

Surveillance Radar RTS-6400

System Features

- Superior low altitude tracking radar performance
- Passive operation capability using configurable optronics suite
- Robust performance in hostile ECM environment
- Line-of-sight stabilisation
- Short reaction times
- Excellent clutter rejection
- Availability enhanced by redundant high-reliability sensors
- Radar and infra-red sensor combinations ensure all-weather and day/night operation
- Automatic, manual and memory tracking on selectable sensor data
- Autonomous search capability
- 1D, 2D, 3D and 4D designation data accepted
- Sector and horizon scan capability
- Low peak power
- Comprehensive on-line BIT



Table 1: Performance Specifications

Radar frequency	X-band (NATO I/J Band)
Radar Detection Range(Fighter)	> 38 km
Radar Detection Range(Missile)	> 18 km
Tracking accuracy(range)	better than 5 m rms
Tracking accuracy(angles)	better than 0.6 mrad rms
Acquisition time	1.5 seconds typical
Instrumented range	Air and surface mode: programmable to 60 km
Positioner(Velocity)	> 5rad/s
Positioner(Acceleration)	> 5rad/s
TV camera - Fields of view (Narrow)	2.5° x 1.9°
TV camera - Fields of view (Wide)	7.3° x 5.5°
Thermal imaging sensor - Fields of view (Narrow)	2.2° x 1.6°
Thermal imaging sensor - Fields of view (Wide)	9° x 7°
Thermal imaging sensor - Operating band	3 - 5 μ m
Laser range finder PRF	> 20 Hz
Temperature Below decks	0°C to +40°C
Temperature Above decks	-10°C to + 50°C
Wind(operational)	80 knots (relative)
Wind(Survival)	110 knots (relative)
Pedestal limits	-30° to +85°

ECCM Features

- Frequency agility
- Random PRF stagger
- PRF jitter
- Programmable digital pulse compression
- Low antenna sidelobes

- Large instantaneous dynamic range
- Track-on-jam
- Adaptive tracking filters
- Scenario-adaptive doppler processing
- Multi-spectral operation

Sub-system Features

- Antenna
 - > Composite dual-offset Gregorian reflector
 - > Very low sidelobes
- Transmitter
 - > Air-cooled Travelling-Wave Tube Amplifier
 - > Wide operating bandwidth
- Receiver
 - > 3-channel monopulse
 - > Low noise figure
 - > Self-calibrating and equalising
- Signal Processor
 - > Programmable digital pulse generation and compression
 - > Doppler and non-coherent processing
 - > Adaptive thresholding
 - > Automatic ECM detection and ECCM initiation
- Data processor
 - > Adaptive tracking filters with motion compensation
 - > Anti-multipath processing
 - > Real-time mode control
 - > Sensor data fusion
 - > FDDI interface
- Positioner
 - > High angular velocity and acceleration
 - > 2-axis line-of-sight stabilisation
 - > Direct drive DC motors
- TV camera
 - > Dual fields of view CCD
- Laser range finder
 - > High repetition rate
 - > High accuracy
 - > Eye safe
- Display
 - > Dual high resolution colour displays
 - > Track and search displays
 - > Control and status

> Joystick control for operator intervention

Options

- Customised displays
- Extended ECCM features
- Provision for CLOS missile control
- Ethernet interface to data processor
- Solid state transmitter
- 8 - 12 μm band Thermal Imaging Sensor
- Ku-Band radar sensor
- Remote diagnostics
- Closed Loop Fire Control with appropriate gun systems

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<http://surveillance-radars.at-communication.com/en/at/rts-6400.html>