

One Page Write Up

Air Defence Tactical Control Radar (ADTCR)

1. Description of Technology

Air Defence Tactical Control Radar (ADTCR) is developed for Army AD for surveillance detection, tracking and friend/ foe identification of aerial targets and transmission of target data to multiple Air Defence command posts/ weapon systems. The system is based on State-of-the-Art Rotating Active Phased Array with Digital Beam Forming (DBF) technology. The radar system is configured on two High Mobility Vehicles and is transportable by Rail, Road and Air.

The system is modular in construction for easier installation, operation and maintenance and can operate in plains, deserts, and mountainous terrains.

With advance signal processor and data processor systems combined with digital multi beam processing, the radar can perform multiple functions, through programmable waveforms including search, Track while scan (TWS), dedicated multiple target tracking and target acquisition. ADTCR gives a true air picture with precise target parameters including the target range, azimuth, height, speed and IFF status. The radar is fully programmable through and efficient Man machine interface from the operator workstation and also from the remote display. The track data can be transmitted to multiple weapon systems and command posts up to 20 km away through line and radio links. The system is designed for survivability in intense environmental and EW conditions, and the operations cabin is protected against Nuclear, Biological and Chemical weapons.

Technologies

- Rotating Active Phased Array with Digital Beam Forming
- Electronic scanning in Azimuth and elevation
- Distributed multiple Transmit/ Receive modules based architecture
- Multifunction capability with advanced signal and data processor

2. Application Areas

Upgradation as a sensor for Fire Control Applications.

3. Field Trials

AAAU calibration is completed at NFTR facilities of K1 site. The system integration & testing is in progress. The system is expected to be ready for DRDO internal evaluation trials by end Sep 2017.

