



All Mode, Mark XIIA Interrogator including Mode S, Mode 5 and ADS-B

To meet the robust needs and requirements of ground, airborne and maritime air defense, TTM Technologies developed the Small Form Factor (SFF)-44 tactical All-Mode Identification Friend or Foe (IFF) interrogator. Specifically designed to address critical Size, Weight and Power (SWaP) consumption limitations, SFF-44 operates across a wide range of diverse and challenging environments.

System Configuration

Like the TTM Technologies (TTM) AN/UPX-44, the smaller and light weight AIMS 17-1000 certified SFF-44 All-Mode interrogator is well-suited for ground-mobile, ground-fixed, shipboard and airborne platforms. The SFF-44 can be hardmounted or shock-tray mounted. With the latest advancements in electronic and mechanical packaging, SFF-44 provides leading-edge interrogator performance capabilities, while maintaining small system size.

SFF-44 interfaces with mission systems using Ethernet ASTERIX formatted messages and may be tailored to adapt to unique IFF systems. Additionally, the SFF-44 is compatible with a variety of prime power input sources and antenna configurations.

Diverse Operating Capabilities

The SFF-44 operates in Modes 1, 2, 3/A, C, 5 Level 1 and 2, Mode S Level 2 with Extended Length Messages (ELM) and Automatic Dependent Surveillance-Broadcast (ADS-B). It also provides multi-channel passive detection and reporting for Mode S ADS-B and Mode 5 Level 2/2-B while utilizing a KIV-77 or SIT2010 Cryptographic Computer appliqué for Modes 5 operations.

The SFF-44 includes a 4th, dedicated passive reception channel capable of providing phantom power to an omni antenna to achieve maximum Mode S ADS-B and Mode 5 Level 2/2-B detection coverage in the surveillance volume.

Small Form Factor (SFF)-44 Tactical IFF Interrogator



The SFF-44 offers three distinct models in a variety of weight, size, output power and ranges:

Model No.	Weight (lb.)	Size (H x W x D in.)	Input Power	Output Power	Max Range	Temperature
SFF-44A* Intended for E-Scan AESA/ESA systems	< 37	9.65 x 7.2 x 9.65	18-36 VDC ≤ 90 w	0.01 – 200w	Antenna Gain Dependent	-46 °C to +55 °C (Operating) -46 °C to +71 °C (Storage)
SFF-44B	< 37	9.65 x 7.2 x 9.65	18-36 VDC ≤ 130 w	100 - 1200 W	Antenna Gain Dependent	-46 °C to +55 °C (Operating) -46 °C to +71 °C (Storage)
SFF-44C	< 46	9.65 x 7.2 x 11.65	18-36 VDC ≤ 200w	600 – 2800 w	Antenna Gain Dependent	-46 °C to +55 °C (Operating) -46 °C to +71 °C (Storage)

Specification Compliance

The SFF-44 interrogator meets the environmental requirements of MIL-STD-810G including gunfire vibration and the electromagnetic environments of MIL-STD-461F. It's also designed to meet all applicable U.S. and international specifications including:

- DoD AIMS 17-1000
- DoD AIMS 04-900A
- STANAG 4193
- ICAO Annex 10

The SFF-44 is capable of the following performance characteristics (antenna dependent):

- Instrumented Range: Up to 256 NM
- Target Capacity (360°): >1000 targets
- Range Resolution: ≤14 m
- Range Accuracy (1σ): ≤4 m
- Azimuth Resolution: ≤0.022°
- Azimuth Accuracy (1σ): ≤0.06°

Visit www.ttm.com for more information.



TTM-00024 ©2023 TTM Technologies. All rights reserved. Although the information in this document has been checked and is believed to be accurate, no responsibility is assumed for inaccuracies. TTM reserves the right to make changes to product descriptions and specifications at any time without notice. TTM and the TTM logo are registered trademarks of TTM Technologies. Other names may be trademarks of their respective holders. All claims made herein speak as of the date of this material. The company does not undertake to update such statements.

