ASİST
SUBMARINE INTERCEPT SONAR SYSTEM
ASELSAN Intercept Sonar System (ASIST) has capability to detect, track and analyze active acoustic source in frequency range from 1 kHz to 100 kHz. It also provides characteristics of detected active acoustic pulses.

ASIST consists of five units which are Intercept Sonar Acoustic Sensor Array, Processing Unit, Control and Display Unit, Power Adaptation Unit and Submarine Interface Adaptation Unit. Intercept Sonar Acoustic Sensor Array includes hydrophone array converting acoustic signals to electrical signal, pre-amplifiers and analog-digital converter (ADC) electronic cards. Processing Unit includes signal processing algorithms, signal processing software and control/display software. Control and Display Unit has capability of display processed data and entering submarine operator commands. Power Adaptation Unit has capability of conversion available DC supply voltage in submarine to system DC supply voltage. SUR Interface Adaptation Unit provides submarine platform information to system.

System simultaneously detects, analyzes and extracts parameters of at least four pulses which are separable in frequency domain. The following parameters of detected pulses are extracted:

- Detection time
- Relative and absolute bearings of pulse
- Pulse frequency
- Pulse amplitude
- Pulse duration
- Pulse repetition interval (PRI) (If the pulse is periodic.)
- Pulse mod

ASIST displays the following graphics related with detected pulses in real time:

- Polar Diagram
- Spectrogram Plot
- Waterfall Plot

The System stores the data of acoustic signal pulses and displays visually stored data. The data of the acoustic signal pulses are transferable to portable storage devices. System has capability of display the following stored parameters and plots:

- Signal Parameters
- Amplitude – Time Plot
- Frequency – Time Plot
- Bearing – Time Plot

**General Specifications**

- Open architecture and modular design
- Modern signal processing algorithms
- User friendly interface
- Rugged design
- Compatibility with military standards
- Standalone system
- Integration to War Management System
- Capability of Built-in Test (BIT)
- Recording the data of acoustic signal pulses
- Data transfer to portable storage devices.