Sagetech AVIONICS
Mk-XIIB IFF Transponder

Model:	MX12B
P/N:	10-0002
S/N:	#####
MAC:	## ## ## ## ## ##
Mfg Date:	DD MMM YYYY
Mod	#
FCC ID#:	YT5MX

DO – 181 E Level 2 [dels] Class 1
DO – 260B Class A2

Sagetech ®
AVIONICS

MX12B TRANSPONDER
CERTIFIED MODE 5 IFF MICRO TRANSPONDER WITH ADS-B IN AND OUT

Sagetech's next-gen MX12B miniature transponder is the only 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 CERTIFIED FOR MANNED AND UNMANNED 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 WITH OPTIONAL DATA VISUALIZATION

▶ 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

MX12B TRANSPONDER
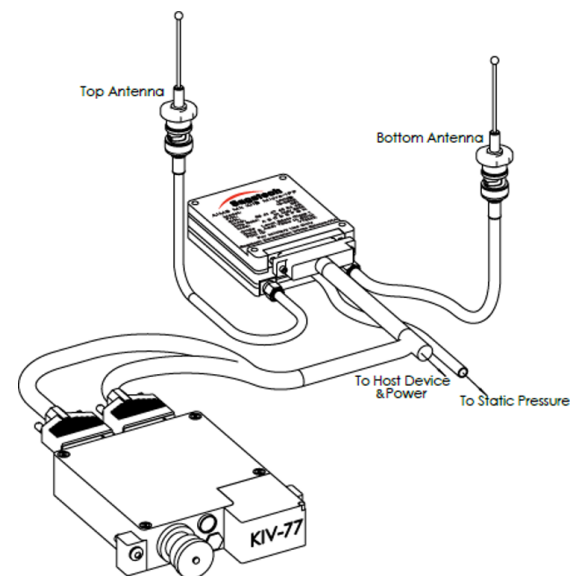## MICRO MODE 5 IFF TRANSPONDER WITH ADS-B IN AND OUT

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Parameter	Specification
General/Communications	
Operating Altitude	Unrestricted
Cruising Speed	Unrestricted
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	Proprietary protocol
Standard	RS-232; RS-422; Ethernet (Point to Point)
BaroAlt Calibration	Up to 100,000 ft
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	TSO-C112e
ADS-B	TSO-C166b
Alt. Encoder	TSO-C88b
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 ADS-B In visualization, test, and integration kits.

Part Number: MX12B: 10-0002

ABOUT SAGETECH

Sagetech is an aerospace technology company, empowering safe flight in unmanned aircraft with the world's most reliable UAV transponders. Currently serving military and civil duty on most small to medium UAVs, 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 an unmanned platform. Today Sagetech is expanding its technology platform to create comprehensive unmanned aircraft situational awareness systems, such as detect and avoid solutions. Sagetech works in concert with its extensive ecosystem of OEM customers, technology partners, and resellers to ensure UAVs fly safer with Sagetech on board.

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