

OTE ARES

Air-ground Radio
Equipment for Single-sky



OTE ARES (Air-ground Radio Equipment for Single-sky) is the 5th generation of VHF and UHF radio equipment family. Thanks to its software-defined radio architecture, conceived with a new design concept, the latest Leonardo radio equipment series can be used for transversal system solutions, suitable for both ATC and Defense markets.

OTE ARES main features include:

- Reduced dimensions
- Reduced power consumption granting continuous RF performances
- Output Power (50W CW for VHF and UHF bands) and Duty Cycle (up to 100% for ATIS and VOLMET applications) granted up to maximum operational temperatures (+55°C)
- Extended VHF range (112 to 156 MHz) and standard UHF range (225 to 399.975 MHz)
- Secure-by-design
- State-of-the-art processing, networking, and Operation & Maintenance capabilities

OTE ARES include:

- 8 channels transceiver/transmitter Ground Station, or 16 channels receiver Ground Station with 1+1 Embedded Changeover configuration
- Fully redundant, including cavity filters and systems for network access, control & monitoring; all included in a single 42U height cabinet

- High flexibility in terms of configuration: capability to arrange 2 transceivers, or 2 transmitters, or 4 receivers, or a cavity filter module in place of a radio, in a single 2U high, 19" wide chassis

BEST IN CLASS TECHNOLOGY LEONARDO PATENTS

OTE ARES provides:

- High efficiency and low consumption, achieved on applying a Leonardo patented power converter module based on Pulsed Wide Modulator (PWM) technology
- High redundancy capability at radio and interfacing line level (cross-failure tolerant concept), achieved on applying the "Embedded Changeover" Leonardo patented functionality (patent EP1675272A1)

MAXIMUM FLEXIBILITY

OTE ARES provides a wide range of solutions for voice and data-link systems which grant safety, security, and reliability complying with the requirements of ATC communication systems, mission critical systems, and Air Defense.

ARCHITECTURE

- Double physical Ethernet interface for VoIP, using bonding technology for fast and seamless connectivity
- Capability to integrate radio equipment with a double IP LAN or WAN
- Configurable physical Ethernet interfaces for secure local/remote control and monitoring of radio parameters
- Dual backbone for smooth transition between legacy connections to new IP networks
- Operation-free of any on-site manual operation, and of any external device
- Analog and VoIP interfaces
- Embedded line delay tuning capable to manage transport networks with different propagation characteristics (e.g. use of both ground and satellite based connections)
- Easy configuration of radio parameters with a simple web browser (web server embedded in the radio equipment) provided by automatic configuration upload capabilities and remote performance tests
- Fully compliance with EUROCAE ED137C standard (100% tests passed during FAA VoIP Interoperability Event, May 2019), with the following additional features:
 - Up to 8 simultaneous VoIP connections towards different VCSS with embedded audio conference capability
 - VoIP Recorder Interface according to ED137C.4 standard
- IPv6 and IPsec ready
- Voice (AM-DSB 25 & 8.33 kHz for VHF and AM-DSB 25 for UHF) and data-link (VDL2 & ACARS for VHF) operating modes available

OTE ARES meets or/ exceeds the requirements claimed by the following standards and regulations.

STANDARDS & REGULATIONS
ARINC 618-5
CENELEC EN 60950-1
ETSI EN 300 019 (parts 1-1 and 1-2)
ETSI EN 300 676
ETSI EN 301 841-1
ETSI EN 301 489-1
ETSI EN 302 617
EUROCAE ED137C
FAA E-3014 v.1.0
ICAO ANNEX 10, volume III & volume V
ICAO VDL2 Technical Manual

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