THALES

Thales Defense & Security, Inc.



Products

22605 Gateway Center Drive
Clarksburg, MD 20871

CAGE Code 23386

AN/PRC-148F
IMBITR

TH340 (2M)
Simultaneous 2-Channel Communications



The AN/PRC-148F IMBITR is a small, lightweight, and rugged 2-channel radio that equips Warfighters with simultaneous narrowband and wideband secure Type 1 communications, enabling tactical command and control communications in a variety of challenging environments. The narrowband channel operates all legacy tactical waveforms including VHF/UHF LOS, SINCGARS, HAVEQUICK, as well as commercial SATCOM. The wideband channel operates the WREN-TSM™ and WREN-NB waveforms from TrellisWare® Technologies, Inc. TSM delivers superior voice and data communications across harsh multipath and unpredictable environments, such as caves, on board ships, and urban operational settings. WREN-NB is a resilient waveform designed to operate in near-peer threat environments, combining robust narrowband frequency hopping waveform with tactical MANET.

ITAR Controlled

Capabilities

Key Features

- Retains the existing narrowband AN/PRC-148 JEM Type 1 capabilities and waveforms
- Wideband channel operating the Type 1 WREN-TSM waveform for SAB or SBU Security Level
- Future WREN-Narrowband (WREN-NB) Waveform
- Embedded GPS
- Optimized for RF Challenged Environments
- Improved Narrowband Tx/Rx Co-site Performance Parameters
- L-TAC Commercial SATCOM
- 10W Burst Mode for SATCOM
- Type-1 Certified Programmable Encryption Engine (AIM)
- Rechargeable Lithium-Ion 7.0 Ah
- Compliant with the Universal Battery Charger (UBC) Family of Tactical Chargers

Technical Specifications

Physical Parameters

Length: 8.50 in (21.59 cm) (with battery attached, excluding antennas) (2M version)

Width: 2.65 in (6.73 cm)

Depth: 1.79 in (4.54 cm)

Environmental Specifications

Operating Temperature: -30 °C to +55 °C

Storage Temperature: -30 °C to +71 °C

Immersion: 2M

Waveforms/Modes of Operation Dependent on Configuration of Radio

Narrowband Channel

Frequency Range: 30 MHz – 512 MHz LTAC 1626.5 MHz – 1660.5 MHz, TX; 1525 MHz – 1559 MHz RX

Transmit Power: Up to 5 W at all frequencies, 10 W in SATCOM

Step Size: 5 kHz and 6.25 kHz

Channel Spacing: 5 kHz, 12.5 kHz, 25 kHz (8.33 kHz future waveform)

MIL-STD-188-241-1/-2 (SINCGARS — Standard/FH2E EOM)

L-TAC commercial SATCOM

MIL-STD-188-181C, -182B, -183B (SATCOM IW)

ANDVT (LPC-10, MELP)

AM/FM

HAVEQUICK I and II

Project 25

Over-The-Air-Cloning (OTAC) — NB only

Retransmission — NB only

AM Swept Tone Beacon

Wideband Channel

Transmit Power: Up to 2 W

Operating Frequencies: L-UHF: 225 MHz – 450 MHz, U-UHF: 698 MHz – 970 MHz, L/S Bands: 1250 MHz – 2600 MHz

Network Throughput: up to 16 Mbps

Encryption Security: Type 1 CNSA

Dedicated PTT Voice Channels: supports up to 32 talk groups, AMR 5.9 or MELPe

Occupied Bandwidth: 1.2 MHz – 20 MHz

Supports up to 8 hops for voice and data

Scalable to 800+ nodes in a single RF channel

Unicast, Multicast, Broadcast IP data support

Multiple simultaneous videos

Position Location Information (PLI) support

WREN-TSM

- SAB Security
- Infrastructure-less MANET
- High-speed wireless IP networking
- Self-forming, self-healing
- Scalable to 800+ nodes
- Robust in harsh environments
- Fast, seamless network join/merge
- Instant adaptation to network topology changes

WREN-NB (Optional)

- Resilient long range narrowband waveform with ECCM capabilities
- Interoperable with Katana — NB at SBU Level
- Instantaneous bandwidth: 50 kHz
- Frequency hopping up to 200 MHz
- Scalable up to 250 nodes in a single data network

Part Number	System Description	NSN
PRC7351-BBSB-SYS	TSMX SAB System 2M Non-BFT	5820-01-715-8440
PRC7351-BBSB-INT	TSMX SAB System 2M Non-BFT (INTL)	
PRC7351-BBSB-SYS2	Hornet System 2M TSMX SAB Non-BFT	

			Part Number	Accessory Description	NSN	Category
✓			1100542-501	Earphone Kit R25	5965-01-507-3577	Audio
✓			1100845-501	LR Remote HMI Kit	5895-01-699-2141	
✓			1600469-14	Full Duplex Speaker Microphone	5965-01-699-2173	Audio
✓	✓	✓	1600494-20	Holster Expandable Multicam	5895-01-679-8664	Holster
✓	✓	✓	1600814-1	Antenna, 50 in Blade 30–88MHz Filtered 20M	5330-00-167-5900	Antenna
✓	✓	✓	1600842-11	LR Rechargeable Battery	6140-01-679-9214	Battery
✓	✓	✓	1600944-1	TSMX L/S Band Antenna	5985-01-692-1003	Antenna
✓	✓	✓	1600960-1	Antenna GPS	5985-01-692-1207	Antenna
			1600960-2	Antenna GPS (Interchangeable with 1600960-1)	5985-01-719-8249	Antenna
✓			3101377-501	Nett Warrior Data and Power Adapter	5995-01-679-7674	
✓	✓	✓	3402339-1	Torque Tool, HUB	5120-01-699-3871	Spares
✓	✓	✓	4103208-501	Unit Assy, IMBITR SAB 2M (Non-BFT)	5820-01-711-7653	RT
	✓		1600816-1	Antenna, 13 in Whip Broadband 30–512 MHz Handheld Filtered 20M		
✓	✓	✓	1600958-1	UHF Dipole Antenna, 225–450 MHz	5985-01-692-1237	Antenna

Accessories

Part Number	NSN	Accessory Description	
1600814-1	5330-00-167-5900	Antenna, 50 in Blade 30 MHz – 88 MHz Filtered 20M	
1600816-1	5985-01-669-7137	Antenna, 13 in Whip Broadband, 30 MHz – 512 MHz Handheld Filtered 20M	
1600944-1	5985-01-692-1003	TSMX L/S Band Antenna	
1600960-1	5985-01-692-1207	Antenna GPS	
1600960-2	5985-01-719-8249	Antenna GPS (interchangeable with 1600960-1)	
1600958-1	5985-01-692-1237	UHF Diploe Antenna, 225 MHz – 450 MHz	
1100524-501	5965-01-507-3577	Earphone Kit	
1600469-14	5965-01-699-2173	Full Duplex Speaker Microphone, Dual PTT	
3101351-502		Headset Kit, Dual PTT, 11-pin (includes 1600865-17 Headset, 1600865-21 V60 Dual PTT, and 1600865-27 11-pin downlead cable)	
1100845-501	5895-01-699-2141	Remote HMI Kit (includes 3501080-501 interface cable, 4103135-501 Remote Control Head, 4401184-1 Vest Clip, and hardware)	
1600842-13		7.6 aHr LR Rechargeable battery	
3101377-501	5995-01-679-7674	Nett Warrior Data and Power Adapter (includes 3101372-501 ASM3, 4103059-501 SIAM3)	
1600494-20	5895-01-679-8664	Holster, Expandable, Multicam	
3402339-1	5120-01-699-7674	Torque Tool, HUB	
3600416-1	5935-01-669-4993	Keyfill Adapter 10-pin to 11-pin	
81553-001		Samsung Galaxy S20 Tactical Edition	
85761-001		Operator's Case Kit, S20, Tan	
857101-001		Samsung Galaxy S23 Tactical Edition	

Accessories

Part Number	NSN	Accessory Description	
857001-001		Operator's Case Kit, S23, Tan	
854072-001		Cable, Rugged USB-C EUD Sinking Host	
3101376-501	5995-01-679-8659	USB Programming Cable (Gleanair to USB-A)	
3501074-502	5995-01-697-1660	Cable Glenair Extension, 18 in	
1600972-1		LTAC antenna	
3501074-504		8 in cable Glen-air extension	
3501074-501		12 in cable Glen-air extension	
3501074-503		24 in cable Glen-air extension	
1100849-504		UBC	
1100771-501		UBC-Lite w/CWB charging	
1100771-502		UBC-Lite w/out CWB charging	
3500755-501		KVL cable	
410310-501		SPAI adapter	
3500460-501		SPAI adapter DC input cable	
1600781-1		AV2055-3T SATCOM antenna	
1600786-1		AV2125 SATCOM antenna	
856012-001		Add HUB battery	

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Specifications are subject to change without notice.

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