ADVANCED CENTRIC SYSTEMS B.V

AIR-DEFENSE OPERATIONS COMMAND, CONTROL & MANAGEMENT SYSTEM

Product brochure

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THE PROBLEM

A generally-accepted definition for "Air Defense" is "all measures designed to nullify or reduce the effectiveness of hostile air action."

In practical terms, these measures include purpose-specific weapon systems (ground-based, airborne and shipborne), the sensor systems that support these weapon systems, the command and control resources used to employ and manage the air-defense effort, as well as some passive resources. All of these measures are employed to protect the national airspace, vital infrastructures, high-value installations and military forces. Missile defense is a more recent aspect of air defense.

The objective of the over-all air-defense effort is to detect and identify hostile aerial targets (fixed and rotary wing aircraft, UAS, missiles, rockets, etc.), engage these targets and destroy them before they can inflict damage.

Ground-Based Air-Defense (GBAD) efforts may be divided into the following categories:

- Self-defense, where ground or naval forces employ their own air-defense resources.
- Accompanying air-defense, where dedicated air-defense elements operate in conjunction with and provide close protection to ground forces.
- Point defense, where air-defense elements protect a particular objective or locality, such as a seaport, airport, military base or infrastructure facility.
- Area air-defense, where air-defense elements are deployed to provide a protective umbrella over a specific area.

Today's air-defense system category includes an extensive variety of surveillance systems, weapon systems, Command, Control, Communication and Intelligence (C4I) systems and integrated systems.

Large-scale air-defense systems operating in the context of a comprehensive theater defense effort or a nation-wide early-warning and C4I layout require dedicated, structured management, command & control mechanisms to ensure that the objectives of the air-defense activity are accomplished.

THE SOLUTION

ACS presents ADOCCMS – Air-Defense Operations Command, Control & Management System.

ADOCCMS is a state-of-the-art air-defense operations command, control and management system designed to address existing and future air-defense challenges. Additionally, the system may be used for civilian Air Traffic Control (ATC) applications.

ADOCCMS utilizes an extensive array of sensors, C2 centers, communication systems and various other elements to generate a high-quality real-time situational awareness picture of the areas being covered.

The situational awareness picture generated by ADOCCMS supports all of the decision-making processes associated with the task of defending the national airspace and the various activities associated with it.

The primary functions of ADOCCMS are:

- Generate a real-time situational awareness picture
- Target identification, spotting & tracking
- Threat evaluation & prioritization
- Real-time operational command & control
- Decision support
- System & sensor management

ADOCCMS consists of surveillance/detection/identification sensors (Radars, electro-optical sensors, spotting/locating systems, command and control centers, communication systems (landline, radio, VoIP, datalink, etc.) and all related subsystems, hardware and software.

KEY FEATURES & MAJOR ADVANTAGES

Key Features & Major Advantages

- State-of-the-art defense operations command, control and management system
- On-going assembly of a real-time status (situational awareness) picture
- Command, control & management of air-defense operations, including:
    - Friendly force flight plans (generation & maintenance)
    - Identification of all targets
    - Threat evaluation & prioritization
    - Weapon system allocation & assignment of responsibilities
    - Support for interception activities
    - Flight safety support
    - Data recording for post-operation analysis & debriefing
    - Automated generation of early-warning alerts
- Cutting-edge operator workstations:
    - Customizable user interface
    - Typically grouped into an operational complex, a technical complex and a training and simulation complex
- On-going system management, control & maintenance