

Very Short Range Air Defense Radar - VSHORAD

■ SFX-2026



Safex

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General

SAFEX Type-2026 Very Short Range Air Defense Radar (VSHORAD) is designed for detection and tracking of airborne targets, including a wide variety of low RCS and low flying targets such as fighter aircraft, ultra-lights and UAVs. It is SAFEX fifth generation of 3D Tactical Air Defense Radars featuring a lightweight transportable, X-Band, pulse-Doppler solid-state electronically scanned array. The radar employs multi-beam elevation coverage through Digital Beam Forming (DBF) and 360° azimuth coverage by antenna rotation, providing accurate target measurements of velocity, range, azimuth and elevation angles target detection and tracking and support of surface-to-air missile weapon systems.

Applications include local air defense, gap filler for complementing main air defense radar systems, border air space protection, and critical infrastructure air space protection. Installation of the radar can be either fixed on the ground or tower, or transportable on a vehicle.

Main Features

- Track While Scan of more than 100 targets
- 3D radar with azimuth coverage of 360°
- Operated locally or by remote Command and Control system
- Standalone operation or integrated with additional Air-Defense radars integrated with IFF (option)
- Ethernet LAN communication (wire or wireless)
- High reliability - full solid-state design
- Extensive ECCM capabilities
- Digital technologies:
 - Digital Beam Forming (DBF)
 - Digital Pulse Compression
 - Digital Receivers
- Embedded GPS
- Extensive BIT
- Low power consumption

Specifications

Instrumental detection range	25 km
Detection range (fighter aircraft)	15 km
Detected target velocity	0 - 600 m/sec
Update Rate	2 sec (30 rpm)
Range accuracy	30 m
Azimuth accuracy	0.3°
Elevation accuracy	0.5°
Elevation coverage	60°
Azimuth coverage	360°
No. of tracked targets	100 by TWS
Resolution	Range: 60 m Azimuth: 3.6° Elevation: 7°
Frequency	X Band
Weight (antenna + pedestal)	75 kg (approx.)
Dimensions:	
- Antenna	200 (W) x 1100 (H) x 750 (D) mm
- Pedestal	364 (W) x 223 (H) x 220 (D) mm
Power consumption	500 W (approx.)
Operating voltage	28 Vdc (nominal)
Operation temperature	-30°C - +55°C

