



FIRE CONTROL RADAR

Falco Plus is a Fire Control Radar (FCR) designed to control surface-to-air missiles integrated within Ground Base Air Defence systems.

The tracking and missile guiding radar can be easily deployed within a complex missile land area defense system. It performs target indication to assure detection, surveillance, tracking and illumination of threats such as attacking air vehicles, fighters and helicopters. It can also detect stand-off air-to-surface, cruise and anti-radiation missiles.

Falco Plus interfaces a Continuous Wave Illuminator (CWI) certified for guiding the ASPIDE and ASPIDE 2000 semi-active missiles. It is integrated within the SPADA 2000 Plus missile system and can control up to four firing sections, each of them equipped with up to six missiles. Alongside the KRONOS Land multifunction radar, the system it forms part of the SPADA 2000 Plus missile system in service with the Italian Air Force.

Falco Plus has excellent ECCM capabilities due to unique monopulse antenna and transmission frequency management. Anti-clutter features allow it to engage targets in any scenario and environmental conditions.

The system can be housed in a standard 20ft ISO shelter for easy transport by air, sea, rail and road.

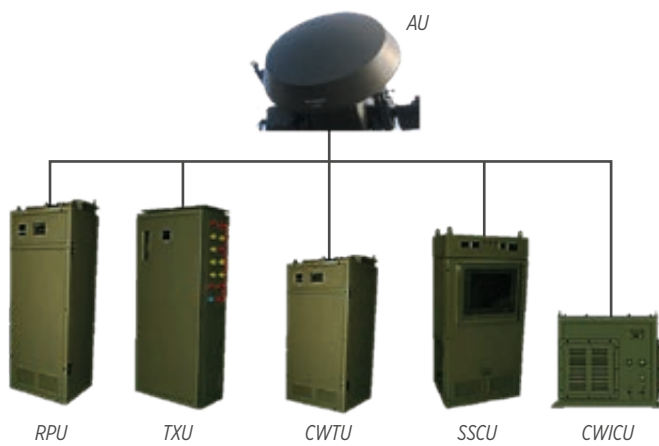
MAIN FUNCTIONS

- Autonomous search in bearing (panoramic or sector) of a target, with pre-fixed elevation or programmed elevation steps
- Automatic target acquisition on external designation or auto designation
- 3D tracking
 - Range, azimuth and elevation
 - SNR and radial speed
- Jammer detection and Side Lobe Jammer alarms
- Track-on-Jamming (TOJ)
 - In case of jamming during normal tracking of a target, the tracking radar can switch to Track-on-Jamming mode
- In acquisition and tracking mode the timing is generated with automatic commutations (Short Range/Long Range and vice versa) according to the target range
- BITE online function operates automatically to check the correct operation
- Missile illumination control function.

FALCO PLUS

TECHNICAL CHARACTERISTICS

RADAR		
Frequency	Low I Band	
Polarisation	Vertical	
Antenna rotation speed	-90°/s (Tscan = 4s)	
Antenna beamwidth	Azimuth	2.2° ± 0.2°
	Elevation	2.2° ± 0.2°
Antenna type	Cassegrain	
Instrumental range	15 km	Short range mode
	50 km	Long range mode
Transmitter	Fully coherent with TWT, uncoded/coded waveforms, frequency diversity/agility	
Receiver	Super heterodyne double conversion, MTI and anti-clutter filters, enhanced ECCM features	
Tracking method	Monopulse	
Missile illumination	Continuous wave	



INSTALLATION DATA

ANTENNA UNIT	
Width	2248mm
Depth	2248mm
Height	2325mm
Weight	500kg

SERVO CONVERSION & COMPUTING UNIT	
Width	700mm
Depth	695mm
Height	1444mm
Weight	380kg

TRANSMITTER UNIT	
Width	720mm
Depth	550mm
Height	1730mm
Weight	250kg

RECEIVER & PROCESSING UNIT	
Width	720mm
Depth	460mm
Height	1797mm
Weight	170kg

CW ILLUMINATOR UNIT	
Width	784mm
Depth	500mm
Height	1051mm
Weight	145kg

CW COOLING UNIT	
Width	695mm
Depth	560mm
Height	566mm
Weight	90kg

