

Global Technical Systems



AN/APS-151 Airborne Surveillance Radar

Features

- PPI (Plan Position Indicator) operation
- Clutter rejection
- Track While Scan
- MTI (Moving Target Indication)
- Long range – up to 200 nmi

Benefits

- High reliability
- Easy installation
- Open architecture
- On board image processing
- Software based system to incorporate advances in signal processing capabilities
- Features, interfaces, and communications software can be customized for specific applications
- Built In Test (BIT)
- Low cost system

Description

The AN/APS-151 is an all-weather, day/night Plan Position Indicator (PPI) Radar for maritime and land-based applications (ISAR and Spot Light SAR are options). The radar can be installed in fixed and rotary wing UAVs and manned aircraft. The system can be integrated with aircraft systems (interfaces) or operate independently with displays and data recorders.

The AN/APS-151 consists of an RF unit, Processor unit, Antenna Interface unit, and Antenna/Pedestal unit. An 8 kW TWTA Transmitter is available. For manned applications side mounted flat panel displays are available for operator display and control. An Active Phased Array Antenna is in Development to replace the TWTA.



System Components

Radar Specifications

- X-Band – Center frequency 9.41 GHz
- 8 μ S chirp with 320 MHz bandwidth
- 800 MHz sampling rate
- 5 sec rotation
- 8 kW TWTA
- Selectable range 20, 90 or 200 nmi
- -15° (up) to +50° (down) elevation
- 360° azimuth continuous rotation
- Track up to 100 targets
- Interfaces – Ethernet, VGA
- Radar Weight 132 lb (60 kg)

Power and Environmental

- 0 °C to 50 °C operation
- 28 V DC system power (TWTA uses 115 VAC 400 Hz)

Configuration Options

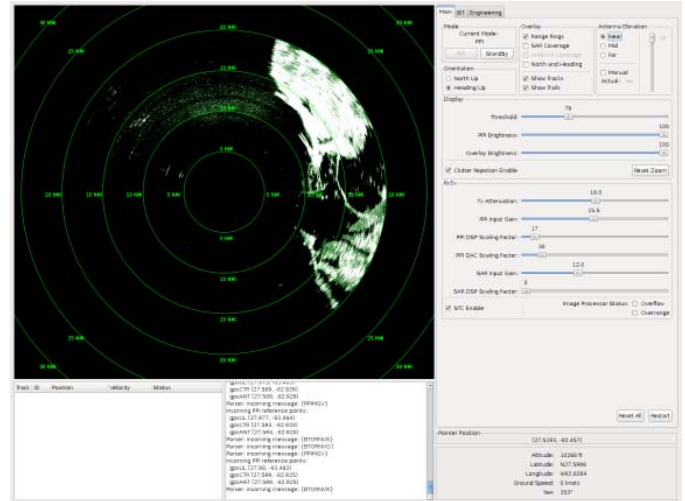
The radar can be adapted to customer needs, including mounting options and interfaces.

- ISAR
- Spotlight SAR
- Integrated user interface and display monitors
- Ethernet interfaces for data and control
- Data recorder
- GPS/INS

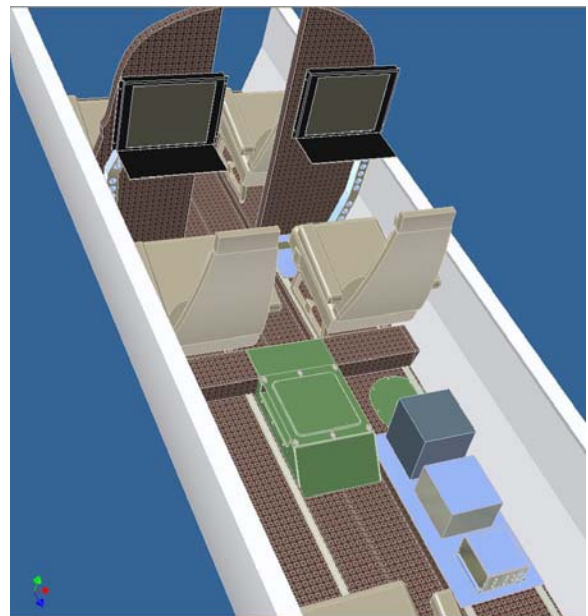
Subsystem Dimensions	Size (in)		
	H	W	D
Pedestal & Antenna	27.2	47.5 dia.	--
Rx/Ex LRU (w shock mount tray)	9.5	7.9	12.9
Processor LRU (w/o shock mount tray) (1 ATR Tall)	10.6	10.1	16.0
Transmitter (TWTA)	6	19	19
Antenna Interface Unit	2.8	5.1	14.3

About GTS

GTS is an energetic, innovative, and assertive Virginia corporation that specializes in providing technical services and high-tech product solutions in the areas of sensor technology and storage area networks. The radar was developed by the Information & Sensor Systems (ISS) Division in St. Petersburg, FL.



PPI Display and Operator Controls (Tampa Bay Area)



Example Aircraft Installation with PPI/SAR/ISAR

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