aselsan
Radar Systems

With extensive radar heritage exceeding 20 years, ASELSAN is a new generation manufacturer of indigenous, state-of-the-art radar systems. ASELSAN’s radar product portfolio includes land, naval and airborne applications spanning a vast range of high technology radar products. These include reconnaissance & surveillance, air defense, and weapon locating applications.

In addition to developing and manufacturing radars required for these applications, ASELSAN is working to develop highly specialized radar technologies such as multi-function radar, mobile radar, and spaceborne radar.

ASELSAN radar products currently span L-Band, S-Band, X-Band and Ku-Band systems, benefiting from various building blocks all developed in-house, such as transceiver units, power amplifier units, signal processing units, microwave modules and antennas. With current know-how and capabilities, ASELSAN possesses worldwide competence in radar technologies and is open to cooperation opportunities in international programs.

Land Based Radar Systems

- **Land Based Air Defense Radars**
  - Air Defense Weapon System Mobile Search Radar
  - Air Defense Weapon System Fire Control Radar
  - KALKAN 3D Air Defense Radar

- **Land Based Surveillance Radars**
  - ACAR Ground Surveillance Radar
  - SERDAR Coastal Surveillance Radar Family

- **Land Based Weapon Locating Radars**
  - Counter Mortar Radar

- **Naval Radar Systems**
  - ALPER Naval LPI Radar
  - SMART-S Mk2 Naval Search Radar

- **Airborne Radar Systems**
  - Synthetic Aperture Radar
Land-Based Air Defense Radars

**Air Defense Weapon System Mobile Search Radar**
The Mobile Search Radar is a radar system that provides fast and accurate detection and tracking of low altitude airborne targets for mobile air defense weapon systems. The X-Band radar is suitable for integration on various land platforms and may be used as the main search radar of low altitude air defense systems.

- 70 km instrumented range
- Phased array antenna
- Digital beam forming
- 3-D target detection and tracking
- Track While Scan (TWS)
- Automatic target tracking
- Multi-target tracking
- Automatic target classification
- Identification of friend or foe

**Air Defense Weapon System Fire Control Radar**
The Fire Control Radar is a 3-D tracking radar designed for accurate target detection and tracking requirements of land and naval based air defense weapon systems. The Ku-Band Radar is suitable for use as the tracking radar in mobile air defense weapon systems.

- 30 km instrumented range
- Compact reflector antenna
- 3-D target detection and tracking
- Generation of accurate 3-D target position information
- Automatic target classification
- Short reaction time
- Operation on-the-move
KALKAN 3D Air Defense Radar

KALKAN is an X-band radar system that enables fast and accurate detection and tracking of low altitude air targets in three dimensions for low and medium range air defense, providing the air picture for the command & control system. KALKAN may be employed as the main search radar of low and medium range air defense systems.

- 100 km instrumented range
- Phased array antenna
- 3-D target acquisition and tracking
- Simultaneous tracking of over 60 air targets
- Track While Scan - TWS
- Automatic Target Classification
- Identification of friend or foe
- Integration with command & control systems
Land-Based Surveillance Radars

**ACAR Ground Surveillance Radar**
ACAR, is a new generation Ku-Band radar for the detection, tracking and classification of moving targets on or close to the ground or sea, and for artillery fire adjustment. ACAR can be used as a stand-alone radar on a tripod, integrated on a vehicle, or mounted on a tower/mast depending on operational requirements.

- 40 km instrumented range
- Slotted waveguide array antenna
- Fully solid state, compact and lightweight design
- Track While Scan (TWS)
- Multi-target tracking
- Automatic target classification
- Low Probability of Intercept (LPI)
- Remote control
SERDAR Coastal Surveillance Radar Family
SERDAR is a low probability of intercept (LPI) Coastal Surveillance Radar for the detection of all kinds of sea surface targets. The X-Band radar promises high functionality in areas of national security such as coastal surveillance, vessel traffic control and harbor control.

• 36/48 NM instrumented range
• 4m or 7m slotted waveguide array antenna
• Solid state design
• Low Probability of Intercept (LPI)
• Superior close range performance
• High range resolution
• Remote control
Land-Based Weapon Locating Radars

**Counter Mortar Radar**

ASELSAN Counter Mortar Radar is an L-Band mortar detection radar offering 360° azimuth coverage for the detection and tracking of mortar fire, and for estimating the locations of fire source and of impact. The radar has been designed with a modular approach, allowing for use on a tripod, on a tower or building, or on a vehicle mounted mast.

- Electronically scanned active array antenna
- Simultaneous mortar fire detection
- Landscape silhouette tracking
- Remote control
Naval Radar Systems

ALPER Naval LPI Radar
ALPER is a low probability of intercept (LPI) naval radar system for the detection of all kinds of sea surface targets. The X-Band radar is ideal for wartime navigation.

- 36 NM instrumented range
- Slotted waveguide array antenna
- LPI, Low Probability of Intercept
- High range resolution
- Integration with navigation radar

SMART-S Mk2 Naval Search Radar
The SMART-S Mk2 is a three dimensional, multi-beam naval search radar for medium to long range surface and air surveillance. The S-Band radar offers operational flexibility and preserves its superior performance even under challenging conditions involving combined environmental conditions and multiple target types; also providing the capability to provide guidance to fire-and-forget type guided artillery and medium range artillery, as well as approach guidance for UAV’s and helicopters close to the vessel.

- 250 km instrumented range
- Active phased array antenna
- 3-D air target detection and tracking
- 2-D surface target detection and tracking
- Jammer detection and tracking
- Automatic target classification
Airborne Radar Systems

**Synthetic Aperture Radar**
The X-Band Synthetic Aperture Radar (SAR) is an airborne radar system for high-resolution ground imaging and moving target detection which can be used on numerous manned and unmanned aircraft. The radar can be employed in a variety of military and civilian applications involving airborne surveillance and imaging.

- Slotted waveguide array antenna
- Stripmap/Spotlight/GMTI/ISAR/Sea Search Modes
- Automatic antenna positioning and stabilization
- Automatic motion compensation
- Tailored interfaces for convenient integration on various aircraft
- Platform-specific radome design