



## SMAR

SWAP-Constrained, Multiband Airborne Relay



- Unencrypted Communications Payload Retransmits Type I Encrypted Traffic
- Integrates PRC6809 Multiband Inter/Intra Team Radio (MBITR) board sets
- Voice and Data up to 16 kbps
- 5, 12.5, and 25 kHz Channel Bandwidth
- Simplex and Half Duplex Operation
- 100 Programmable Channels
- Selectable Power Output up to 5 Watts
- Embedded MIL-STD-704 Power Supply
- Convection Cooled

**Specifically Designed for Size, Weight, and Power Constrained Payloads and Platforms.**



\*Photo Courtesy of GinetIQ  
Zephyr High Altitude, Solar Powered/Long Endurance Aircraft

# SMAR

## SWAP-Constrained, Multiband Airborne Relay



The Thales SWAP-Constrained, Multiband Airborne Relay (SMAR) is a repackaged PRC6809 Multiband Inter/Intra Team Radio (MBITR) with the proper power conditioning and filtering for airborne applications. Developed to meet the more size, weight, and power (SWAP) dependent Unattended Airborne Vehicle (UAV) uses, the SMAR provides full retransmission capabilities including optional SINCGARS and HAVEQUICK ECCM in a minimum SWAP package to extend radio linkage or overcome obstacles that prevent line-of-sight operation. The repeater function is non-CCI and crypto transparent.

### TECHNICAL SPECIFICATIONS

#### Frequency Range

- 30-512 MHz Contiguous
- 5 and 6.25 kHz Step Size

#### Modulation Types

- AM and FM
- HAVEQUICK I/II
- FM Narrowband (12.5 kHz)
- AES (optional)
- Type III DES (optional)

#### Frequency Stability

- 5 ppm

#### Receive Sensitivity

- FM: <-118 dBm 12 dB SINAD
- AM: <1.5 uV 10 dB SINAD (-103.5 dBm, 30% mod)

#### Adjacent Channel Rejection

- Greater than 45 dB at  $\pm 25$  kHz

#### Spurious and Image Rejection

- Greater than 58 dB

#### Third Order Intercept Point

- Greater than +5 dBm

#### Receive Audio Distortion

- Less than 10% at Rated Audio Power

#### Transmit Output Power

- 0.1, 0.5, 1.0, 3.0 and 5.0 Watts (FM)
- 1.0 and 5.0 Watts (AM)
- User Selectable

#### Transmit Characteristics

- Radiated Spurious Output: < -13 dBm
- Audio Distortion: Less than 10%
- Adjacent Channel Power Ratio: >62 dBc

#### Reliability

- MTBF: > 4,605 hours

#### Emergency Beacons and GPS

- AM Swept Tone Beacon
- GPS Interface

#### Programmable Channels

- 100 Memory Preset Channels
- Selectable Groups
- User Programmable from:
  - Remote Control Interface
  - PC Programmer

#### Connectors

- Antenna: 50 Ohm (Female) SMA
- Digital: 9-Pin
- Power: 9-Pin

#### Physical Parameters (per Transceiver)

- Height: 2.5 inches (6.35 cm)
- Width: 3 inches (7.62 cm)
- Depth: 5 inches (12.7 cm)
- Weight: 1 pounds (0.45 kg)

#### Finish

- Anodized per MIL-A-8625F, Type III, Class 2

#### Environmental Specifications

- Temperature:
  - Operating: -31° to +60° C
  - Storage: -33° to +71° C
- Humidity: 95% Non-condensing
- Shock: MIL-STD-810F
- Vibration: MIL-STD-810F
- Altitude: 16,000 Feet
- Fluid Contamination Exposure
- Explosive Atmosphere

#### Power

- 28VDC nominal input, 50 Watt Max
- MIL-STD-704D
- MIL-STD-1275B

#### Remote Control Interface

- RS-422 or RS-232

- Non-U.S. Government sales are subject to U.S. Government approval.
- Specifications are subject to change without notice.

#### Thales Communications, Inc.

22605 Gateway Center Drive | Clarksburg, MD 20871  
Toll-Free: 1.800.258.4420 | Phone: 240.864.7000 | Fax: 240.864.7920  
E-mail: Solutions@thalescomminc.com | Website: www.thalescomminc.com

