



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 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 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	< 31	9.65 x 7.2 x 9.65	16-40 VDC ≤ 60 w	31.62 mW	Antenna Gain Dependent	-40 °C to +55 °C (Operating) -55 °C to +71 °C (Storage)
SFF-44B	< 37	9.65 x 7.2 x 9.65	16-40 VDC ≤ 134 w	100 - 1200 W	Antenna Gain Dependent	-40 °C to +55 °C (Operating) -55 °C to +71 °C (Storage)
SFF-44C	< 51	9.65 x 7.2 x 12.55	16-40 VDC ≤ 236w	600 – 2800 w	Antenna Gain Dependent	-40 °C to +50 °C (Operating) -55 °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: > 256 NM
- Target Capacity (360°): >1000 targets
- Range Resolution: ≤7.2 m
- Range Accuracy (1σ): ≤4 m
- Azimuth Resolution: ≤0.005°
- Azimuth Accuracy (1σ): ≤0.06°

Visit www.ttm.com for more information.



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