ELDIS
RADAR
SYSTEMS

RPL–2000

GROUND CONTROL APPROACH RADAR SET

The RPL-2000 Ground Control Approach Radar (GCA) is a complete set of all ELDIS active radars. It is designed to provide complete solution for Ground Control Approach or Air Defence. The RPL-2000 GCA consists of Primary Surveillance Radar RL-2000, Secondary Surveillance Radar MSSR-1 and Precision Approach Radar PAR-E, as well as the Operations Subsystem, which includes Communication Equipment, ERDIS Air Traffic Management Automation System and mobile control tower.

The RPL-2000 GCA follows the tradition of proven concept of complete airbase radar solution and represents the next generation of the RPL-5M GCA radars, produced by company ELDIS Pardubice. The GCA is based on common standards and modular design, but uses the cutting-edge, fully solid-state technology, resulting in excellent radar parameters and long lifecycle of the radar equipment.

The RPL-2000 GCA comes in fixed, transportable and mobile configuration.

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ERDIS

ERDIS is a state-of-the-art Air Traffic Management Automation System developed by the company ELDIS Pardubice and designed for the civilian, military and civ/mil joint ATM centres. The ERDIS system supports surveillance and/or procedural air traffic control operations for En-route (ACC), Approach (APP) and Tower (TWR) control and planning air traffic services. System is designed for fail-safe 24/7 operation costs.

RL-2000

RL-2000 is the latest generation of ELDIS primary surveillance radars for Terminal Approach Control Area. The radar meets or exceeds EUROCONTROL and ICAO standards and recommendations. RL-2000 features a fully solid-state highly modular configuration a fail-safe system and low life cycle costs. RL-2000 can be customized to meet specific customer requirements.

MSSR-1

The Monopulse Secondary Surveillance Radar is a fully modular system, which meets or exceeds ICAO and MARK X recommendations and standards and allows extension according to increasing customer needs. Individual modules of the equipment can be used either in new or in older MSSR systems.

PAR-E

The PAR-E precision approach radar provides important support for the approach and landing control of various aircraft, including the emergency landing due to avionics failure. The radar utilizes an active electronic scanning antennas (AESA) both in the azimuth and the elevation which allows operation without mechanical movement of the antennas. The radar meets relevant ICAO standards and follows the NATO Vision document, according to which the PAR technology will be used at least until 2040. The PAR-E Precision Approach Radar is designed for target detection such as aircrafts, ground objects and meteorological formations. The detected information is displayed on workplace screens and radar information is transferred to remote ATC workplaces. The radar is particularly important in situations when the pilot has limited sight (because of fog, rain, etc.) and in emergency landing due to avionics failure. In this situation, the radar has to provide the approach controller with maximum quality radar display complemented by computer evaluation of speed, deviations from glide path/course line, the distance from the previously approaching aircraft, etc.

MOBILE ATC TOWER

Mobile Air Traffic Control Tower serves for navigation and air traffic control at provisional air stripes. Navigation is possible for various aircrafts depending on the equipment installed, available radars and systems for air traffic control connectivity and interoperability. Each Control Tower can be manufactured specifically for the customer.

CONTROL AND MONITORING SYSTEM (CMS-CAM)

Each system equipment or unit is fitted with independent BITE diagnostics to carry out performance monitoring and automatic system backup changeover at system level. LCMS is located on radar site, RCMS can be located in remote technical room in Control tower (TWR), etc. The CMS consists of radar status and performance monitoring and allows the authorized personnel to control and adjust radar configuration and parameters remotely. CMS incorporates a user-friendly graphical interface which is used for data and status presentation.

BASIC PARAMETERS

- RL-2000 is S-Band surveillance radar
- RL-2000 is produced in versions with minimal range 60, 80 or 100 NM
- The radar is equipped by linear, circular or elliptical polarization
- RL-2000 is capable of excellent detection ensured by frequency diversity (up to four frequencies) and PCR of long pulses
- Scanning speed up to 15 RPM with 256 NM coverage in ELS and EHS-S
- The output power of the MSSR-1 transmitter (impulse) is at least 2 500 W
- Altitude coverage 35 000 / 66 000 ft
- Operation in II / SI code with EUROCONTROL certification (EC 262/2009)
- Mode S Clustering ability
- Receiving ADS-B data from detected signals
- Independent four-channel ADS-B system with 360° coverage
- PAR-E is a precision approach radar operating in the X-band with a range of up to 40 km operating on the principle of electronic scanning AESA. The radar excels in in low maintenance requirements
- The mobile control tower has a maximum height of 8 620 mm with a floor height of 6 000 mm above the ground. During transport, the maximum height is 2 718 mm, width 2 550 mm and length 10 065 mm

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