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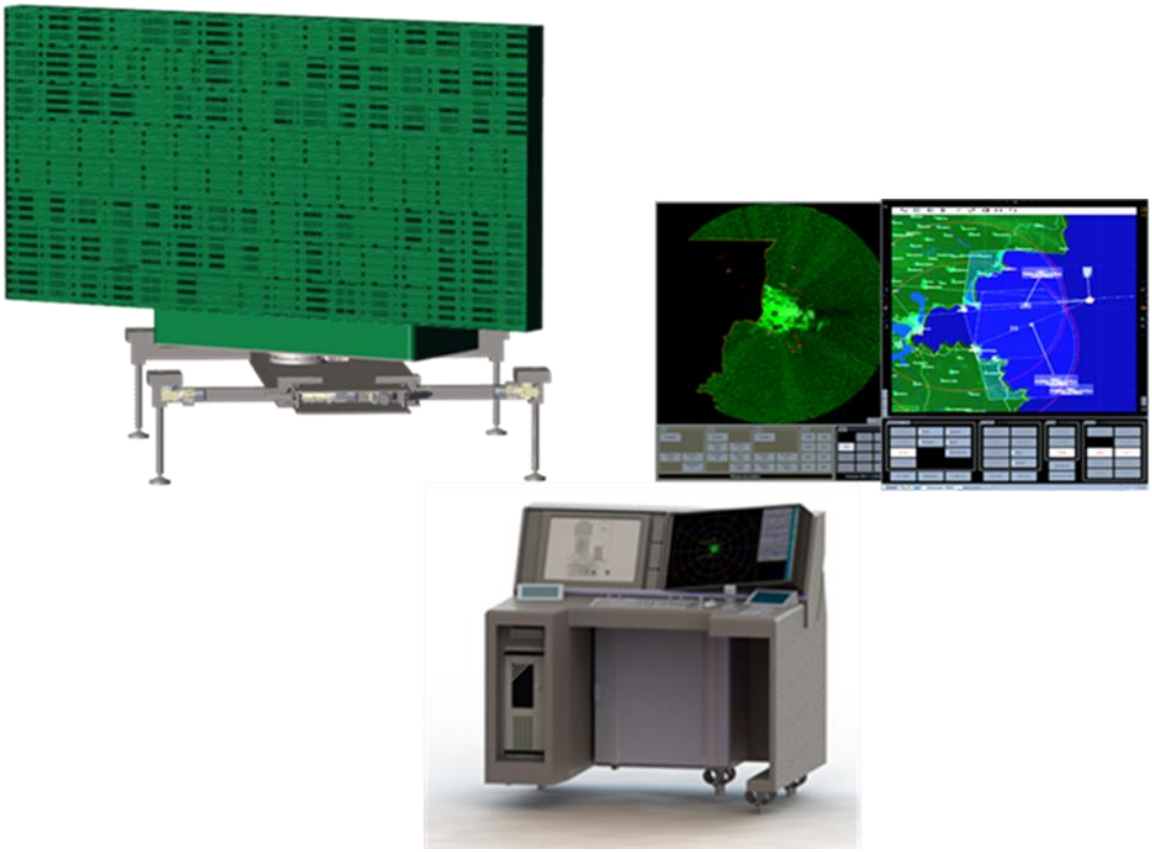
3D radar PXG - 04 - X

Multi-frequency, multi-channel 3D radar with phased array antenna for sea and air targets



Purpose:

Automatically detect and escort both marine and airborne targets with a small effective reflective surface under intense radio-resistance with high accuracy. Detects and escort small airborne objects and unmanned aerial vehicles (UAV/Drone).

Radar is a modular version of PXG-04-450S changing the algorithm for processing information identification data for marine (surface targets) of different background (earth and water).

High protection against intense active targeting disturbances.

The emission of signals with constant and non-periodically changing frequencies, amplitudes and lengths leads to a significant hindrance to the enemy's radio intelligence and virtually makes it impossible to counteract the target radio interference.

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Technical parameters:

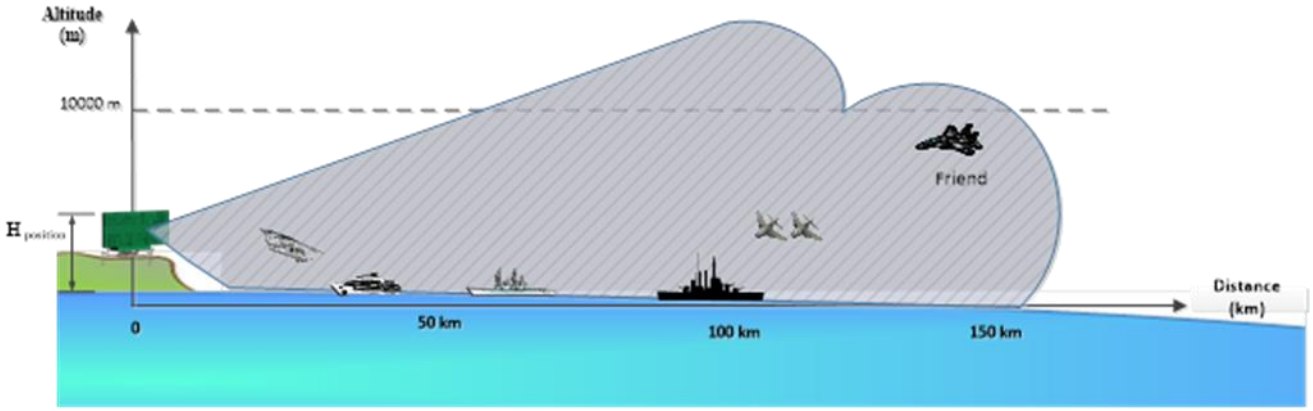
- Working range – X band;
- Composite strobe signal with receiving compression;
- Transmitted power - 12,8 kW ;
- Phase Array Antenna with microprocessor phase control;
- Ability to upgrade with MSSR (IFF) – option.
- Diagram – adaptive;
- Scan Rate - 4 sec (15 rotations) and 6 sec (10 rotations) ;
- Power consumption < 15 kW;
- Power supply - 3 x 380V/ 50Hz;
- System diagnostics and management and remote control;
- Automatic "plot" and "track" process (processing).

Fight against interference:

- The probing signal is coded at several frequencies;
- Changing the frequency that is "stuck" without losing any information;
- Using filters for uncorrelated impulse interference;
- Filters for passive dipole, band and others interferences;

Distance detection of sea targets and aerial targets flying at extremely small altitudes

Altitude of the position	Detection distance of sea targets	Detection distance of air targets at h_{target} = 50 m
70 m	30 km	55 km
125 m	40 km	65 km
196 m	50 km	75km
500 m	80 km	105 km
784 m	100 km	125 km



Operational view OV-1: Concept of using the radar