



SRT-700 FAMILY V/UHF AIRBORNE TRANSCEIVERS

Airborne transceivers for Fixed-Wing aircraft, UAV and Helicopters. The Airborne V/UHF Radio Systems Family SRT-700 is the new family of advanced multi-band, multi-mode transceivers covering the V/UHF 30MHz to 512MHz frequency band for fixed-wing and rotary-wing avionic platforms, dedicated to military and dual applications.

Designed to meet the most severe requirements, the transceiver provides EPM capability: HQI&II and SATURN (i.a.w. NATO standards), SINCGARS (i.a.w. US DoD) and EASY2 (proprietary algorithm).

The SRT-700 is developed to provide aircraft with plain/secure voice/data communications facilities over an extended frequency range through external encryption unit. A patented technology reduces transmission power consumption by more than 35% respect previous design, reducing heat dissipation and improving reliability.

MAIN FEATURES

- Extended frequency band, 30MHz to 512MHz, in AM and FM
- Compliant with ICAO annex 10 and ED23-B including FM immunity embedded
- Several options for channel spacing and guard frequencies available
- EPM capability by frequency hopping (Have Quick, SATURN, SINCGARS and EASY II)
- Cockpit control via dedicated control panel or over the MIL-STD-1553B bus, ARINC 429 Bus or RS-485 Serial Line
- Preset channels operation
- Compatibility with crypto devices for operation in the base-band or diphas modes
- Compatibility with Link 11 modem
- Lightning indirect effect protection according to DO-160F level 2
- Compact size and low weight
- Low power consumption
- Improved MTBF.

TECHNICAL SPECIFICATIONS

General

Frequency bands and modulations	VHF VHF-FM 30MHz to 88MHz VHF-AM 108MHz to 116MHz (Rx only) VHF-AM 116MHz to 156MHz UHF-FM 156MHz to 174MHz UHF-FM/AM 225MHz to 400MHz UHF-FM 400MHz to 512MHz
Preset channels	99
Channel spacing	25kHz (12.5/8.33/5kHz selectable)
Guard channels	40.5MHz; 121.5MHz; 156.8MHz and 243.0MHz automatically selected with the operating band
Emergency frequency	243.0MHz (military) 121.5MHz (civil)
Frequency stability	1 part in 10^{-7}
Channel change time	1ms
Duty cycle	1 min Tx 5 min Rx without forced air cooling
8.33kHz operation	Compliant with ICAO Annex 10 and ED23B including FM immunity embedded
Power supply requirements	+28VDC (i.a.w. MIL-STD-704F)
Power consumption	120W max (Tx) 56W (Rx)
Reliability	MTBF: 2500 hr AUF (40°C)

Dimensions and weight

Dimensions (H x W x L)	126mm x 126mm x 245.5mm
Weight	Less than 4.5kg

EPM waveforms

HQ I&II	STANAG 4246
SATURN	STANAG 4372
SINCGARS	Mil-STD-188-241-1
EASY II	Proprietary algorithm

Environmental conditions MIL-STD-810 F

Temperature	-40 °C to +71 °C (continuous) -54 °C to +95 °C (storage)
Altitude	Up to 50,000 feet
Relative humidity	Up to 95%

EMI specification MIL-STD 461E

Lightning i. e. protection	A2H2,2 i.a.w. DO-160F sect. 22
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Main receiver

Sensitivity (S+N)/N = 10dB	0.6µV (FM) 1.5 µV (AM)
AM modulation index	80% to 100%
Audio output distortion	5%
Spurious rejection	Better than 70dB in NB mode for frequency differing 125kHz
Squelch	Operating both on base band signal- to-noise ratio and RF carrier level. SNR Thresholds adjustable

Guard receiver

Sensitivity (S+N)/N = 10dB	0.6µV (FM) 1.5µV (AM)
Spurious rejection	Better than 70dB in Narrow Band mode for frequency differing 125kHz
Squelch	Operating both on base band signal- to-noise ratio and RF carrier level. SNR Thresholds adjustable

Transmitter

Output power	10W in AM 15W in FM
Spurious emissions	Less than -80dBc from 600kHz
Distortion	5% max
Signal/noise ratio	45dB min for m = 0.9kHz in AM 30dB min at f = 6kHz in FM