

6-Beam Simultaneous Lobing 3D Radar

System Features

- 6-Beam simultaneous-lobing 3D radar(ESR 360L)
- 9-Beam simultaneous-lobing 3D radar(ESR 380)
- Active antenna housing distributed transmitter and receiver
- Integral Track-While-Scan
- Fully coherent architecture
- High mobility via transporter or trailer
- Air transportable
- Co-located or remote operations centre
- Comprehensive ECCM suite
- Local and remote control and status monitoring
- External data link
- High reliability, short down-time design
- Comprehensive on-line BIT with diagnostics



Table 1: Performance Specifications

	ESR 360L	ESR 380
Frequency	L-Band (NATO D-Band)	
Instrumented range	200 km	445 km
Detection range (RCS=2 m ² , 80% P _d , 10 ⁻⁶ _{fa})	185 km	350 km
Antenna rotation rate	6/15rpm	6 rpm
Altitude	>12km	>20km
Signal processor	MTI / MTD	
Target track capability	>100 targets/s	
Radar accuracy(range)	25 m	25 m
Radar accuracy(azimuth)	0.3°	0.3°
Radar accuracy(elevation)	0.5°	0.2°
ECCM features	Automatic jammer detection and avoidance	
	Frequency agility	
	Random PRF stagger	
	Digital pulse compression	
	Single pulse suppression	
	Low mean antenna sidelobe levels	
Deployment time (operational)	< 30 minutes	
Altitude (operational)	3 000 m	

Wind(operational)	120 km/h
Wind(survival)	200 km/h

Sub-system Features

- **Antenna**
 - > 6-Beam simultaneous lobing (ESR 360L)
 - > 9-Beam simultaneous lobing (ESR 380)
 - > Independent ESM analysis
 - > Composite planar array
 - > Robust composite material structure
- **Transmitter**
 - > Distributed solid-state transmitter
 - > 18 Radiating elements (ESR 360L)
 - > 30 Radiating elements (ESR 380)
 - > Wide band
 - > Air cooled
- **Receiver**
 - > Distributed 6-channel configuration (ESR 360L)
 - > Distributed 9-channel configuration (ESR 380)
 - > Low noise figure
 - > Self-calibrating
 - > Auto offset control
- **Processor**
 - > Independent processor per beam
 - > Digital pulse generation and compression
 - > Range and Temporal CFAR
 - > Adaptive thresholding
 - > Plot extraction and track-while-scan
 - > Performance optimisation by sector or range/azimuth gate
- **Display**
 - > High resolution colour display
 - > Integral maps
 - > Radar control & status display
 - > Full mission control features

Options

- Integrated IFF
- Customised logistic
- Integrated Command and Control
- Multiple-sensor data display
- Customised ECCM

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<http://surveillance-radars.at-communication.com/en/at/esr360l-esr380.html>