

LEONARDO ELECTRONICS

SDR SRT-800

SWAVE AIRBORNE
SOFTWARE DEFINED
RADIO



SWave Airborne SDR SRT-800 provides secure and cyber resilient connectivity in the air-to-air and air-to-ground domains for Military and Civil Agencies looking for reliable radio communications spanning the entire area of operations.

SWave Airborne SDR SRT-800 is designed to guarantee superior performance on any fixed/ rotary wing aircraft, manned or unmanned.

The success of military actions strongly relies on accurate information. From this viewpoint, the recent advancement of communication technology is of great importance in forming the structure of Network Enabled Capability (NEC). NEC combines key elements from different organizations – instructive, procedural, technical, organizational and human – and merges them into a single Network, thus enabling them to interact, achieve, and maintain notable strategic superiority.

Leonardo's answer to NEC requirements is the cutting-edge SWave® Airborne SDR SRT-800 radio, this airborne radio is based on the company's latest Software Defined Radio (SDR) technology.

A single SDR is designed to replace various traditional avionics units such as UHF/VHF communications radio, modem and crypto computer.

SDR was specifically developed with the idea of a single communication platform having the capability to be completely reconfigurable with software that's based on several different communication modes. Due to its SCA compliance, SRT-800 provides the customer with a highly versatile and flexible communications option.

The Secure architecture, typically associated to the SDR paradigm, is complemented by an innovative user selectable Safety profile that allows the safe execution of civil ATC with appropriate design assurance level (iaw DO-178C/DO-254).

SWave® Airborne SDR SRT-800 is the latest in Leonardo's SDR family, which includes man-portable, vehicular and naval radios. The SDR solution can be tailored to customer requirements ranging from integration of the airborne SRT-800 into an existing network up to delivery of a complete communication solution.

Leonardo is one of the leading partners of the ESSOR (European Secure Software Defined Radio) consortium, whose purpose is to establish a shared EU radio architecture, ensuring that all products of the SWave SDR family are compatible and compliant with the development of new waveforms.



KEY FEATURES

- Software reprogrammable in the field (SCA compliant)
- Software programmable crypto applique
- Narrow and wide band waveforms
- EPM capability
- Compatible with ICAO Annex 10 and ED-23C, including FM immunity
- Line-of-sight and beyond line-of-sight capability
- Interoperable with NATO standards
- Ability to host indigenous SCA waveforms and cryptographic algorithm
- Control via MIL-BUS-1553 or Ethernet or RS-485
- Compact and lightweight
- Low power consumption thanks to the innovative and patented Power Amplifier design



TECHNICAL SPECIFICATIONS

FREQUENCY RANGE

Coverage:	30-2000 MHz
VHF:	30-88 MHz close air support
VHF:	108-118 MHz navigation
VHF:	118-137 MHz air traffic control
VHF:	137-156 MHz land mobile
VHF:	156-174 MHz maritime
UHF:	225-512 MHz military
UHF:	512-2000 MHz (growth)

TRANSMIT OUTPUT POWER

AM:	16W
FM:	20 W
SATCOM:	100 W (with external power amplifier)

SWAP

Weight:	< 4,1 Kg
Size:	2 MCU (57,0 mm W x 193,5 mm H x 320,5 mm L)
Power supply:	28 Vdc (MIL-STD-704F)
Power consumption:	Rx 70 W; Tx 160 W

ENVIRONMENTAL SPECIFICATION

MIL-STD-810G	
Temperature	Operating -40° C to 70° C Storage -54° C to 85° C
Altitude up to	50,000 ft

EMI SPECIFICATION

MIL-STD-461E	
RTCA/DO-160G:	Lightning Induced Transient Susceptibility [Sect. 22 Category A3J3L3]

RELIABILITY

AUF (40°C) > 3150 h; ARW (55 °C) > 2350 h

WAVEFORMS

VULOS AM/FM voice and data i.a.w. STANAG 4204/05
ATC in the 118-137 MHz band (8.33 kHz and 25 kHz channels)
with embedded FM immunity i.a.w. ED-23C
HaveQuick/HaveQuickII (STANAG 4246)
SATURN (STANAG 4372 ed. 4)
SINCGARS (MIL-STD 188-241-1)
Selfnet® Soldier Broadband Waveform
ESSOR's High Data Rate Waveform
VMF i.a.w. MIL-STD-188-220 and MIL-STD-2045-47001
Link-11/Link-22 (FF and EPM) with external modem
Sonobuoy with external modem
Maritime in the 156-174 MHz band
Capability to host end user's proprietary SCA waveforms
UHF SATCOM (i.a.w. MIL-STD-188-181/2/3/4)

SECONDARY RECEIVER

Independent tunable (30-512 MHz) secondary receiver
(can act as guard receiver).

COMSEC

Programmable Cryptographic Appliance (compliant to crypto modernization algorithms and requirements)
Compatible with external cryptos
Capability to host end user's proprietary algorithms

ANCILLARIES

Remote control panel SP-2083/X
High Power Amplifier (SATCOM)
Low Noise Amplifier (SATCOM)

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