



Rezonans-NE

Mission

The Rezonans-NE very high frequency counter-stealth early warning phased-array radar is designed to effectively detect a wide range of current and future air targets, including low-observable cruise and ballistic missiles, hypersonic aerial vehicles, as well as stealthy ones, in severe electronic countermeasures (ECM) and clutter environment.

Tasks

- detect and track a wide range of air targets at long ranges, including small and stealthy ones;
- automatically determine the location and motion parameters of air targets as well as classify them;
- automatically provide designations to weapon systems;
- generate and send information about the tracked targets for taking operational decisions;
- analyze the ECM situation and automatically adjust to the actual ECM conditions.

The radar can operate in circular scan mode or within a specified sector. In addition to peacetime tasks, it can provide early warning of an air attack and information support for air and air defence warfare operations.

Composition

The Rezonans-NE includes up to four radar modules, each of which provides control in the azimuth sector of 90 degrees and can operate independently.

The radar module consists of a transmit antenna-feeder device, receive azimuth and elevation antenna-feeder devices, and a power amplifier. The radar's data receiving and processing system provides data reception and processing in each of the four modules. Radar equipment is housed in containers.

The probing signal generator and radar data receiving and processing equipment are digital and controlled by special processors. A solid power amplifier is used.

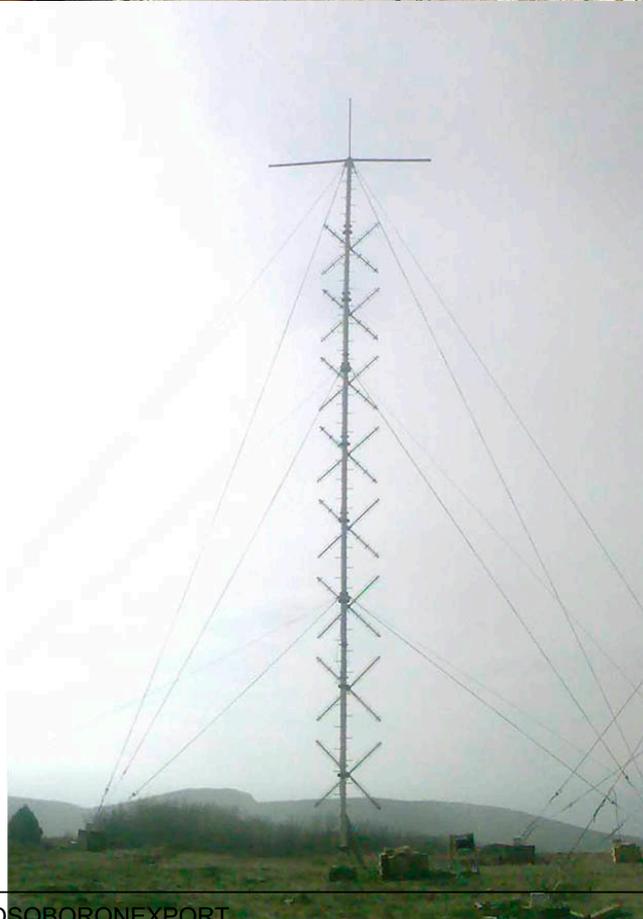
The radar consisting of the four modules controls the 360-degree sector and occupies a 100 x 100 m area.

Main characteristics:

- Coverage area:



- range, km: 10-1100
- azimuth, deg: 360
- elevation, deg: 1,5 to +80* (0 to +80)**
- altitude, km: ±100
- Fighter detection range at altitude of 10,000 m, km: 350
- Target location accuracy, not worse than:
 - range, m: 300
 - azimuth, deg: 1,5
 - elevation, deg: 1,5
 - speed, m/s: 1-1,5
- Data update rate, s: 1-10
- Number of tracked targets: ±500
- Operation time mode: continuously***
- Warm-up time (on a prepared site with installed AFD), min: 10
- Operating crew (one shift): 3
- Power supply system: self-contained industrial network 3 x 220 VAC, 50 Hz
- Power consumption, kW: 100
- Operation conditions:
 - ambient temperature, °C: -40° to +50°
 - relative air humidity, %: ≤ 90 at 25 °C
 - wind speed, m/s: ≤ 50
- Transportation: by road, rail, sea, air





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