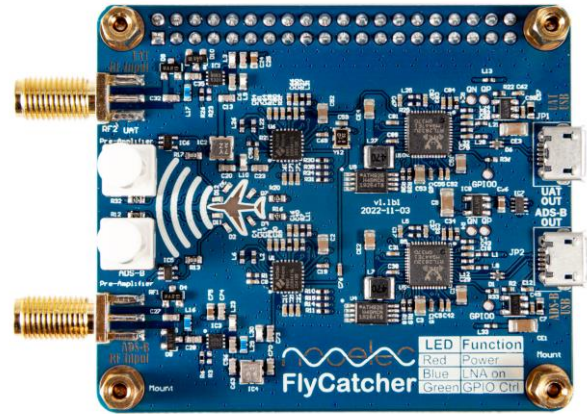


Ordering Information

SKU	Description	UPC
100848	SDR Module	628693723060

Description

FlyCatcher is a Raspberry Pi Hat equipped with a dual-channel software defined radio (SDR). One side is dedicated to receiving ADS-B signals at 1090MHz, and the other side is dedicated to receiving UAT signals at 978MHz . This compact and high-performing device delivers unparalleled versatility and sensitivity, unlocking a world of possibilities for aviation enthusiasts and tech enthusiasts alike.



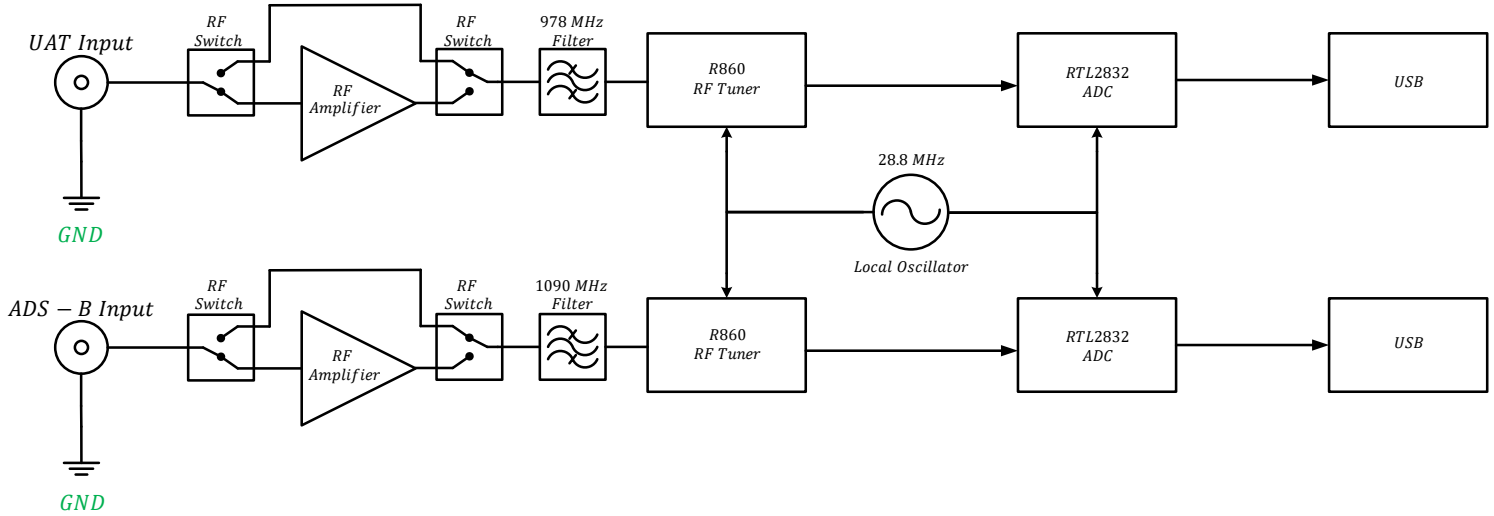
Features

- Dual channel
- 978MHz and 1090MHz
- Low noise preamplifier
- LNA bypass option
- LNA software control
- High quality SAW filters
- Raspberry Pi compatibility

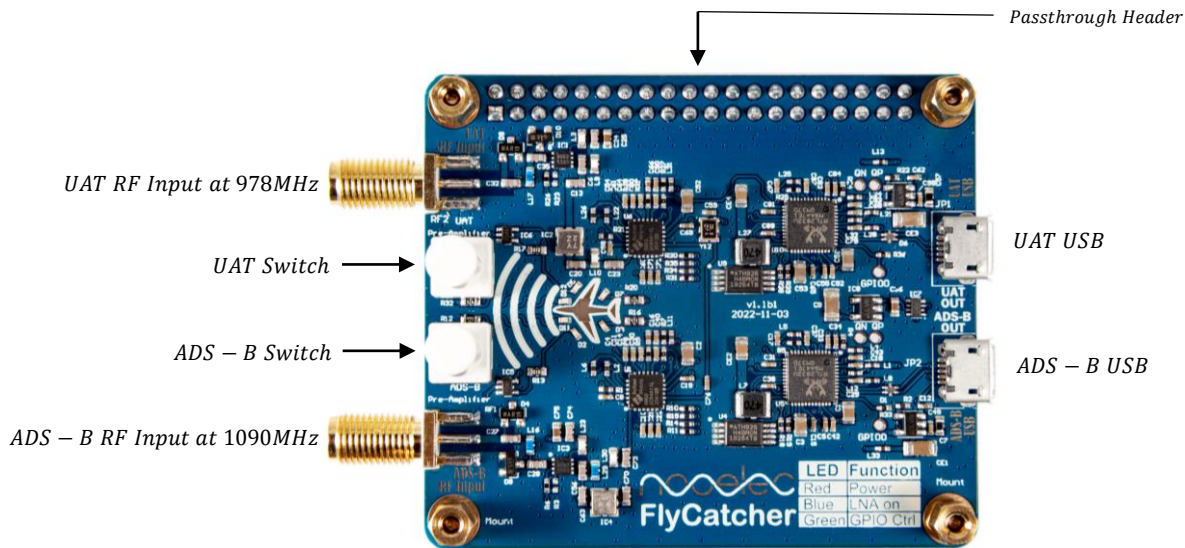
Applications

- Flight tracking and monitoring
- RTL-SDR applications
- Low noise reception
- Aviation research and analysis
- Weather monitoring

Simplified Schematic



Pin Configuration and Functions



Recommended Operating Conditions

Parameter	Symbol	Min	Typical	Max	Unit
Input Voltage	V_{in}	4.7	5	5.3	Volts
Input Power	P_{in}	-	-	10	dBm

Electrical Specifications

A) UAT Side

Test Conditions unless otherwise specified: $V_{in} = +5$ Vdc, 50 Ohm system.

Parameter	Symbol	Min	Typical	Max	Unit
Frequency Range	$f_L - f_H$	968	-	985	MHz
Center Frequency	f_o	-	978	-	MHz
Input Return Loss	S11	-18	-12	-8	dB
Noise Figure	NF	-	1.6	-	dB
Noise Temperature	T_n	-	129	-	K
Supply Current	I_{supply}	200	250	300	mA

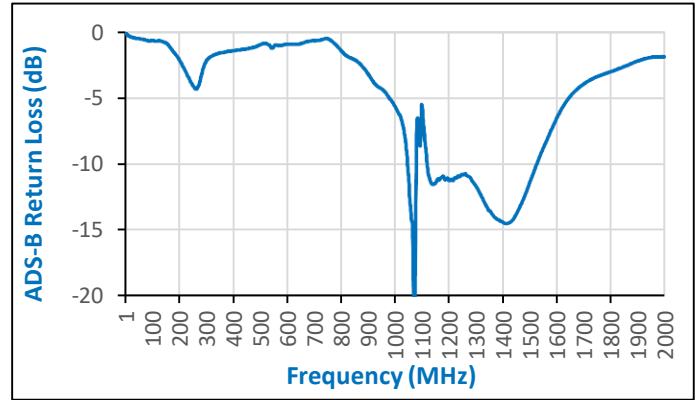
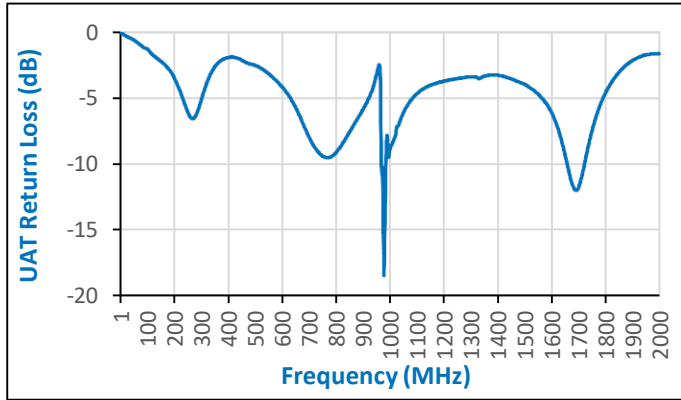
B) ADS-B Side

Test Conditions unless otherwise specified: $V_{in} = +5$ Vdc, 50 Ohm system.

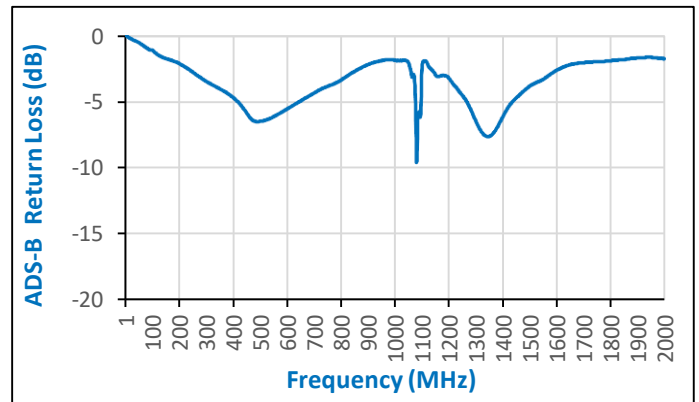
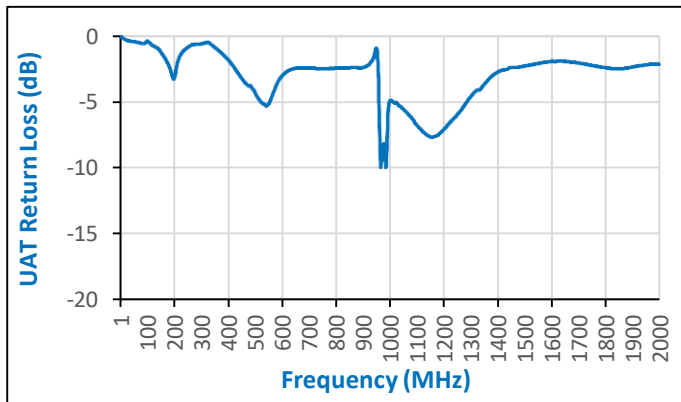
Parameter	Symbol	Min	Typical	Max	Unit
Frequency Range	$f_L - f_H$	1085	-	1095	MHz
Center Frequency	f_o	-	1090	-	MHz
Input Return Loss	S11	-10	-8	-5	dB
Noise Figure	NF	-	1.5	-	dB
Noise Temperature	T_n	-	120	-	K
Supply Current	I_{supply}	265	315	365	mA

Electrical Characteristics Plots (1 MHz to 2000 MHz)

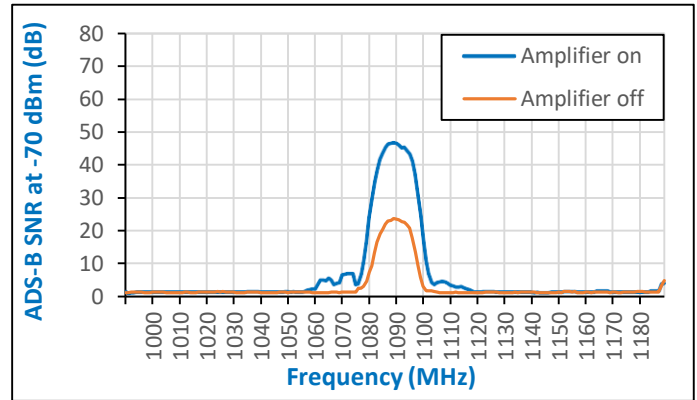
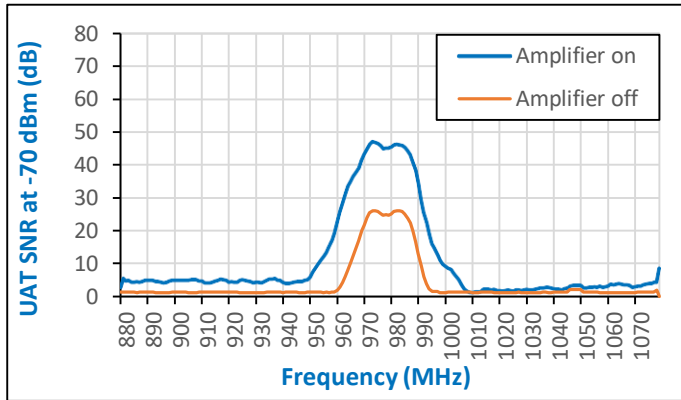
A) Return Loss Amplifier off:



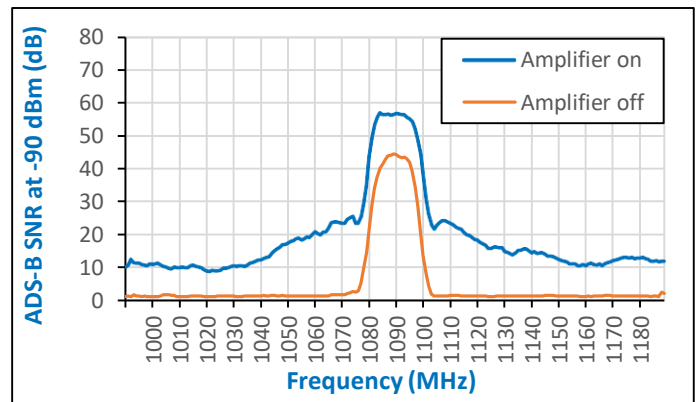
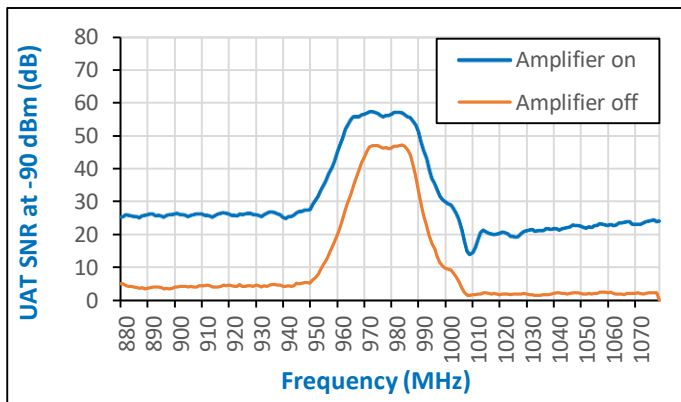
Amplifier on:



B) Signal-to-noise Ratio
Tuner Gain = 0dB:



Tuner Gain = 49.6dB:



Physical Specifications.

Parameter	Value	Unit
Length	76 (2.99)	Millimeter (Inch)
Width	57 (2.24)	Millimeter (Inch)
Height	19 (0.74)	Millimeter (Inch)
Weight	48 (0.11)	Gram (Pound)

Accessories



SAWbird+ ADS-B	ADS-B Discovery Antenna Bundle - 3dBi	ADS-B Discovery Antenna Bundle - 5dBi (High Gain)
SKU: 100847	SKU: 100696	SKU: 100714