

# MX12B TRANSPONDER

## MICRO MODE 5 IFF TRANSPONDER WITH ADS-B IN AND OUT

Sagatech's next-gen MX12B miniature transponder is the first micro Mode 5 IFF transponder certified to the full DoD AIMS Mk XIIB specification. It packages Mode 5, Mode S, and complete ADS-B In and Out capability in a SWaP that is at least 93% smaller and 6 times lighter than traditional certified military Mode 5 IFF transponders.

Based on certified technology proven in over 1.5 million military mission flight hours across many programs, the MX12B is ready to serve today. Units ship from stock.



**93% SMALLER & 6X LIGHTER**  
than traditional transponders



**UNPRECEDENTED MICRO SWAP**  
WITH FULL FEATURE SET



**INTEGRATED ADS-B RECEIVER**  
NO ADDITIONAL  
INTEGRATION NEEDED



**FLEXIBLE I/O**  
ETHERNET, RS-232, RS-422



**FULL OUTPUT POWER**  
WITH NO DEVIATIONS

- ▶ CERTIFIED TO DOD AIMS 17-1000 MARK XIIB SPECIFICATION
- ▶ FULLY COMPLIANT FOR CREWED AND UNCREWED AIRCRAFT
- ▶ MODES 1, 2, 3/A, C, AND S
- ▶ IFF MODE 5 LEVELS 1 AND 2, UPGRADEABLE TO LEVEL 2B-OUT
- ▶ ADS-B IN AND OUT
- ▶ COMPATIBLE WITH 04-900(A) OPTION B CRYPTO (KIV-77)
- ▶ ANTENNA DIVERSITY FOR FULL VISIBILITY
- ▶ FLEXIBLE I/O: RS-232, RS-422, ETHERNET
- ▶ INTEGRATED ALTITUDE ENCODER
- ▶ INTUITIVE COMMAND AND CONTROL SOFTWARE INCLUDED

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### Parameter Specification

#### General/Communications

Transmit Power at SMA	AIMS 17-1000 Standard
1030 Receive Sensitivity	AIMS 17-1000 Standard
1090 ADS-B In Sensitivity	AIMS 17-1000 Standard
Host Serial Communications Standard	Proprietary protocol RS-232; RS-422; Ethernet (Point to Point)
BaroAlt Calibration	55,000 ft. Default (100,000 ft. maximum)
Antenna Diversity	Standard (can configure for single antenna)
Export Classification	ITAR
Supply Voltage	14-28VDC; +/- 4VDC

#### Power

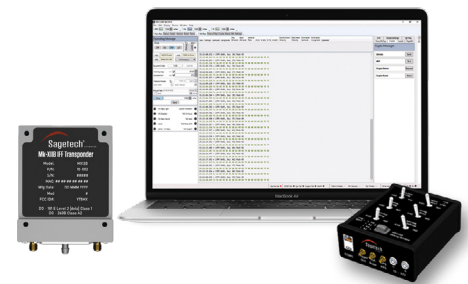
Power Consumption	Standby	7W
	Operating	11W
	Typical	13W
Power Notes	All power values include 3W for KIV-77	

#### Design Objectives (DAL C)

Transponder Performance Standard (ref: DO-181E)	Level 2dels Class 1
ADS-B Performance Standard (ref: DO-260B)	1090 MHz Class A2
Pressure Altitude Standard	SAE AS8003
Mode S	RTCA DO-181E
ADS-B	RTCA DO-260B
Alt. Encoder	SAE AS8003
Mode 5	AIMS Mark XIIB M5 L1&2
Environmental/EMI	RTCA DO-160G, MIL-STD-810G, MIL-STD-461F

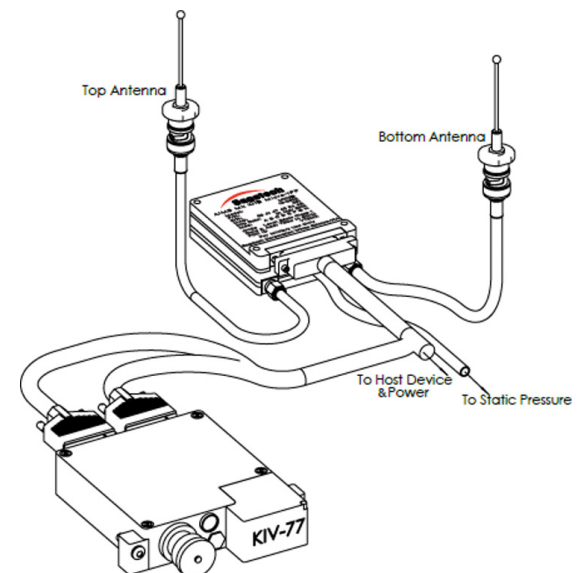
#### Physical/Environmental

Dimensions	86 x 64 x 25 mm (3.4" x 2.5" x 1.0")
Mass	190 g (6.7 oz)
Operating Temperature	-40°C to 70°C
Storage Temperature	-55°C to 85°C
Humidity	Max: 100% non-condensing



### EACH TRANSPONDER

offers user-friendly command and control software plus optional test and integration components.



Sagetech is an aerospace technology company, empowering safe flight in crewed and uncrewed aircraft with certifiable situational awareness solutions.

Currently serving military and civil duty on a broad range of UAV platforms, Sagetech solutions are mission-proven and offer decades of program experience, certifications, and millions of flight hours to deliver maximum value over the life of a platform. Today, Sagetech is expanding its technology platform to create comprehensive, certifiable systems such as detect and avoid solutions.

Every day, Sagetech works to concert with its extensive ecosystem of OEM customers, technology partners, and resellers to ensure UAVs and crewed aircraft fly safer with Sagetech on board.



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