

# LONG RANGE PANORAMIC THREAT DETECTION AND TARGET TRACKING

## Intelligent Land & Sea Radar Surveillance System

Radar Analytics, Processing and Tracking system has played a vital role for US homeland defense and perimeter and threat detection since 2010 and has been deployed on both land and maritime in the US and in Afghanistan since 2011.



### RAPT Overview

Infiniti has been a recognized industry leader in Long Range EO/IR systems and is excited to announce the commercial release of our RAPT long range Radar Analytics, Processing and Tracking system. The RAPT when integrated with our Electro-optics provides Ultra long range turn key solutions for wide-area surveillance and border and perimeter protection. The RAPT Radar Analytics processing and tracking system provides panoramic 360 degree 24/7 day night coverage and with Slew to Cue on Electro optic Surveillance cameras cameras provides automated security and deference that reliably detects and tracks land, maritime and aerial targets of interest automatically with the ability for manual remote or local override.

### Proven Reliability

The Maritime Radar System (MRS), selected by the U.S. Navy for combatant upgrades to track small boats, and the Land Radar System (LRS), selected by the U.S. Army Persistent Ground Surveillance Program for protecting land forces in Afghanistan. These MRS and the LRS offer unparalleled performance for tracking small targets at long ranges, even under severe radar clutter and poor climatic conditions where traditional systems failed. The RAPT system can be controlled remotely and installed and operated on a variety of platforms such as towers, Mobile vehicles, Vessel and aerostats. RAPT is a dynamically adaptive, Automatized, Panoramic 360° wide-area persistent situational awareness and long range threat assessment tool that requires no operator adjustments, turning of controls or interpretation of data. RAPT detects , tracks and provides bearing and speed of an array of difficult to detect targets from human to vehicle size and larger and easily integrates with other 3rd party sensors to offer target Detection, Classification and Identification with high a level of accuracy at extreme distances. 3rd party sensors to oer target Detection, Classification and Identification with high a level of accuracy at extreme distances. The RAPT can even detect small UAV and drones for unparalleled performance making the clear choice for long range threat assessment and situational awareness.



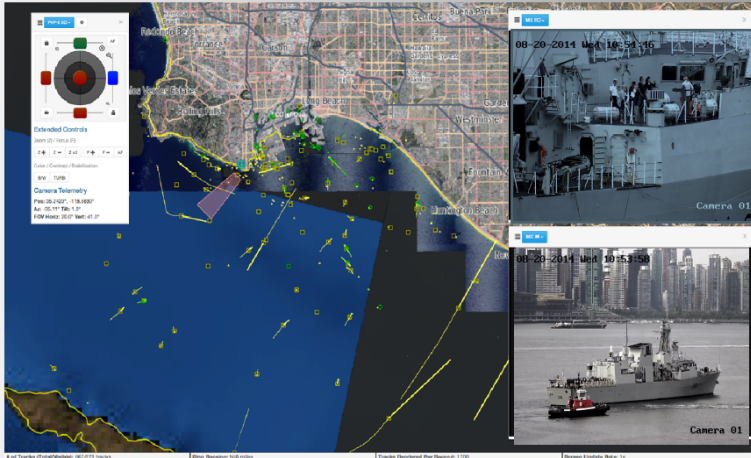
## FEATURES & PERFORMANCE

- Ultra long range threat detection
- Self-Adaptive, automatic system operation
- Panoramic 360 24/7 day night operation
- Advanced processing low false alarm rate
- Robust, operation in severe climatic conditions
- Up to 35km of vehicle detection (3,846km 2)
- Ideal for marine, land and aierel surveillance
- Integrated real time Health Monitor and control via web client
- Real time speed, bearing and estimated object size reporting
- Designed for remote unmanned deployment
- Full Slew to Cue (STC) Integration with Infiniti Electro Optic long range surveillance PTZ Cameras

# COMPLETE TURN-KEY SOLUTION

A superbly effective and strategic solution uses radars in tandem with EO/IR Surveillance cameras (visible and thermal) to automate many of the critical challenges that the security force faces. This solution automatically detects and tracks moving objects and positions the camera to focus on the object. If the tracked object moves into a blind spot or out of a camera's view, it will be picked up automatically by another camera and tracking will continue seamlessly.

The RAPT display Java client, available to any computer on the network, uses standard NTDS symbology for maritime and land target threat levels. The RAPT display Java client also supports multiple sensor feeds, including sensor integration into the RAPT client supporting AIS and Blue force tracking, forensic track history database and open standard maps and/or external map servers.



**RAPT SYSTEM COMPONENTS**

## Advanced Radar Analytics, Processing and Tracking (RAPT)

- Provides extreme range wide-area threat detection and target tracking
- Includes archive for replay or forensic track analysis
- Designed for extreme temperatures and high-vibration environments

## Radar Control System (RCS)

- Environmentally sealed option for remote or aerostat applications
- Enables remote, web-based radar control, including customized radar modes for land, marine, and aerial
- Outputs raw radar signals to SSRP

## Commercial Navigation Radar

- There are a variety of radar options ranging from 5KW (2.5 ft antenna) up to 60KW (12 FT antenna)
- Can connect to and use existing radars or third party scanners

## RAPT Display Client

- Track Client Display
- System Health and status

## RAPT SPECIFICATIONS (Can be custom built)

### Size

2U X 21 in. deep,  
19 in. rack-mount

### Weight

10 to 50 pounds  
(4.5KG to 22.6KG)

### Power

100 to 400W



### Forced Air Cooling (Application dependent)

200CFM forced air front-to-back and front-to-right

### Military Grade

Designed to meet MIL-S-901 / MIL-STD-167

### Synchronization and Navigation Input

1+ Hz time sync message or existing NTP server  
Requirements for moving platform:

- 10 Hz heading, < 0.5 deg drift over 5 min desired

- 1 Hz position, < 5 m drift over 5 min

NMEA streams from one or more of:

- TCP server port(s)
- RS-232/RS-422 link(s)

Other platform specific formats supported

### Track Output Options

Interactive GIS-based display via web-start java client  
ICD 0100 XML track reports via TCP server or client port;  
'NMEA-like' output stream via TCP server port or RS422 serial (Others optional upon request)

### Forensic Tracking and Tenable Archiving

Provides 10+ weeks of track history for playback up to 150x real-time such as backtracking sources for live threat analysis, prosecution or offline forensics



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