# Sentry Nexus

## SENTRY VIEW SYSTEMS
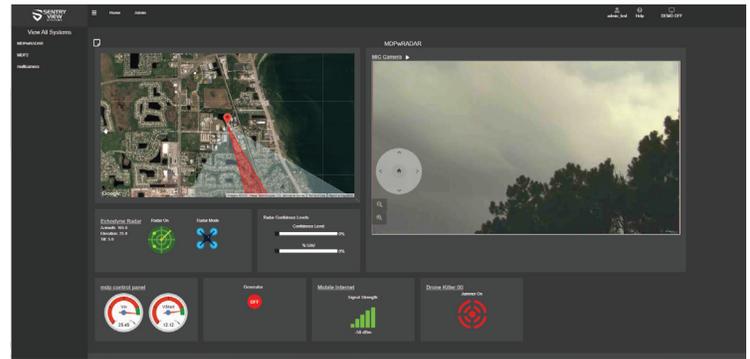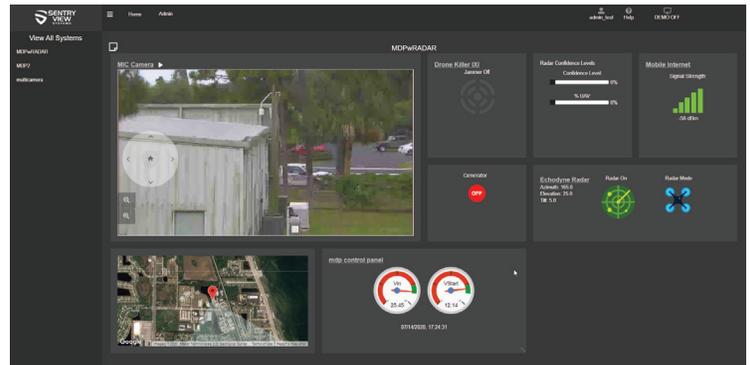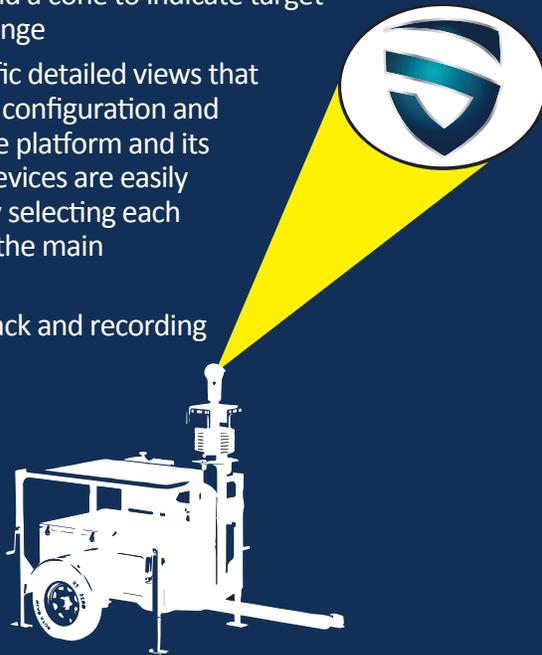
Sentry Nexus is a SaaS (Software as a Service) product that supplies instant and reliable data for the user. It provides users the ability to interact with and gather data from commercially available monitoring and mitigation devices such as radars, visual reconnaissance devices, and electronic warfare devices integrated on deployed Sentry UMDP (Urban Mobile Detection Platform).

The fastest way to act on potential threats involving persons, ground-based vehicles, or UAS (Unmanned Aerial System) is with accurate identification and constant situational awareness. Sentry Nexus provides the real time situational awareness necessary to make informed decisions and has the capability to automate action on targets or within the system based on pre-determined, user-configured rules in the software.

- Intuitive graphical interface that displays data collected in real-time from each platform deployed
- Satellite map with embedded data that includes targets identified by the radar, the radius of target detection, and a cone to indicate target mitigation range
- Sensor specific detailed views that include finer configuration and control of the platform and its integrated devices are easily accessible by selecting each platform on the main dashboard.
- Event play back and recording features

## FEATURES

- Real time, automated slew-to-cue of Pan-Tilt-Zoom cameras on active targets, including commercial drones for visual verification

- Radar Fusion – ability to track targets across multiple radar units while maintaining track IDs for a given target

- Multiple Targeting Methods for camera tracking including: Closest Target or Target Cycle (rotating a PTZ camera through targets with user-defined dwell times).

- Dynamic Mapping allows end users to designate appropriate response (camera tracking, alarms/alerts) depending on classification of target and precise location of that target in 3D space

- C-UAS features include: drone priority (track closest target, but prioritize drones over other targets) and drone-only mode (track only targets classified as drones)

- Calibration toolset allows end users to optimize system performance by accounting for topography and other area-specific features that would impact sensor performance and camera tracking

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## ADVANTAGES

With modular architecture, Sentry Nexus has the ability to integrate with COTS (commercial off-the-shelf) products seamlessly. IP cameras, radar arrays, CBRNE (chemical, biological, radiological, nuclear, and explosive) sensor arrays, power management devices, MANET (Mobile Ad Hoc Networking) radios, and electronic warfare devices fitted onto each platform are furnished with information panels in the web interface that give authorized users a comprehensive look at data streaming from the device. Along with this data, each device is managed with simple, straight-forward controls to give users command over device operation.

Identifying and observing threats in the field as quickly as possible is vital for operations. That is why Sentry Nexus has integrated slew-to-queue capability between camera and radar devices on each platform. Together with priority tracking, keep-out zone management, and object classification preferences managed through easily accessible panels within the dashboard, Sentry Nexus provides the power and flexibility to identify and mitigate threats in many situations.

While live data is critical to mission execution, Sentry Nexus empowers authorized users to analyze playback of recorded platform data over an extended period. All radar, video, and sensor records are aggregated and played back on a configurable screen, aiding investigation of a mission or timeframe.

In order to maintain the highest level of inter-operability, Sentry Nexus software is capable of interfacing with systems that communicate using XML messaging over TCP/IP or through an extensive API (Application Programming Interface). Additionally, this compatibility allows for the platforms to be controlled by third-party systems using the same scheme. Allowing status and control from third-party entities enables Sentry Nexus to be incorporated into existing systems, giving customers the ability to expand their capabilities effortlessly.

## Scalability

Sentry Nexus is hosted utilizing Docker containers in a private cloud; therefore, its scale can be matched to organizations' demands for platforms and users without downtime or slowed service. Organizations that require private hosting can do so with minimal software maintenance and are offered full support from the SVS team. Sentry Nexus is built with rapid deployment and resiliency in mind; likewise, its architecture is flexible and scalable to provide service to any size organization.

## Security

Adversaries are opportunistic. That is why Sentry Nexus has been hardened to eliminate vectors of infiltration. From user permission groups that give organizations control over who sees which data and control over devices, to communications between devices and services being transmitted via secure sockets, Sentry Nexus offers peace of mind for users. All data exchanged from the Sentry Nexus service is encrypted using SSL – this includes platform, web browser, and third-party communications. Each platform has the capability of hosting a VPN (virtual private network) if required for missions.

Sentry Nexus understands different mission roles require distinctive permissions. For instance, command and control of platform and device preferences or states can only be modified by those in the administrative group while users that only require the ability to gather data are place in a read-only group. Custom permissions can be modified upon request.

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