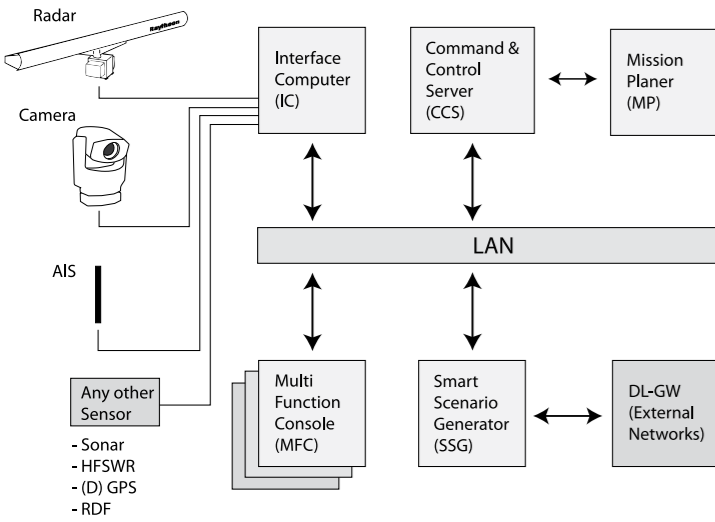


Surveillance Solutions

We understand Surveillance

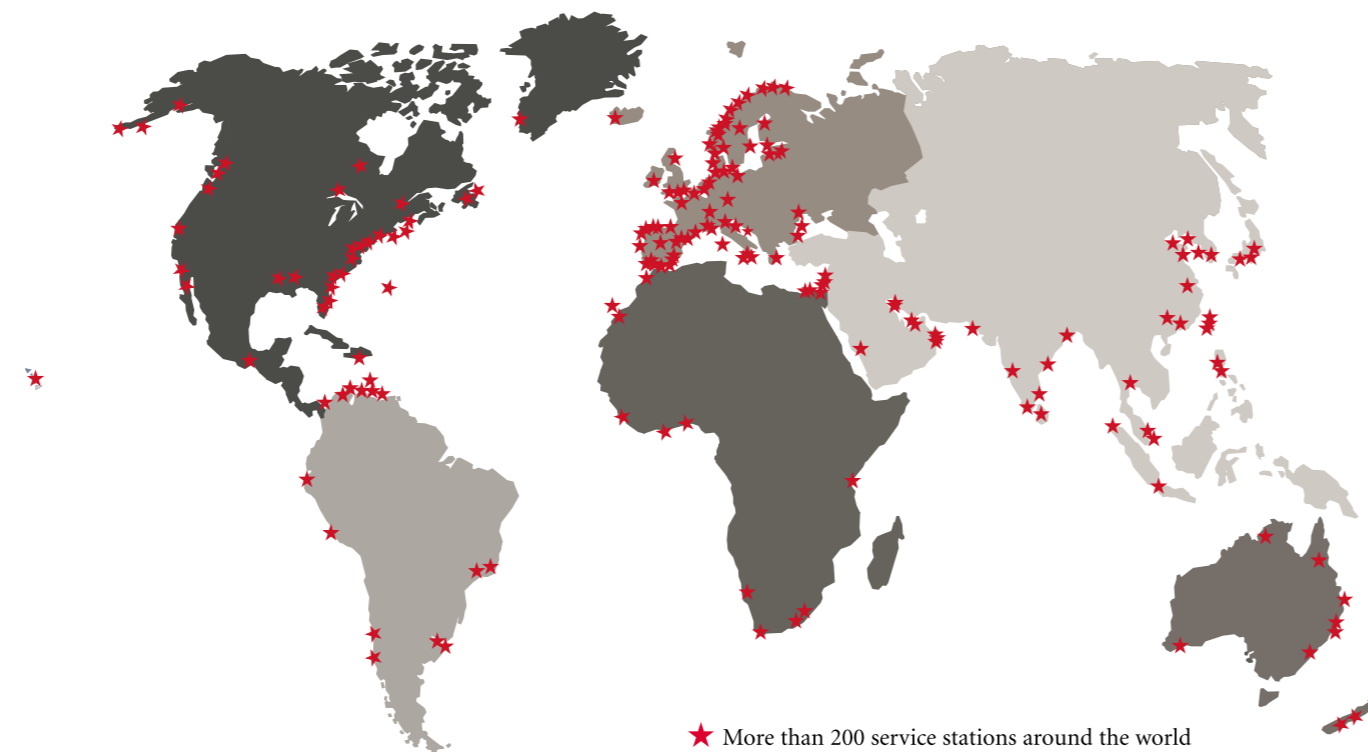
Raytheon Anschutz deliver Command and Control Solutions for Coastal Surveillance, Site Protection and Border/Perimeter Security. Raytheon Anschutz maritime domain knowledge and experience in systems architecture design and sensor integration provides customers with modular systems design specific to their needs. Scalable solutions with extensive add-on possibilities provide customers with flexible systems, capable of quick integration to new assets and adaptable to meet emerging requirements. Raytheon Anschutz offer through life in service support as part of the solution.



Technical Data

Radar	
X-band (S-band):	6 to 18 ft antennas
Transmit power:	25 kW
Range:	>24 nm depending on antenna height
Pulse length:	60 ns to 1.0 μ s
Dynamic range:	130 dB
Noise figure:	5.5 dB
Full remote control:	of all radar functions
Radar Antenna	
Beam width (azimuth):	0.4° (18 ft) and 0.7° (12 ft)
Beam width (elevation):	23°
Tracker	
Track handling capacity:	> 500 targets /scan
Speed range:	0 – 97 kt
Track recording:	30 days or more
CCTV control:	pan/tilt control available
Display	
Resolution:	1600 X 1200 true colour
Charts:	S57 and ARCS
Presentation:	multiple windows multiple screens
Networking, protocols:	Ethernet, TCP/IP
Accuracy	
Speed:	+/- 0.2 kt (0.1 m/s)
Course:	< +/- 0.9°
Position:	< +/- 1 m

Raytheon Anschutz operates a worldwide network of more than 200 service stations with highly skilled technicians trained at the Kiel training academy. All service stations include a spare parts depot with spare parts coordination centrally managed from Kiel. Regional offices with knowledge in practice, language and culture are able to provide 24/7 local life cycle service & support.



★ More than 200 service stations around the world

CONSULTING, INTEGRATION AND SERVICE FOR COASTAL SURVEILLANCE SYSTEMS



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Surveillance Solutions

General Company Overview

Raytheon is a technology leader specialising in defence, homeland security, and other government markets throughout the world.

Anschütz is a Raytheon company specialising in the maritime domain with an excellent reputation worldwide as a reliable provider of Surveillance Systems, Integrated Bridge Systems (IBS) and nautical equipment for commercial and defence applications.

Raytheon Anschütz have built up many years of experience in maritime system integration, including references from over 400 radar installations.

With the advantage of having the important processes of research and development, production, system engineering, project engineering and service coordination centralised at one location, Raytheon Anschütz ensure effective handling of customer's requirements from large scale programmes through to single sensor system projects. All systems are built up and tested fully integrated with Factory Acceptance Testing in Kiel, Germany as part of Raytheon Anschütz ISO9001 Quality procedures.

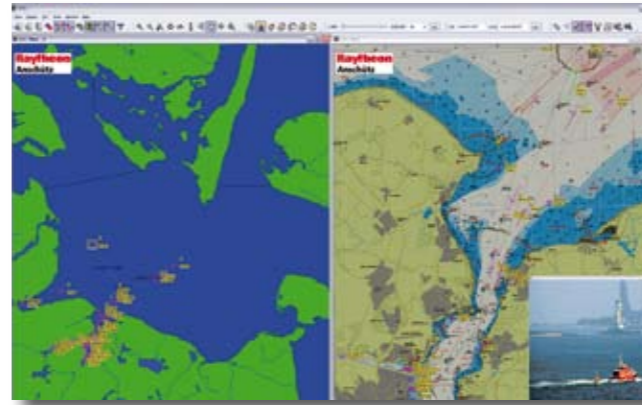
We offer extensive know-how for Surveillance Solutions, supporting our customers from concept of operation's, project outline and specification of systems through project realization, system in operation and ongoing support. We offer guidance on selection of appropriate technology and assist our customers in balancing operational requirements with best value for budget. Where appropriate Raytheon Anschütz partner with sensor systems providers and offer customers the best available for the budget.

Complete Surveillance Solution

Raytheon Anschütz's Coastal Surveillance System includes a Multi Function Console with Command and Control functionality providing operators with a clear display of the maritime situation. The surveillance display includes charting/mapping information with overlay/underlay of real time Geo-referenced sensor data. The System architecture is a multi agent system based on a unique efficient and distributed core which provides for all data management and distribution, recording, replay and other essential services. The system provides a Common Operating Picture and distributed data between command points and agencies. The scalable structure is based on open systems and modular design.

Core System Capabilities include:

- Radar, Control, Processing and Tracking
- EO, Control, Processing and Tracking
- AIS Integration
- Track Management & Correlation
- Multiple Sensors and Multiple Platform data fusion.
- Track Filtering Tools
- Central Alarm and Alert Management
- Remote System Health Monitoring



Surveillance Display

Raytheon Anschütz can offer rapid application development and GUI implementation to integrate new sensor systems based on the distributed multi-agent system architecture.

Main System Components

CCS – The Command and Control Server (CCS) which is the base for the system. The CCS is the main processing unit of the system which collects the data from all interfaces, processes it and creates the tactical situation assessment picture; the situation assessment picture can then be distributed to any other system component. This unit also manages the command and control user actions and system operations including data fusion, threat assessment and weapon allocation, tracks and bearing lines management.

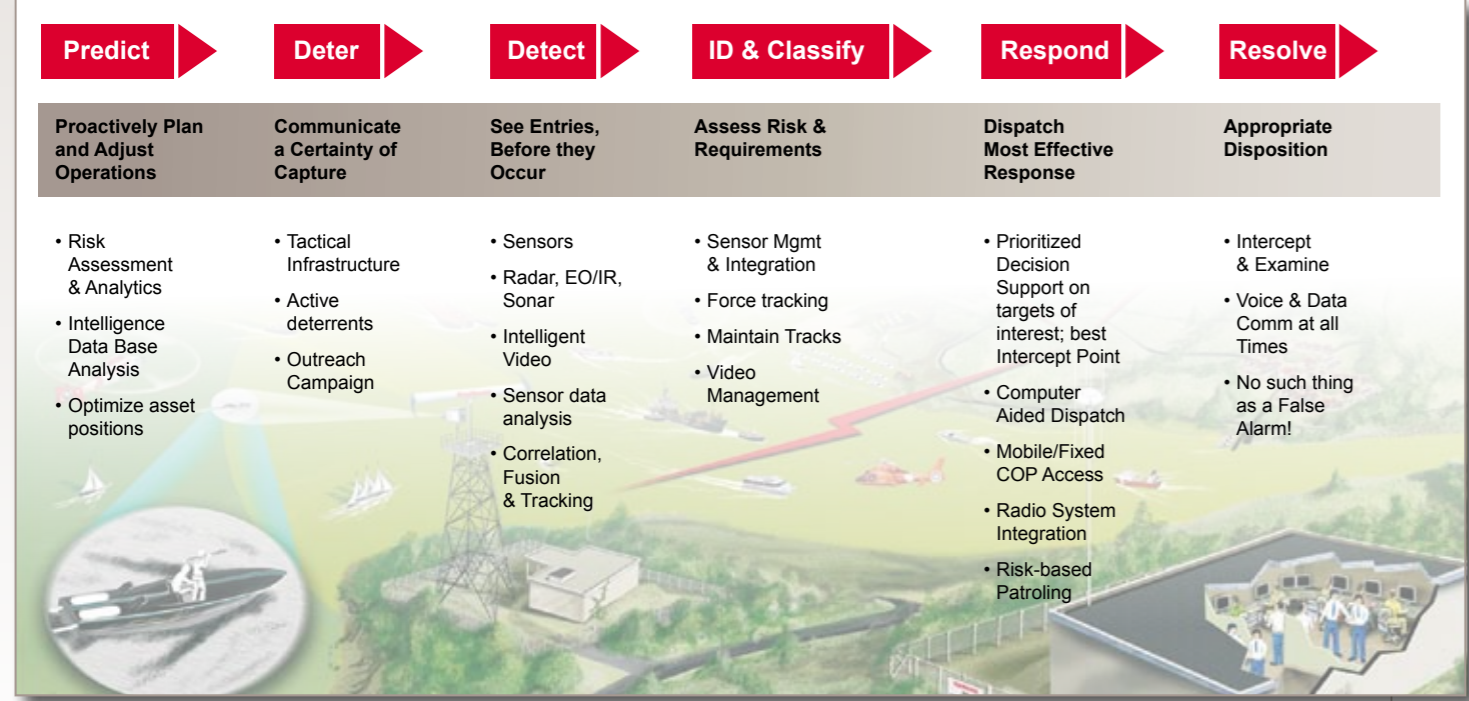
MFC – The Multi Function Console provides the operator with all the required capabilities to construct present and manipulate the tactical situation picture. The user can also interact with the CCS by inserting and updating different types of data.

IC – The Interface Computer (IC) is responsible for the interaction with all external interfaces. Since each interface can be implemented on a different software process the implementation can support a single computer running multiple interfaces.

DL-GW – The Data Link GateWay is the unit which is responsible for the management of the tactical communication with external networks. This component supports IP based protocol (TCP, UDP etc...) and enables connectivity to any external network.

MP – The Mission Planner (MP) is a software component which is used off-line for preparing missions databases for the CCS.

SSG – The Smart Scenario Generator (SSG) is a simulator which enables training of the CCS Operation. The SSG enables simulation of all input data from the different sources. This includes front-end (UI) and backend (simulation brain) component which shall support creating and managing scenarios to be "injected" into the CCS.



Capability Add-ons

The Surveillance System is based on a modular design using open architecture standards which are used extensively throughout Raytheon Anschütz products. This enables easy integration and delivery of additional capabilities and features to the system.



Technical Knowledgebase Editor

Such additional capabilities include:

- New Sensor Types
- Blue Force Tracking
- DF Integration
- Training modes
- Tracking, management and planning of logistics
- Datalink and Network Centric Capabilities
- Access to intelligence information by our Technical Knowledgebase
- Data Mining Tools
- Advanced mission planning capabilities
- Rule based abnormalities detection and Decision Support
- 3D Display Integration including 3D Objects management
- Path Computation including Real-Time Collision Avoidance and Obstacle Avoidance capabilities
- Redundancy Mechanisms and failover solutions