- **High Dynamic Range**
- **Parameter Calibration**
- **Modular Design**

ELDIS
RADAR
SYSTEMS

MSSR–1

MONOPULSE SECONDARY SURVEILLANCE RADAR

Secondary Surveillance Radar MSSR-1 with full Mode S functionality and a coverage range of 256 NM. The MSSR-1 features fully solid-state highly modular configuration with whole system digitalization, fail-safe system and low lifecycle costs. The radar system is designed to be used in continuous operation. Every part of the system is easily maintainable and repairs are possible to carry out without any interruption to the radar operation. The radar meets EUROCONTROL and ICAO standards.

The system can be complemented by independent four-channel ADS-B system integrated in the radar with 360° coverage.

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ANTENNA UNIT ASSR

The unit is consists of from antenna pedestal, drive, antenna frame and the antenna (ASSR-35) itself. The drive rotates together with the antenna support frame and the antenna. The unit is equipped by two asynchronous motors, the gear-box, the three-channel rotary joint and two azimuth encoders. High resistance against wind.

INTERROGATOR

- Circuits for interrogations generation
- Receiving and signal processing in individual interrogation modes
- Extensive BITE internal diagnostics
- Fully duplicated configuration with automatic backup switchover

TRANSMITTER / RECEIVER UNIT

- Variable output power
- Overload protection
- Automatic calibration and testing using a test signal injection
- Fully duplicated configuration with automatic backup switchover

EXTRACTOR UNIT

The Extractor analyzes all received signals and detects individual reply codes and aerial targets. It is consists of from the reply detection unit, individual modes processing unit and target correlation unit.

DATA PROCESSING

- Garble and interference replies suppresion
- Tracking and target correlations
- Mode S information database updating
- Statistical information about targets
- On-line monitoring of signal quality and internal diagnostics
- Variable data interface for ATCC

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 consist of monitors radar status and performance 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

- Scanning speed up to 15 rounds per minute with 256 NM coverage in ELS and EHS-S
- The output power of the transmitter (impulse) is at least 2500 W
- Altitude coverage 66 000 ft
- Operation in II / SI code with EUROCONTROL certification (EC 262/2009)
- Ability Mode S Clustering
- Mode S parameter setting
- Receiving ADS-B data from detected signals
- Independent four-channel ADS-B system with 360° coverage

ELDIS Pardubice, s.r.o.
Dělnická 469, 533 01 Pardubice, Czech Republic