



OTE VHF AND UHF RADIO EQUIPMENT FOR GROUND-TO-AIR CIVIL AND AIR DEFENCE COMMUNICATIONS

OTE ARES (Air-ground Radio Equipment for Single-sky) and OTE DEMETRA (Defence Multirole Transponder) are the 5th generation of the OTE VHF and UHF radio equipment family respectively and represent the top quality product line for ground-to-air civil and air defence communications. Thanks to their software-defined radio architecture, these new radio equipment series can be used for both Air Traffic Control and Air Defence markets.

THE SYSTEM

OTE ARES and OTE DEMETRA main features are:

- State-of-the-art processing, networking and Operation & Maintenance capability
- 8 channels Ground Station deployment with 1+1 “Embedded Changeover” configuration, completely redundant in 1 rack, including cavity filters

- High flexibility in terms of configuration of the standard 19” chassis: it is possible to arrange up to 2 transceivers, or up to 2 transmitters, or up to 4 receivers, or to insert a cavity filter module in place of one radio

These two radio equipment are also characterized by reduced dimensions and reduced power consumption with no performance degradation in terms of RF Output Power and Duty Cycle, even at high temperature.

Patented Technology

OTE ARES and OTE DEMETRA radio equipment provide:

- High efficiency and low consumption, by applying a proprietary patented technology for pulsed wide modulation
- High redundancy capability at radio and interfacing lines level (cross-failure tolerant concept), thanks to the patented technology for “Embedded Changeover” function.

OTE ARES & OTE DEMETRA

Maximum flexibility

OTE ARES & OTE DEMETRA provide a wide range of solutions for voice and data link systems where safety, security and reliability are mandatory, as for ATC communication systems and for Air Defence mission critical systems:

- Double physical ethernet interface for VoIP, using bonding technology for fast and seamless connectivity redundancy purposes, in order to integrate the radio equipment with a double IP LAN or WAN
- Dual backbone feature, for a smooth transition from legacy connections to new IP network without any manual operation on site and without using external devices, by means of analog and VoIP interfaces at the same time
- Embedded line delay tuning to manage transport networks with different propagation characteristics (e.g. use of both ground and satellite based connections)
- Easy configuration of the radio parameters with a web server embedded in radio equipment
- Remote execution of equipment test, thanks to the automatic configuration upload capability, making these radio equipment a suitable solution for installation in unmanned sites

- Fully compliance with EUROCAE ED137B standard about voice, with the following additional features:
 - Up to 8 simultaneous VoIP connections towards different VCSS, with embedded audio conferencing capability
 - VoIP Recorder Interface and EUROCONTROL MIB according to ED137B standard
- Readiness of Wake-on LAN, IPv6 and IPsec
- Availability of Voice (AM-DSB 25 & 8.33 kHz) and data link (VDL2/ D-ACARS) operating modes

STANDARD & REGULATION	OTE ARES	OTE DEMETRA
ARINC 618-5	X	
CENELEC EN 60950-1	X	X
ETSI EN 300 019 (parts 1-1 and 1-2)	X	X
ETSI EN 300 676	X	
ETSI EN 301 841-1	X	
ETSI EN 301 489-1	X	X
ETSI EN 302 617	X	
EUROCAE ED137.B	X	X
FAA E-3014 v.1.0	X	X
ICAO ANNEX 10, volume III & volume V	X	
ICAO VDL2 Technical Manual	X	
MIL STD 461-F	X	
RTCA DO-224A	X	
RTCA DO-278	X	X

