

# 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 or failure 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, SATCOM, 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 appliqué
- Narrow and wide band waveforms
- EPM capability Compatible with ICAO Annex 10 and ED-23C, including FM immunity
- Beyond line-of-sight capability
- Interoperable with NATO standards
- Ability to host indigenous SCA waveforms and cryptographic algorithm
- Control via MIL-BUS-1553 or Fast 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: 16 W
- 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

### WAVEFORMS

- VULOSAM/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)
- SINGARS (MIL-STD 188-241-1)
- Selfnet® EASY II
- Selfnet® Soldier Broadband Waveform
- ESSOR's High Data Rate Waveform
- Data Link 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 137-156 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 Appliqué (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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