

# STX 165 Transponder

A New Standard For Mode C Transponders



**Small And Light Weight**  
**Low Power Consumption**  
**Built-in Encoder**  
**Pressure Altitude Display**  
**Three Timer Functions**  
**Optional OAT Probe Input**  
**Outside Air Temperature Display**  
**Density Altitude Readout**  
**Icing Alert**

Photo Courtesy NASA Hubble

# STX 165 Mode C Transponder

The STX165 elevates transponder capabilities to a new level while reducing both weight and size. The solid state transmitter design provides 200 Watts nominal output with no warm up time. And because it's all solid state, power requirements are at an absolute minimum.

The STX165 is a panel mount unit that uses a 1/2 3ATI panel cutout, just like equipment found in top of the line business aircraft. Behind the panel depth is only 6 1/4" (not including connectors). With a built in Altitude Encoder, installation time and cost is greatly reduced. When the optional STP 78 OAT probe is installed the STX165 displays Outside Air Temperature, Density Altitude and even alerts the pilot when the temperature is conducive to icing conditions.

A remote version, the **STX165R** is available for interface with existing navigation management systems. The STX165R will accept either Gilham Gray Code or RS-232 altitude input for Mode C operation. The STX165R can be mounted with or without the mounting tray either vertically or horizontally. All functions of the STX165R are remotely con-



## Technical Specifications

	<b>STX 165 Panel Mount</b>	<b>STX 165R Remote</b>
<b>Electrical</b>		
Input Voltage	11-33Vdc	11-33Vdc
Current Requirements:	430 mA @ 14 Vdc 210 mA @ 28Vdc (500PRF and 7777Code)	360 mA @ 14 Vdc 180 mA @ 28 Vdc (500PRF and 7777Code)
Power Output:	200 Watts Nominal	200 Watts Nominal
Transmitter Freq:	1090 KHz	1090 MHz
Receiver Freq:	1030 MHz	1030 MHz
Receiver Sensitivity:	-74dBm Nominal @90% reply rate	-74dBm Nominal @90% reply rate
<b>Mechanical:</b>		
Dimensions	1/2 3ATI Panel Cutout	3"H x 1.8"W x 6.9"L
Behind Panel Dim.	1.78"H x 3.5"W x 7.34"L 4.52cm x 8.89cm x 18.64cm	8.89cm x 4.57cm x 17.53cm
Weight	1.30 lbs ( .59kg)	1.16 lbs (0.526kg)
<b>Inputs</b>		
Alt Encoder	Built-in 35K Encoder External RS-232 (Optional)	Grey Code RS-232
OAT Probe	SANDIA STP78 (Optional)	N/A
<b>Environmental:</b>		
Temperature:	-20 <sup>0</sup> to +55 <sup>0</sup> C	-20 <sup>0</sup> to +55 <sup>0</sup> C
Altitude	-100 to 35,000 Ft	-100 to 55,000 Ft
<b>Certification:</b>	DO160F DO 178B Level C TSO C74d TSO D88b (Encoder)	DO160F DO178B Level C TSO C74d



SANDIA aerospace

3700 Osuna Rd NE

Suite 711

Albuquerque, NM 87109

[www.sandia.aero](http://www.sandia.aero)

STX165R31000