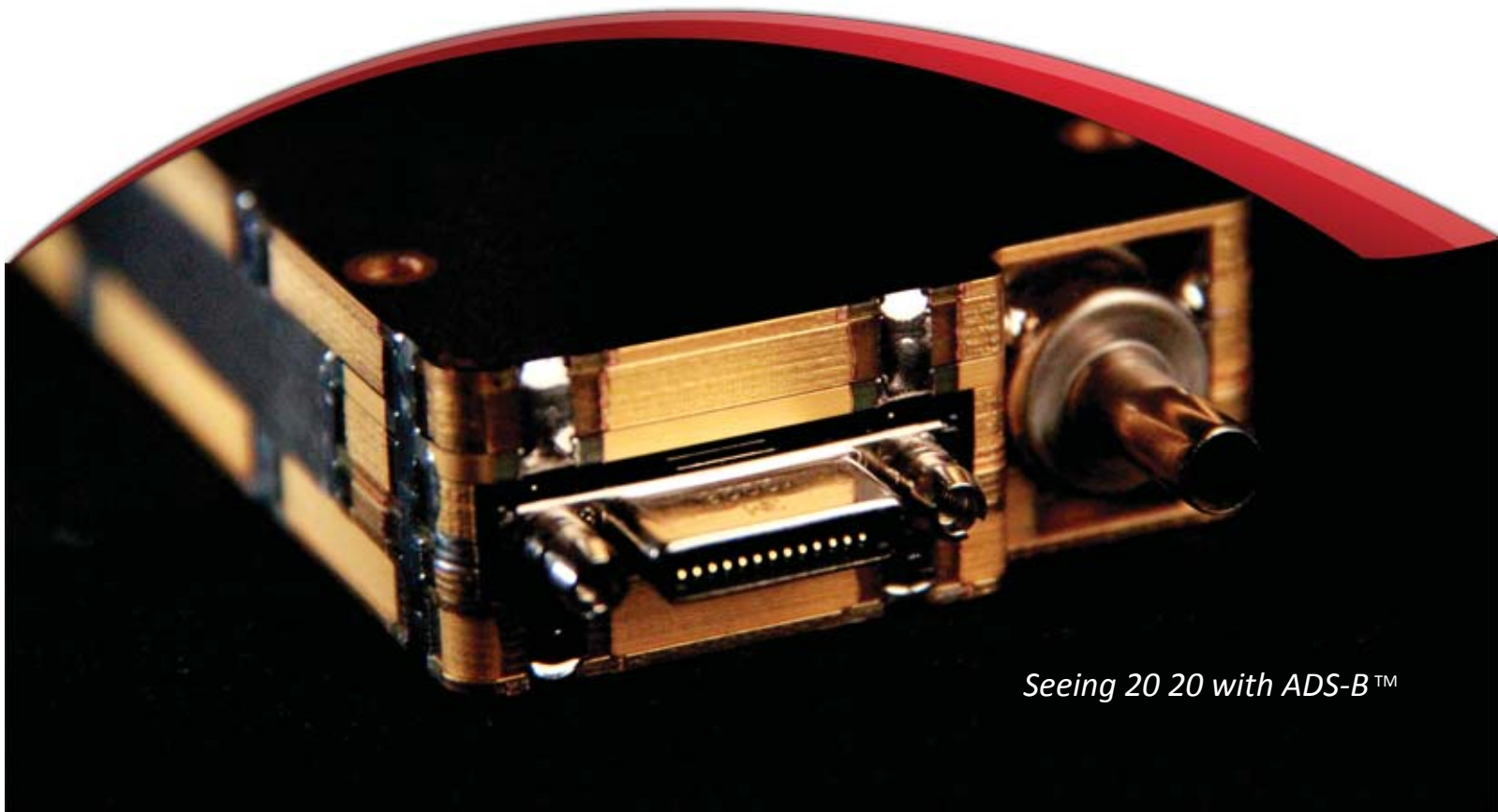




XP Family of Transponders

Product Information

Version 3.1 February 2012



Seeing 20 20 with ADS-B™



The World's Smallest Transponder

Where size, weight and power are critical

Features

- **The world's smallest size and weight** Sagetech transponders measure just 3.5" x 1.8" x 0.7" and weigh only 100 grams
- **Lowest power consumption on the market** Our transponders are a must for power conscious applications
- **Integrated altitude encoder** All Sagetech XP transponders have an integrated altitude encoder, compliant up to 50,000 feet. The flight computer can read altitude data from the transponder providing backup altitude information
- **Simple integration** Due to its small size and light weight, the XP family of transponders minimizes integration complexity
- **3 versions available**

Mode C Transponder – Small, high reliability solution for Mode A and Mode C requirements

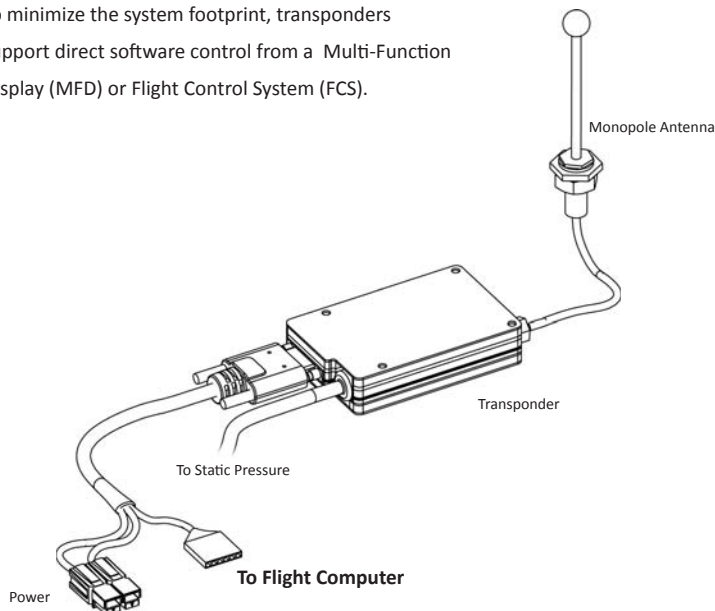
Mode S Transponder with ADS-B Out – Meet the 2020 ADS-B requirements today

Mode S Transponder with ADS-B In/Out – Receive other aircraft's ADS-B data, increasing your situational awareness

Multi-Function Display / Flight Control System

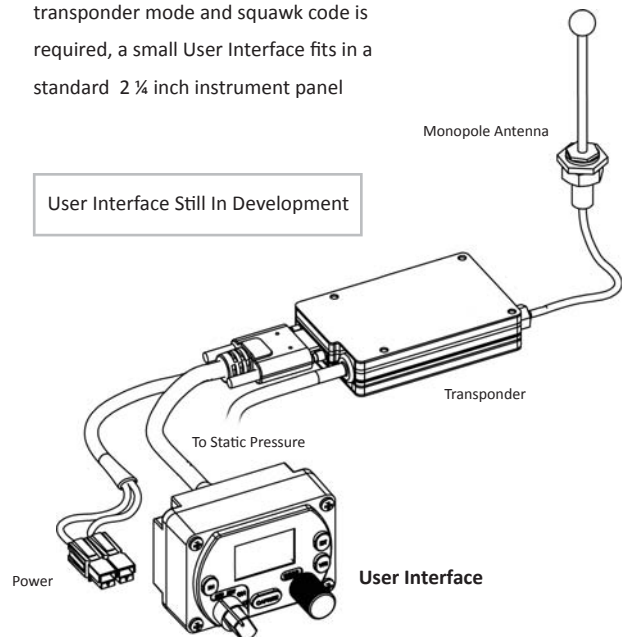
Integrated Configuration

To minimize the system footprint, transponders support direct software control from a Multi-Function Display (MFD) or Flight Control System (FCS).



Conventional Configuration

For applications where pilot control of the transponder mode and squawk code is required, a small User Interface fits in a standard 2 ¼ inch instrument panel





Serial Communications / General

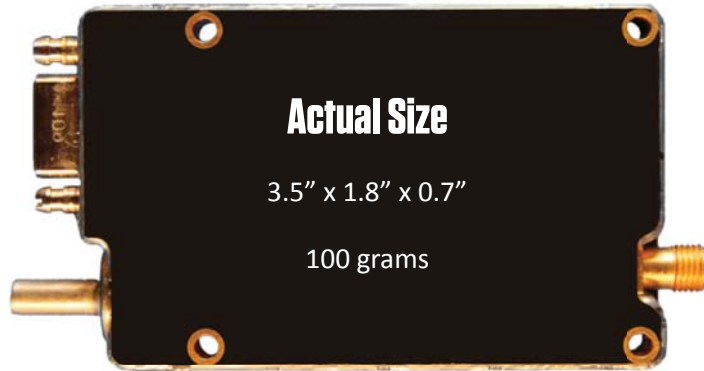
Power

Certifications

Physical/ Environmental

Part Number	XPC-TR	XPS-TR	XPS-TRB
Description	Mode C Transponder	Mode S Transponder with ADS-B Out	Mode S Transponder with ADS-B In/Out
Operating Altitude	unrestricted	unrestricted	unrestricted
Cruising Speed	unrestricted*	unrestricted*	unrestricted*
Transmit Power	250 W nominal	250 W nominal	250 W nominal
1030 Receive Sensitivity	-73 +/- 4 dBm	-74 +/- 3 dBm	-74 +/- 3 dBm
1090 ADS-B IN Sensitivity	N/A	N/A	-84 dBm
RF Impedance	50Ω	50Ω	50Ω
Serial Comms			
Com0 Control	Proprietary protocol RS-232, 57.6 Kb	Proprietary protocol RS-232, 57.6 Kb	Proprietary protocol RS-232, 57.6 Kb
Com2 GPS Input	N/A	Accord NexNav, NMEA RS-232, Adj data rate	Accord NexNav, NMEA RS-232, Adj data rate
Com1 ADS-B In Messages	N/A	N/A	Proprietary protocol RS-232, Adj data rate
Mutual Suppression	Yes	Yes	Yes
Altitude Encoder	50,000 ft	50,000 ft	50,000 ft
ADS-B Out (Extended Squitter)	No	Yes	Yes
ADS-B In (TIS-B)	No	No	Yes
Export Compliance	ECCN 7A994	ECCN 7A994	ECCN 7A994
Supply Voltage	10-32 V	10-32 V	10-32 V
Power Consumption (ON & ALT)	4 watts (typical) 11 watts (max)	7 watts (typical) 12 watts(max)	8 watts (typical) 14 watts (max)
Power Consumption (STBY)	< 1 watt	< 1 watt	< 1 watt
Minimum Operational Performance Standards	RTCA DO-144A, SAE AS8003	RTCA DO-181D, RTCA DO-260B, SAE AS8003	RTCA DO-181D, RTCA DO-260B, SAE AS8003
FAA	TSO-C74d, TSO-C88b	TSO-C112c Level 2els, Class 1, TSO-C166b Class B0, TSO-C88b	TSO-C112c Level 2els, Class 1, TSO-C166b Class A0, TSO-C88b
EASA	ETSO-C74d, ETSO-C88a	ETSO-2C112b, ETSO-C166a, ETSO-C88a	ETSO-2C112b, ETSO-C166a, ETSO-C88a
FCC	FCC part 87, Part 15 equipment approval	FCC part 87, Part 15 equipment approval	FCC part 87, Part 15 equipment approval
Software	DO-178B level C	DO-178B level C	DO-178B level C
Complex Hardware	DO-254 level C	DO-254 level C	DO-254 level C
Environmental Testing	DO-160F	DO-160F	DO-160F
Dimensions	89 x 46 x 18 mm (3.5 x 1.8 x 0.7 in)	89 x 46 x 18 mm (3.5 x 1.8 x 0.7 in)	89 x 46 x 18 mm (3.5 x 1.8 x 0.7 in)
Mass	98 g (3.45 oz)	98 g (3.45 oz)	100 g (3.53 oz)
Operating Temperature	-20 to 70 °C (-4 to 158 °F)	-20 to 70 °C (-4 to 158 °F)	-20 to 70 °C (-4 to 158 °F)
Storage Temperature	-55 to 85 °C (-67 to 185 °F)	-55 to 85 °C (-67 to 185 °F)	-55 to 85 °C (-67 to 185 °F)
Humidity	Max: 95% non-condensing	Max: 95% non-condensing	Max: 95% non-condensing

*In Europe, cruising speed limited to 250 KTS due to single antenna design.



About Sagetech Corporation

Sagetech Corporation provides avionics subsystem products, services and solutions for the aviation industry. These solutions range from avionics modules and sensors to the world's smallest Mode S transponder. Sagetech helps customers achieve greater performance by offering innovative and highly reliable products that save weight and power which directly translates to greater flight time. Sagetech is headquartered in White Salmon, Washington with 100 employees.

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