Radar Video Surveillance (RVS)

Automated Detection, Tracking, and Video Response to Security Threats

Honeywell

Protection from perimeter to ship

Today, managing an effective port is about maximizing security without slowing commerce. Honeywell delivers both – with a level of innovation, experience, reliability and product depth no other provider can match.

Honeywell's Radar Video Surveillance (RVS) system is no exception, helping to detect, track and respond to potential threats. Advanced radar and video technology covers a wider range of your facility, from your perimeter to the inner core of your operations center. And because RVS is an automated system, response time and resources are greatly increased. Put simply, RVS will help you run a more efficient, cost-effective, secure operation.

Automated Detection and Tracking
The Honeywell RVS system is a Wide Area Surveillance System supported by radar and other sensors to automate detection and tracking of potential threats to your facility. When an intruder breaks your user-defined rules, RVS generates an alarm, automatically directing a PTZ camera to the threatened area. Video is recorded and distributed over a Local Area Network to provide a recorded history for future reference or evidentiary purposes.

Situational Awareness
RVS is equipped with a full-featured Geographic Information System (GIS) engine to display an aerial view of your facility, complete with an overlay of all sensors and threats on a single monitor. This display is available in the control room and on any PC on the facility network. Potential threats, displayed in red, are easily distinguished from known objects, displayed in blue. To further investigate possible situations, RVS allows the user to click a point on the map which automatically finds the closest camera and brings up live video of the area.

Wide Variety of Sensors and Responses
To detect threats, RVS combines marine radar and ground radar, ranging from 4kW - 25kW and 1km - 5km, respectively. RVS technology also includes Automatic Identification System (AIS) and Global Positioning System (GPS), which filters known vehicles and vessels and reduces false alarms. Responses include a CCTV response using Honeywell's Digital Video Manager (DVM), with alarming through Honeywell's EBI or Pro-Watch security platforms. RVS can also be easily integrated with other security systems of your choice.

Low Cost of Ownership
With long-range, 360° coverage, RVS reduces the equipment, infrastructure and maintenance required to secure a wide area, compared to competing technologies such as Video Analytics, Infrared, Fiber Sensors and Microwave. In fact, when configured to take advantage of the full range, systems costs can approach $1 per linear foot of coverage for marine radar, and $4 per linear foot for ground radar. And since there's less software and hardware, system maintenance can be as little as one third the cost of other technologies.

Radar Sensor Summary	Marine Radar			Ground Radar	
	4kW	12kW	25kW	STS1400	STS12000
Max. Detection Range, 10 ft. Vessel	1 NM	3 NM	6 NM	NA	NA
Max. Detection Range, Person	NA	NA	NA	1 KM	5 KM
Scan Rate (RPM)	12/24	12/24	12/24	60	5
Vertical Beamwidth	22°	22°	25°	6°	4°
Horizontal Beamwidth	1.8°	1.2°	0.8°	1.0°	0.8°
Frequency	X Band	X Band	X Band	Ka Band	Ku Band
Lowest Cost / Linear Ft. Cvg (1 Radar)	$6	$2	$1	$13	$4

Transponder Summary	AIS	GPS
Transmission Frequency	VHF Band	900 MHz
Max. Detection Range	40 Nautical Miles	3 Statute Miles
Data Available	Location, Speed, Heading, Vessel Name, Size, Destination, Cargo	Location, Speed, Transponder ID

Convenience, reliability and functionality

The Honeywell RVS system is easy to understand and operate, and it can be integrated with security systems and processes already in place. RVS also incorporates user-friendly features that will help to identify and respond to potential threats.

Automatic detection and tracking frees personnel to perform tasks other than monitoring the surveillance system.

An **increased detection range** allows more time to respond to threats.

Integration with DVM allows you to use existing CCTV cameras to display, distribute and record threats.

A full-featured GIS engine provides situational awareness display to any location on your Local Area Network.

User-defined alarm zones automatically detect, track and prioritize potential threats entering any of your designated areas.

User-defined rules capture the operational intelligence of your facility to prioritize threats and reduce false alarms.

Threat prioritization allocates the closest CCTV assets to the highest priority threats.

Multiple configurations include the images, rules and alarm zones for different operations or security threat levels.

With **AIS/GPS filtering,** you'll find a Red Force/Blue Force view on your Situational Awareness display.

Look Here allows you to point and click anywhere on the map to quickly display live video of a potential threat.

A **Threat Summary** provides a tabular view of known assets and potential threats currently being tracked.

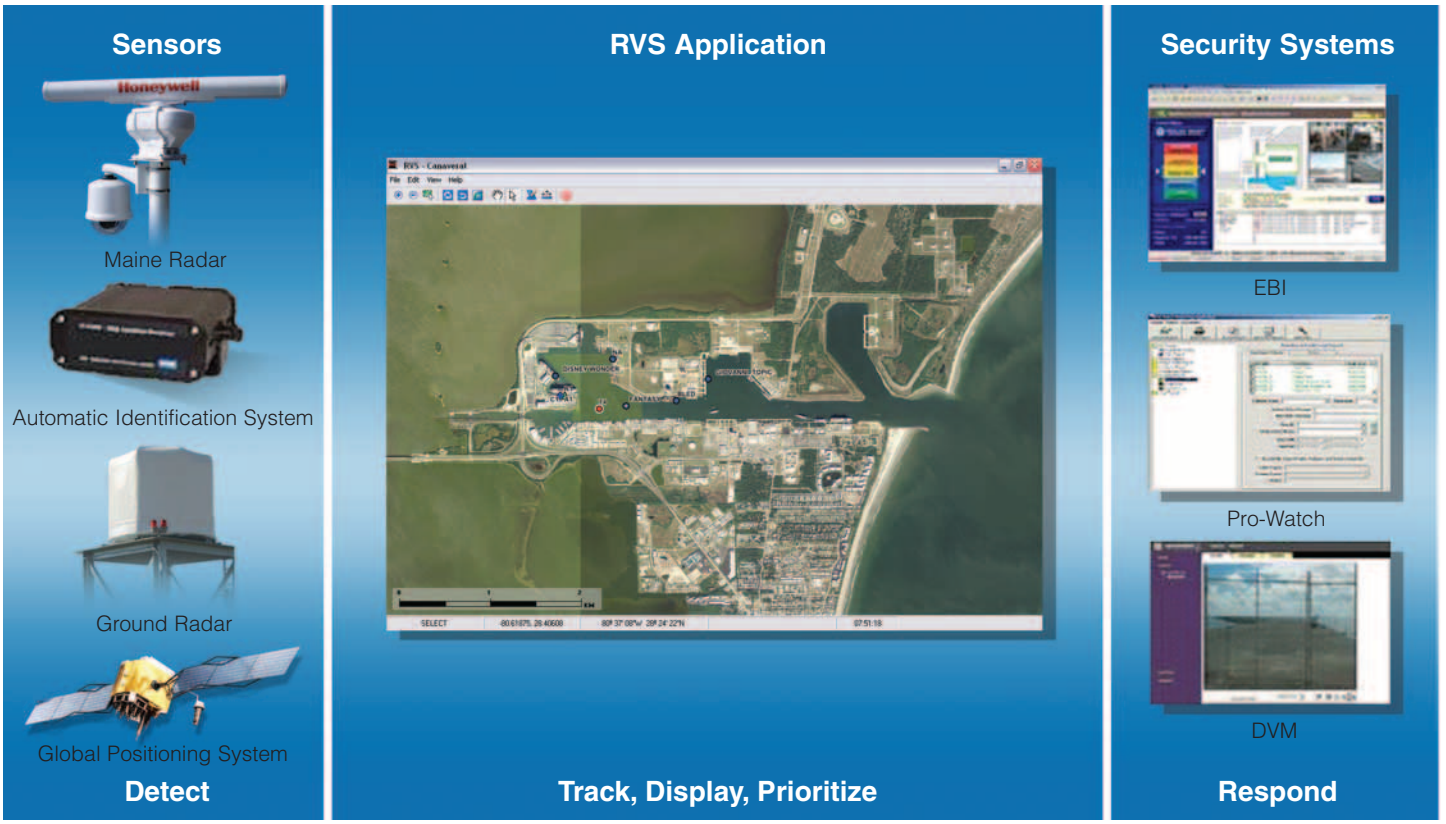
Threat Details can be viewed by mousing over a threat or known object, which then pops up a detail window showing all details for the known object.

Because RVS allows for easy **integration with other security platforms,** RVS alarms are processed the same way as any other access or intrusion alarms you may have at your facility.

Camera override is available so that operators can override control of PTZ cameras at any time, allowing them to investigate threats or verify system operation manually.

With **arrival and departure recording,** vessel arrival and departure times are recorded in a relational database to confirm billing data.

You need **open architecture** to share data with other systems, so RVS is built on .NET technology, using SQL Server and XML interfaces to do just that.



Honeywell is a leading provider of technology, innovation and service for Critical Infrastructure customers around the world.

More than 200 of the world's ports and airports trust Honeywell to apply its proven track record in military defense, commercial security and national infrastructure protection toward keeping their facilities running safely, securely and efficiently.

Honeywell for Ports

- A trusted name in commercial security and controls for more than half a century
- The world's largest manufacturer of security products
- The provider of choice to meet U.S. military defense security needs for more than 25 years
- Global resources and experience with local access, delivery and support

Solutions Overview

Radar Video Surveillance (RVS): RVS uses radar and CCTV cameras to detect and track, and AIS to identify intruders along the waterside perimeter. It provides comprehensive wide-area surveillance at low initial investment and lifecycle costs.

Access Control & Visitor Management: LobbyWorks™ manages access privileges for port employees, visitors and vehicles by providing visitor management and ID badging. Pro-Watch™ Security Management acts as the single point command-and-control platform integrating the latest technologies — access control, video, video analytics, visitor management and perimeter protection – into one easy-to-use graphical user interface.

Digital Video Surveillance & Management: Honeywell has a scalable video management system using its Digital Video Manager™ (DVM). The digital surveillance system can automatically record, play back and store video clips. DVM allows you to easily perform video analytics.

Find Out More:
Find out how Honeywell can bring your systems and people together for increased security and productivity. Please visit **www.honeywell.com/cip** or call **800-345-6770, ext. 618**.

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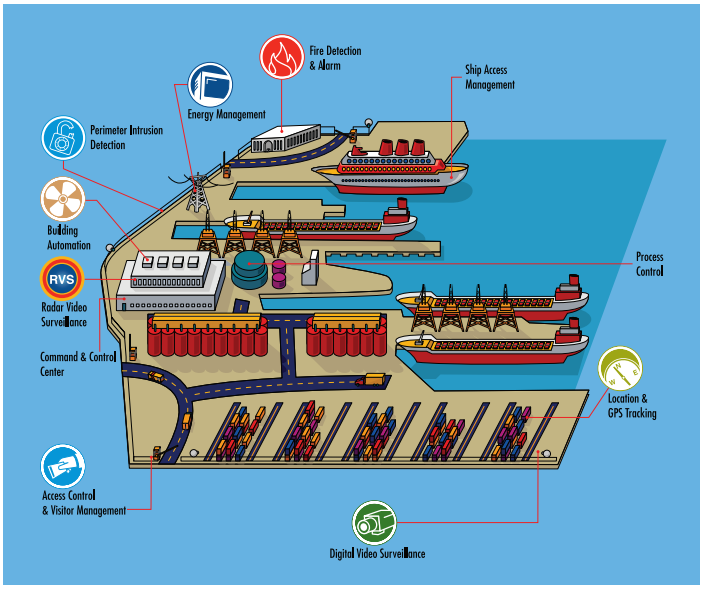

Perimeter Intrusion Detection: Honeywell Security solutions can deliver the most efficient and cost-effective solution for securing your port. With experience in virtually every technology, we can integrate cameras, sensors, radar and access control into one command-and-control center.

Location & GPS Tracking: GPS and wireless communication is used to track, locate and manage equipment, people, cargo and other vital assets – as well as electronically manage muster stations to improve security and safety. GPS improves productivity and reduces capital outlays across the entire port, while also reducing the cost of theft, loss and hoarding.

Critical Infrastructure Protection (CIP): The Honeywell CIP Group offers the most extensive portfolio of integrated safety and security systems for critical infrastructure customers around the world. From project management and design, to lifecycle services and operation support, Honeywell technology and service is helping to make the world more safe, secure and productive. Our global project experience includes airports, maritime, metro rail, industrial, government/military and public events.

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