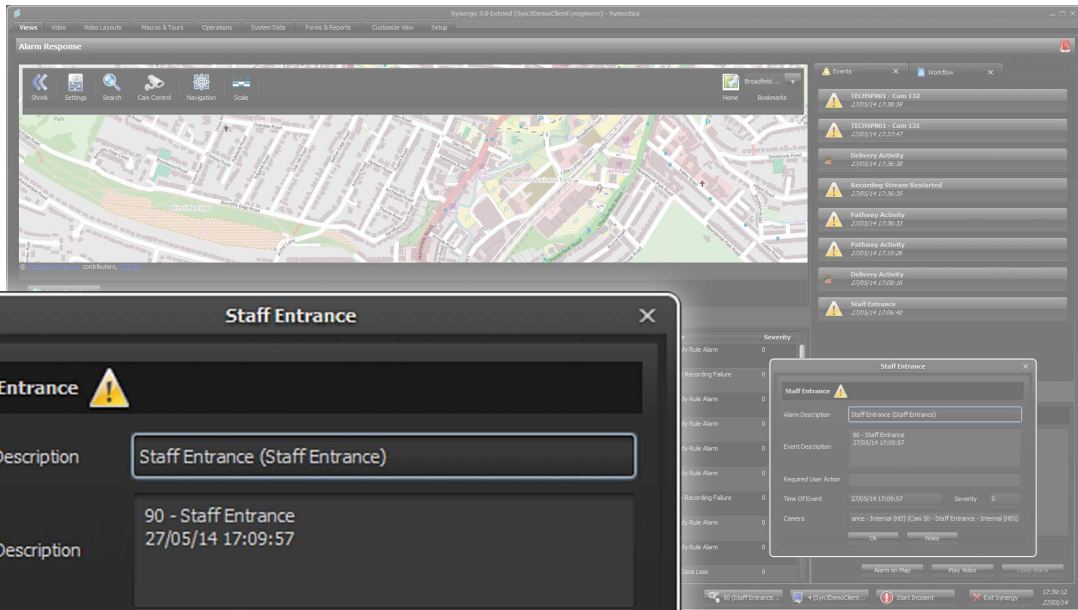
User-definable workflows provide potent process management tools to guide operators through required procedures and responses to alarm events. Workflows automate and track operator reactions to defined alarm conditions with multiple “if/and/or” decision points and specify explicit procedures to follow for each. Workflows can incorporate custom forms, diary tasks, contacts, or automated e-mail or text messaging.

Workflows ensure accurate, consistent, and deliberate responses to alarm events that remove confusion during high-pressure situations and ensure compliance with regulatory authorities.

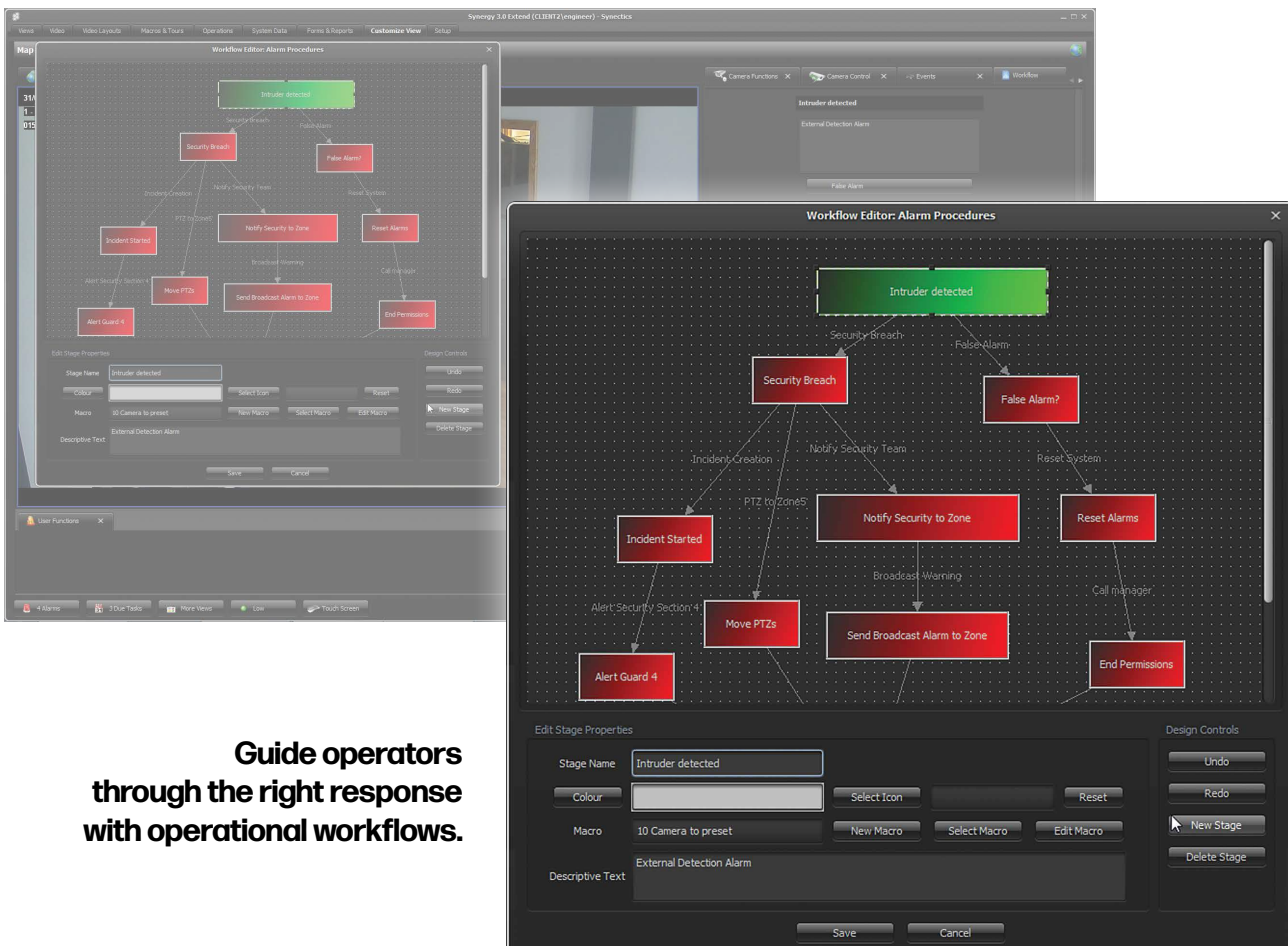
Event and Alarm Counting

With built-in counting functionality, Synergy can tally alarm events, set thresholds and time ranges, aggregate groups, and present real-time results in consolidated totals, graphs, or reports.

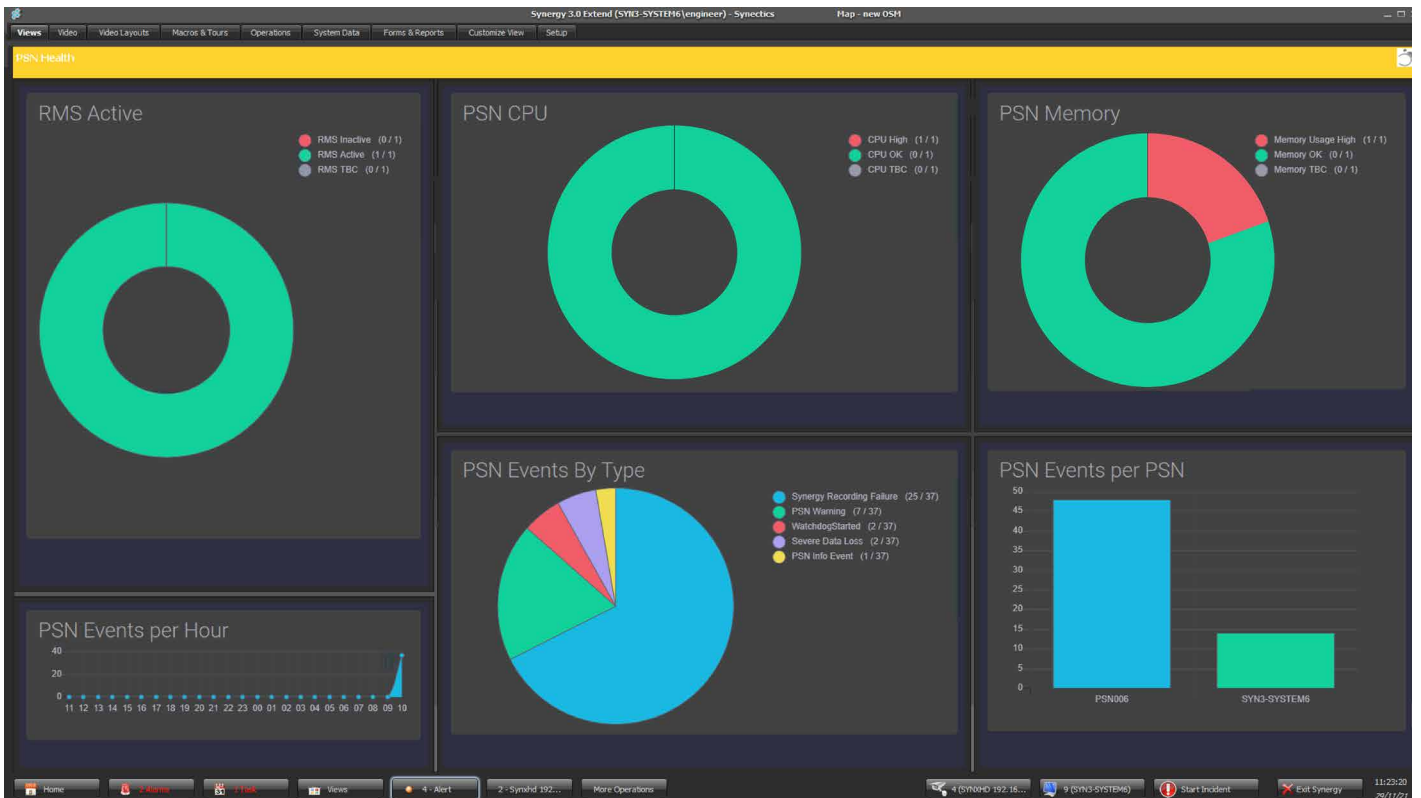
The system can monitor a variety of objects or events, such as the number of vehicles crossing defined tripwire boundaries, people entering or exiting doorways, cash drawer openings, or user-defined alarms.



Logically connect alarm events to video and situational management processes.



Guide operators through the right response with operational workflows.



Comprehensive Insights with Dashboards

Diary and Task Management Interface:

The interface includes a 'Manage Diaries' window with a calendar view for March 2014. A 'New Diary Task' dialog box is open, showing the following configuration options:

- Task Details:**
 - Memo Text: [Empty]
 - Created By: engineer
 - For User: All Users
 - Auto-run?: [Checked]
 - Schedule Rule: Single Entry
 - Select Macro: [Empty]
 - Select Workflow: [Empty]
 - Date Due: 31/03/14 14:33
 - Completion Time: 31/03/14 15:33
 - Select File: [Empty]
 - Audio File: [Empty]
 - Select Contact: [Empty]
 - Select Fault: 0
 - Select Incident: 0
 - Select Patrol: [Empty]
 - Comments: [Empty]
- Task Details (Right Panel):**
 - Memo Text: [Empty]
 - Created By: engineer
 - For User: All Users
 - Auto-run?: [Checked]
 - Schedule Rule: Single Entry
 - Select Macro: [Empty]
 - Select Workflow: [Empty]
 - Date Due: 31/03/14 14:33
 - Completion Time: 31/03/14 15:33
 - Select File: [Empty]
 - Audio File: [Empty]
 - Select Contact: [Empty]
 - Select Fault: 0
 - Select Incident: 0
 - Select Patrol: [Empty]
 - Comments: [Empty]

Diary and Task Management

Advanced Management Reporting and Tools

Synergy reporting delivers essential information on system changes, incidents, alarms, camera activity, fault tracking, and operator performance. Reports and graphs can be custom-built with user-defined fields suited to the needs of the department, situation, or operator for relevant, timely, and applicable analysis.

Historic user, incident, and alarm data is constantly captured and stored, and can be presented in a variety of graphs and reports. Database-driven reporting allows users to search and filter system data by any criteria and save commonly-used reports for future use.

By combining variables such as incident type, camera, and location, security managers can obtain practical data to improve and optimise security procedures. For example, data can be presented graphically or in report format to identify areas of frequent “slip and falls” or criminal activity over a designated time period to highlight problem areas that need remedial attention.

Management Tool Suite

Beyond control and integration, Synergy provides a full range of management tools for supervisors to track system performance, restrict or prioritise user access, audit operator activity, maintain on-going case files, monitor persons of interest, track repairs and maintenance history, and review alarm trends and anomalies.

System Management Highlights

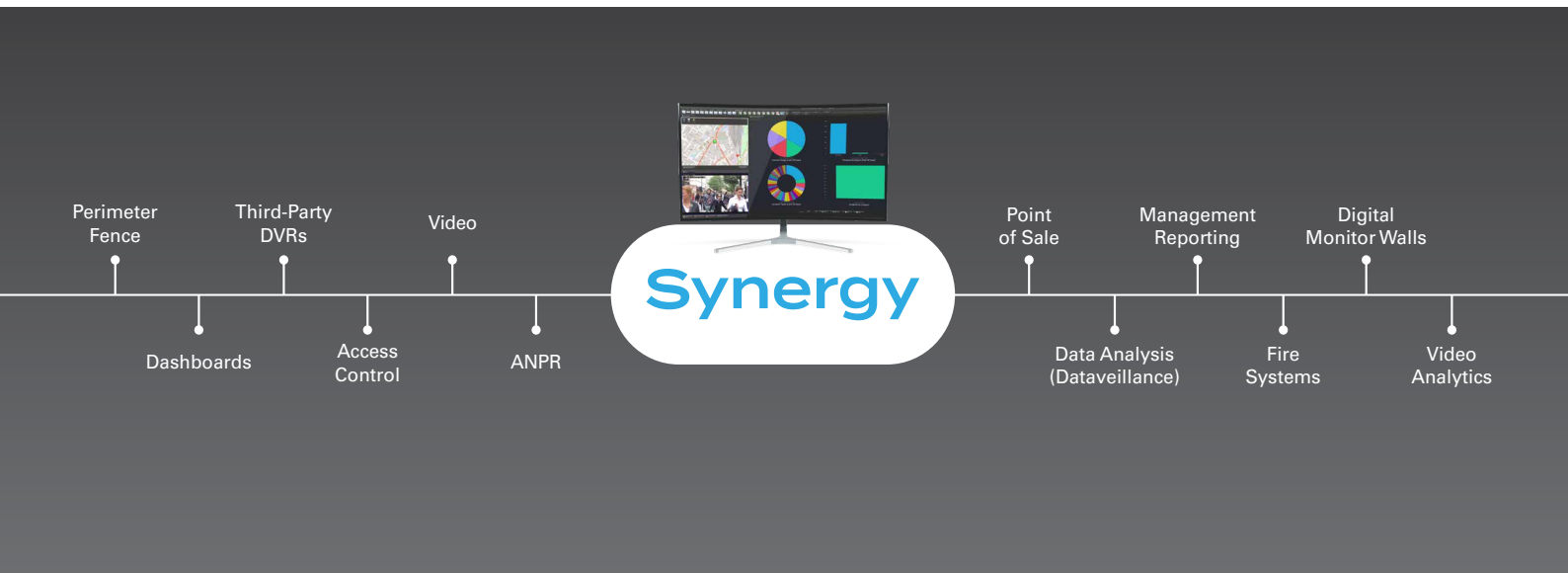
- **Diary and task management** – assign one-time or recurring tasks to designated staff, incorporate workflows and forms, automatically monitor individuals’ completion progress through a unified calendar and diary appointments, and audit performance with comprehensive reporting.
- **User/group profiles** – create operator profiles that control and monitor access rights to every system feature and camera, integrated with Active Directory.
- **Fault management** – systematically alert designated technicians of defective cameras and PSNs, prioritise critical failures for immediate attention, track device

problem history, serial numbers, vendor, and receive notification when repairs are complete.

- **Contacts database** – store suppliers, employees, service personnel, VIPs, and suspects, with user-defined fields, photographs, and built-in messaging functionality.
- **Comprehensive database reporting** – search, sort and generate custom reports based on virtually any variable including operator, camera, time, incident type, system modifications, and alarms.
- **Detailed system logs** – stored in password-protected directories for technicians and supervisors to audit, troubleshoot and review every system activity.
- **User-defined macros** – automate system functions such as workflows, camera patrols, recording on motion or alarm, PTZ movement, resolution forms, and incident initiation.



Intelligent Integration



Synergy is an open architecture platform designed to present and manage alarms and transactional data from independent third-party systems—such as access control, fire, building management, process control, point of sale, panic—in a secure, unified, and visually-intuitive command and control environment.

Significant cost and efficiency gains are achieved by combining data from multiple systems into a single user interface. Managers and operators benefit from reduced training, better situational awareness from integrated systems' data, and more consistent adherence to regulated procedures regardless of sub-system vendors.

Synergy streamlines alarm processing by automating routine functions. For example, an alarm event may trigger an audio alert, move a PTZ to a defined preset, display a designated camera stream on a supervisor's monitor, highlight the alarm point on a site map, lock or unlock doors, and inform key contacts via text or e-mail.

Synergy also tracks all these activities and maintains a secure transaction record and case file to ensure data integrity for compliance verification or prosecution.

Synectics is committed to open integration standards and supports ONVIF, PSIA, OPC, MODBUS, and SNMP protocols. In addition to the dozens of existing integrations to leading security products and common standards, custom interface drivers can be cost-effectively developed upon request, or via the Synergy SDK.

**Manage data,
video and alarms in a
single user interface.**



Smart Video Analytics

Synergy Video Content Analysis (VCA) provides smart monitoring to identify camera tampering, gross scene change, object classification, and tripwires in real-time or after the fact.

Optional add-on license packs are available for advanced threat recognition and detection, including perimeter breaches, object removal, objects left behind, loitering, and people/vehicle counting.

Synergy may be configured to systematically compare surveillance activity against pre-defined rules, such as tripwire or motion, automatically detect and alarm on potential security breaches, and then bring the incident, location, and corresponding camera feeds to the attention of live operators. Security personnel monitoring large or distributed facilities can identify, verify, and respond quickly and confidently.



Integrate and Analyse your Data

Dataveillance

It is becoming increasingly difficult to detect threats from cameras alone as high risk indicators are often buried within petabytes of video and alarm data. As camera counts increase and additional third-party systems are connected to the network, data proliferates, making it harder to identify real threats from benign activity.

To help surveillance personnel sift through all that data, Synectics has developed Dataveillance, a powerful data analysis engine that correlates video, alarm, and transactional information from multiple third-party systems.

Security breaches, fraud, theft, or collusion often cannot be detected from a single camera view or alarm. Instead, it requires simultaneously monitoring a combination of interrelated data points from multiple cameras, door alarms, tripwires, or other third-party systems. For example, a refund at a cash register is a normal occurrence, as is no one in line. But, anytime a refund is issued without a customer in line at the register, it becomes a suspicious event that warrants review.

As data is pushed to the surveillance network from various integrated systems, Dataveillance captures and organises it in a common database environment. Security managers can then create “if/and/or” rules to monitor and analyse the data in real-time or after the fact. Dataveillance could, for example, look for a series of events happening in sequence, over a specified time period, and that fall outside of “normal” parameters. Suspicious incidents can trigger an alarm in Synergy’s graphical user interface (GUI), which instantly presents time-synchronised video from associated cameras for visual verification. The ability to harness and simultaneously analyse multiple security databases with customer-specific algorithms and to automatically combine the data with related video helps operators expose, and proactively react to, complex deception, escalating threats, and covert criminal activity with far more accuracy and efficiency.

Visually Display Your Operation

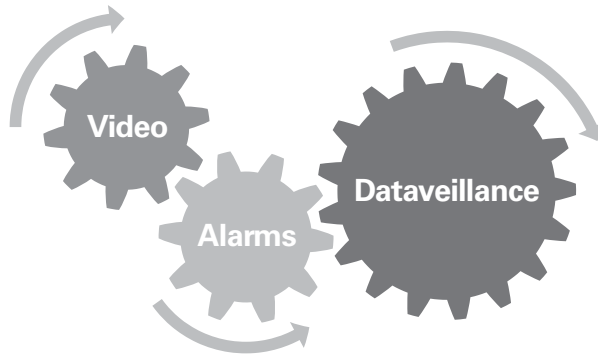
With Synergy’s intuitive mapping interface, operators can quickly access a camera or follow a subject by clicking camera icons on a street-level map or building floor plan, without having to memorise a multitude of device numbers or names.

Other security components, such as PTZ presets, perimeter fences, access points, and alarm sensors can also be depicted on Synergy maps with “smart-status” icons. For example, an access control point can be displayed in green when the door is open and in red when closed. Synergy’s logical, graphical interface reduces training time and makes it easy for first-time operators to use.

All icons are equipped with “tool tips” so operators know what each symbol represents for fast and accurate identification. Camera icons “tool-tips” may also include a snapshot of the camera’s default field of view to save navigation time.

Upon alarm or event trigger, corresponding devices are automatically highlighted on the interactive map interface. Operators can instantly identify the incident area and respond appropriately based on location, circumstances, and available devices. For example, in the event of a fire alarm, an operator could remotely open all access controlled doors in the vicinity directly from the Synergy interface.

Synergy’s flexible and scalable mapping engine provides logical navigation through a hierarchical “map tree” and supports hyperlinks to quickly switch between layers, such as hotel floors, campus buildings, and parking garage levels.



Synergy's mapping engine displays location-based data including camera locations and icon clustering and grouping.

Synergy Maps

Synergy's enhanced mapping engine can display geographically referenced information in an interactive, multi-layered, and visually intuitive format. It allows operators to search for and locate a wide variety of data points quickly and easily including:

- Camera locations and live "field-of-view" plotting
- Street name
- Postal/ZIP codes
- GPS/longitude/latitude
- Operator derived bookmarked locations

The mapping engine can display any location-based data such as historical crime statistics, anti-social behaviour hot spots, and slip and fall areas. Quick access to visually presented historic security data and cameras on interactive maps exponentially improves situational awareness and empowers surveillance operators to react and respond far more effectively to time-sensitive threats.

Synergy Maps automatically captures location meta data (latitude and longitude coordinates) so incident locations may accurately be identified and operators can record notes about specific locations for shared intelligence.

Synergy is compatible with a wide variety of mapping platforms, including OS Mastermap, Open StreetMap as well as locally hosted maps, such as simple image maps, CAD, site, and floor plans.

Resilient and Secure System Protection

Synergy is designed with multiple layers of hardware, software, and network resiliency that ensure the highest level of failover protection available for the world's most demanding security environments.

With real-time health monitoring, Synergy provides operators and technicians with proactive feedback about system issues or any networked device failure. Fully compatible with SNMP, Synergy can receive and display status data from connected SNMP devices or, alternatively, push alarm data to dedicated SNMP servers.

To protect against data loss or corruption, critical Synergy databases can be replicated in real-time across multiple physical and/or virtualised failover servers, so vital system data is protected and the system remains fully operational should the primary server fail. Secondary hot swap servers continuously monitor the network and, should the primary server fail to acknowledge, system control will automatically failover to a secondary server and mirrored database without interruption or operator intervention.

Robust enterprise class resiliency and video failover protection is available for Synectics' Recording Management System as well. Should a video storage server fail, Synergy can automatically alert operators and redirect camera sources to record on one or multiple backup servers on the network without recording interruption or video data loss.

Synergy's intelligent failover functionality extends well beyond hardware protection. Cameras can be prioritised in Synergy so that camera streams covering high security areas failover before cameras in lower security areas and the video that matters most is protected first.

Synergy also keeps track of all hot-swap server activity and video storage locations. Operators simply request video from a given time and the system seamlessly and automatically plays back the video, even when spanned across primary and failover servers. This smart, resilient design maximises system uptime, maintains operator access to critical functionality, and protects video data integrity by eliminating any single point of failure.

Protection Against Network Failure

Finally, Synergy offers unparalleled protection against IP video loss due to network failure. Synectics' IP cameras, equipped with SD memory cards or internal hard drive storage, can be configured to record locally for several hours in case of network interruption. When the network is restored, Synergy will identify any missing video from the primary storage servers and look for the missing segments on edge-based IP cameras and encoders that have been recording while the network was down.

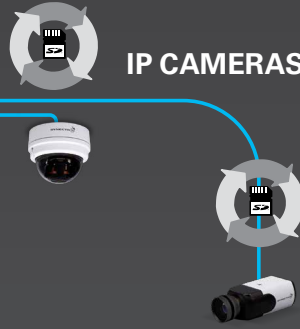
Synergy's backfill technology will then automatically copy the missing video from the edge device across the network onto the primary storage server, restoring it with full data integrity. During the backfill process, cameras and encoders continue to stream and record without interruption.

Synergy delivers uninterrupted system performance and data integrity.

ANALOG CAMERAS



IP CAMERAS



NETWORK

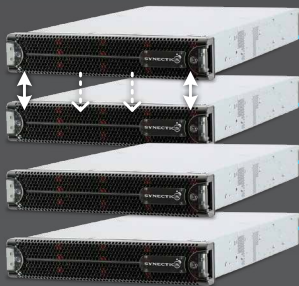
In the event of a network outage, Synectics' cameras and encoders store video locally.

Synergy A

Synergy B

Synectics PSN

Hotswap Synectics PSN

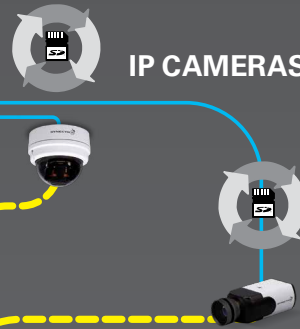


- CAT 6 UTP
- Coax
- Backfilling

ANALOG CAMERAS



IP CAMERAS



NETWORK

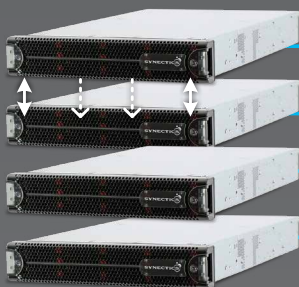
When the network outage is repaired, all locally stored video backfills to Synectics PSN.

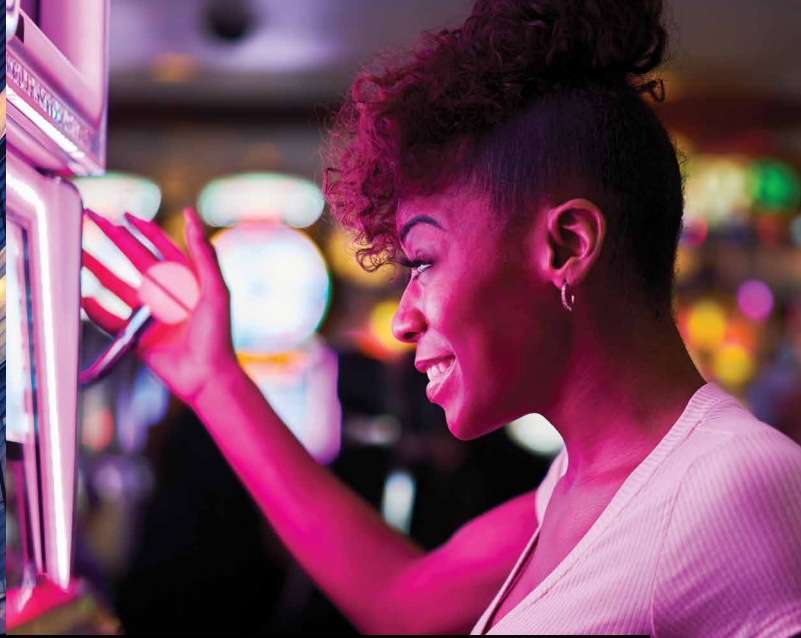
Synergy A

Synergy B

Synectics PSN

Hotswap Synectics PSN





Protecting what matters, where it matters most

Synectics is a leader in advanced security and surveillance systems that help protect people, property, communities, and assets around the world.

We have a deep and unique understanding of our customers' issues and challenges, and we draw on this to create solutions they can rely on completely – giving them peace of mind by securing the assets, people, and livelihoods they are responsible for protecting.

We have built an enduring reputation for our problem-solving expertise, technical excellence, and total commitment to delivering for our customers.



Specifications subject to change. E & OE.

Literature Reference: SYN3BR/1223/A4 Issue 4
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SYNECTICS

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