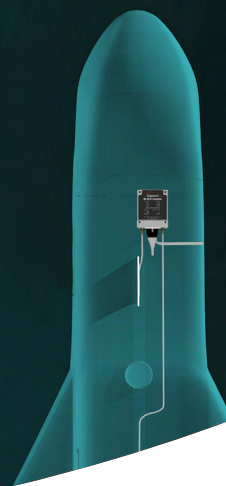




UPDATED: APRIL, 2024

# MX12B Transponder

## Micro Mode 5 IFF Transponder with ADS-B In and Out



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

### Product Number: 10-0002

Sagetech's next-gen MX12B miniature transponder is the first micro Mode 5 IFF transponder certified to the full DoD AIMS Mk XIIB specification, and is the first Mode 5 Level 2B Out transponder to be certified. It packages Mode 5 Level 1, 2 and 2B Out, 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.



**MULTIPLE AWARD SCHEDULE**  
NAICS: 334511  
CONTRACT #: 47QSWA23D00A5



**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, LEVEL 2B-OUT
- ▶ ADS-B IN AND OUT
- ▶ COMPATIBLE WITH 04-900(A) OPTION B CRYPTO (KIV-77/79)
- ▶ ANTENNA DIVERSITY FOR FULL VISIBILITY
- ▶ FLEXIBLE I/O: RS-232, RS-422, ETHERNET
- ▶ INTEGRATED ALTITUDE ENCODER
- ▶ INTUITIVE COMMAND AND CONTROL SOFTWARE INCLUDED

# MX12B

## Transponder

### Micro Mode 5 IFF Transponder with ADS-B In and Out



#### EACH TRANSPONDER

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



Test Box and Emulator available separately.

\* Pending AIMS certification

\*\* Available in 2025

Parameter	Specification
<b>General/Communications</b>	
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
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
<b>Power</b>	
Power Consumption	Standby 7W
	Operating 11W
	Typical 13W
Power Notes	All power values include 3W for crypto
<b>Design Objectives</b>	
Transponder Performance Standard	RTCA DO-181E Level 2dels Class 1
ADS-B Performance Standard	RTCA DO-260B 1090 MHz Class A2
Pressure Altitude Standard	SAE AS8003
Alt. Encoder	SAE AS8003
Mode 5	AIMS 17-1000
Environmental/EMI	RTCA DO-160G, MIL-STD-810G, MIL-STD-461F
<b>Design Assurance</b>	
DO-178C	DAL C
<b>Physical/Environmental</b>	
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
<b>Functionality</b>	MX12B Variant: <b>V1</b> <b>V2</b> <b>V3</b> <b>V4</b>
Mode 1, 2, 3A, C, S (ELS), 5L1, 5L2, ADS-B In/Out	✓ ✓ ✓ ✓
Mode 5 Level 2B Out	✓ ✓ ✓
Mode 5 Level 2B In *	✓ ✓
UAT Receive, ARINC-429 **	✓
<b>ACAS X</b>	
ACAS X	Prototype available now, FAA TSO in 2026
<b>Interrogator</b>	
Civil interrogator	Prototype available now
Mode 5 interrogator	Hardware capable, sponsor required

**EXPORT CONTROL** - This product is controlled for export under the International Traffic in Arms Regulations (ITAR). A license from the U.S. Department of State is required prior to the export of this product from the United States.



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