

- Leap-ahead Technology: Simultaneous 2-Channel Operations
- Embedded GPS
- Retains the Existing Narrowband AN/PRC-148 JEM Type 1 Capabilities and Waveforms
- Wideband Channel Operating the TSM™ Waveform from TrellisWare® Technologies
  - AES 256 Encryption
  - Optimized for RF Challenged Environments
- 2M/20M Immersible



## AN/PRC-148C IMBITR





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The Thales AN/PRC-148C solution is a significantly enhanced version of the widely fielded AN/PRC-148 JEM radio. The AN/PRC-148C offers all of the existing functionality of the current JEM radio with the addition of the TrellisWare® TSM wideband networking waveform capability. Within a single, small, lightweight, rugged package, the user is provided simultaneous narrowband and wideband communications capabilities necessary to support tactical command and control communications in a variety of challenging radio operating environments.

The AN/PRC-148C provides wideband MANET coverage, regardless of the environment and ensures interoperability with users that operate both TrellisWare® and Thales radio systems.

The robust TSM provides superior voice and data communications across harsh multipath and highly dynamic environments, such as shipboard, caves and urban operational settings.

### TECHNICAL SPECIFICATIONS

#### Key Features

- 2-Channel handheld radio
  - JEM/MBITR-like form factor
  - Simultaneous narrowband and wideband operation
  - Narrowband channel supports same capabilities as AN/PRC-148 JEM
  - Wideband channel supports the TrellisWare TSM Waveform
- Embedded GPS
- Improved narrowband performance over AN/PRC-148
  - Improved narrowband Tx/Rx co-site performance parameters
  - Improved SATCOM performance
    - 10W burst mode for SATCOM
    - Improved SATCOM noise figure
- COMSEC
  - Up to Top Secret (TS) Type 1 Narrowband

#### Physical Parameters

- Length:
  - 8.50 inches (21.59 cm) (excluding antennas)
  - 8.65 inches (21.97 cm) (20M version)
- Width: 2.65 inches (6.73 cm)
- Depth: 1.75 inches (4.45 cm)
- Displacement Volume: 36 cubic inches (including radio brick and battery) (589.93 cubic cm)
- Weight: 2.30 lb – Radio and Battery (1043 g)

#### Batteries

- Rechargeable Lithium-Ion
  - 6.8 Ah

#### Environmental Specifications

- Operating Temperature: -31° to +55° C
- Storage Temperature: -33° to +71° C
- Immersion: 2M/20M

#### Waveforms/Modes of Operation

##### Dependent on configuration of radio

- TSM
  - Infrastructure-less MANET
  - High-speed wireless IP networking
  - Self-Forming, self-healing
  - Scalable to 200+ nodes
  - Robust in harsh environments
  - Fast, seamless network join/merge
  - Instant adaptation to network topology change
- MIL-STD-188-241-1/-2 (SINCGARS - Standard/ FH2E EOM)
- MIL-STD-188-181C, -182B, -183B (SATCOM IW)
- HAVEQUICK I and II
- ANDVT (LPC-10, MELP)
- AM/FM
- Project 25
- Over-The-Air-Cloning (OTAC) - NB only
- Situational Awareness
- Retransmission - NB only
- AM Swept Tone Beacon

#### NARROWBAND CHANNEL

##### Characteristics

- Frequency Range: 30 MHz – 512 MHz
- Transmit Power: 5 Watt in all frequencies, 10 Watt in SATCOM
- Step Size: 5 kHz and 6.25 kHz
- RF Channel Bandwidth: 25 kHz and 12.5 kHz
- Channel Spacing: 5 kHz, 12.5 kHz, 25 kHz (8.33 kHz Future Waveform)

#### WIDEBAND CHANNEL

- Transmit Power: 2 W
- Operating Frequencies: L-UHF: 225-450 MHz, U-UHF: 698-970 MHz, L/S Bands: 1250-2600 MHz
- Network Throughput: up to 16 Mbps
- Encryption Security: AES-256
- Dedicated PTT Voice Channels: up to 32 independent voice channels, AMR 5.9 or MELPe
- Occupied Bandwidth: 1.2 - 40 MHz
- Net entry time <1 sec
- Supports up to 8 hops for voice and data
- Scalable to 200+ nodes in a single RF channel
- Unicast, Multicast, Broadcast IP data support
- Multiple simultaneous streaming videos
- Position Location Information (PLI) support with Cursor-on-Target (CoT)
- OTA Remote Control

- TrellisWare is the registered trademark and TSM is the trademark of TrellisWare Technologies, Inc.
- Specifications are subject to change without notice.

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