



## ARS-800 Maritime Patrol Aircraft Radar

The **ARS-880** Maritime Patrol Aircraft Radar has been developed for use in:

- airborne search and rescue (SAR) and support of maritime rescue missions,
- aerial reconnaissance and patrolling,
- support of customs and economic zone protection,
- surveillance and protection of fisheries,
- control of illegal immigration and terrorist threats,
- operations against surface vessels,
- natural disaster rescue and recovery support,
- sea pollution and oil slicks detection.



### Advantages:

- high immunity against jamming
- light weight
- Synthetic Aperture Radar mode to create synthetic map of the coast

The **ARS-800** radar is used in maritime patrol aircrafts as a stand-alone sensor or a basic component of a multi-sensor recognition system.

The color TFT display image indicates:

- contact heading,
- contact distance,
- contact bearing (relative, true, North),
- bearing between contacts (North reference),
- speed relative to ground reference,
- geographical position.

The image can show analog video input (contacts and coastline) and synthetic indicators (plots, routes, maps, heading markers) separately or in a variety of composite modes.

The onboard navigation system provides the radar with geographical position of the aircraft, its speed vector, altitude, heading, pitch and roll.

The radar can operate stand-alone or co-operate with a dedicated communication system to transmit the contact data to a coastal or shipborne command posts.

### Technical characteristics

Operation ranges	10, 20, 40, 80, 160, 220 / 3, 6, 12, 24, 48, 96, 120 km/Nm
Number of detected and simultaneously tracked targets	200
Operation frequency	X-band
Transmitter power, average	160 W
Antenna beamwidth	2° AZ / 9° EL
Scanning angle	360°
Antenna rotation rate modes	3 / 7,5 / 15 / 30 RPM
Range of antenna beam stabilization	20°
Output data	Ethernet, RS-232, TS-422, ARINC-429, MIL 1533, user format
BITE	Available
Power supply	3 x 115 VC, 400 Hz, +27 V

### Detection range for typical targets

	Target RCS	Sea state	Detection range
Raft or dinghy	1 m <sup>2</sup>	3	10 km
Small boat	5 m <sup>2</sup>	3	35 km
Fishing trawler	150 m <sup>2</sup>	4	80 km
Ship	500 m <sup>2</sup>	5	100 km

### SAR resolution in strip mode

in azimuth	15 m @ 20 km
in distance	15 / 30 m

### Environmental requirements

Sinusoidal vibrations	5 to 500 Hz, 2 g
Shocks	12 ms, 6 g
Operation temperature	-25 °C to +50 °C
Humidity	95%, 35 °C
Operation altitude	up to 4500 m