



ADVANCED CENTRIC SYSTEMS B.V

HF-BAND SHORE-BASED MARINE & AERIAL SURVEILLANCE RADAR SYSTEM

Product brochure



THE PROBLEM

Countries that have a coastline and possess territorial waters and Exclusive Economic Zones (EEZ) are required to protect their sea territory and shores against military threats, terrorism, illegal immigration, smuggling, unauthorized fishing and various other threats.

To protect such areas, surveillance Radar systems are used as the primary sensor in integrated coastal surveillance systems. Although Radar systems normally operate in the higher bands of the frequency spectrum, the HF (High Frequency) band offers several advantages with regard to long-range (beyond the horizon) coverage of sea areas.

THE SOLUTION

ACS presents HSMASRS – HF-Band Shore-Based Marine & Aerial Surveillance Radar System.

HSMASRS detects and tracks marine surface targets and low-flying aerial targets in the user country's Exclusive Economic Zone (EEZ), from the shore to well beyond the horizon – up to a range of 200 nautical miles.

Utilizing the ground wave propagation phenomenon (as opposed to sky wave propagation), the HSMASRS Radar generates a wide-angle beam in the HF band to cover a 120-degree sector.

The receiving element of HSMASRS consists of vertical antennae (single array or multiple arrays arranged to enable the use of the phased-array technology).

Additionally, HSMASRS utilizes specialized interference suppression technologies to eliminate the effects of communication noise and clutter.

This Radar setup offers consistent, uninterrupted coverage of the expansive area being covered, with excellent long-range (beyond the horizon) marine and aerial target detection and tracking performance under any environmental conditions, including rough sea conditions.

KEY FEATURES & MAJOR ADVANTAGES

Key Features & Major Advantages

- HF-band Radar covers a wide sector & enables assembly of on-going situational awareness picture
- Consistent long-range (beyond the horizon) marine & aerial target detection and tracking performance
- Adaptable reception antenna setup with phased-array technology

- Effective interference suppression
- Cost-effective operation & maintenance
- Specifications:
- Frequency band: HF
- Azimuth coverage: 120 degrees
- Range accuracy: 2 km
- Range resolution: 3 km
- Azimuth resolution: depends on antenna array configuration and frequency
- Detection range – marine target: 370 km (1500 ton ship)
- Detection range – low-flying aerial target: 130 km (small, twin-engine aircraft)

