

Ordering Information

SKU	Description	UPC
100721	Ham It Up Plus - Barebones	0616469146076
100769	Ham It Up Plus - with enclosure	0616469146137

Description

A high-quality RF (ULF, VLF, LF, MF, HF) converter for software defined radio devices like our NESDR series and the HackRF. Also works as a panadapter for most radios! It will function in both transmit and receive modes if available on your SDR.



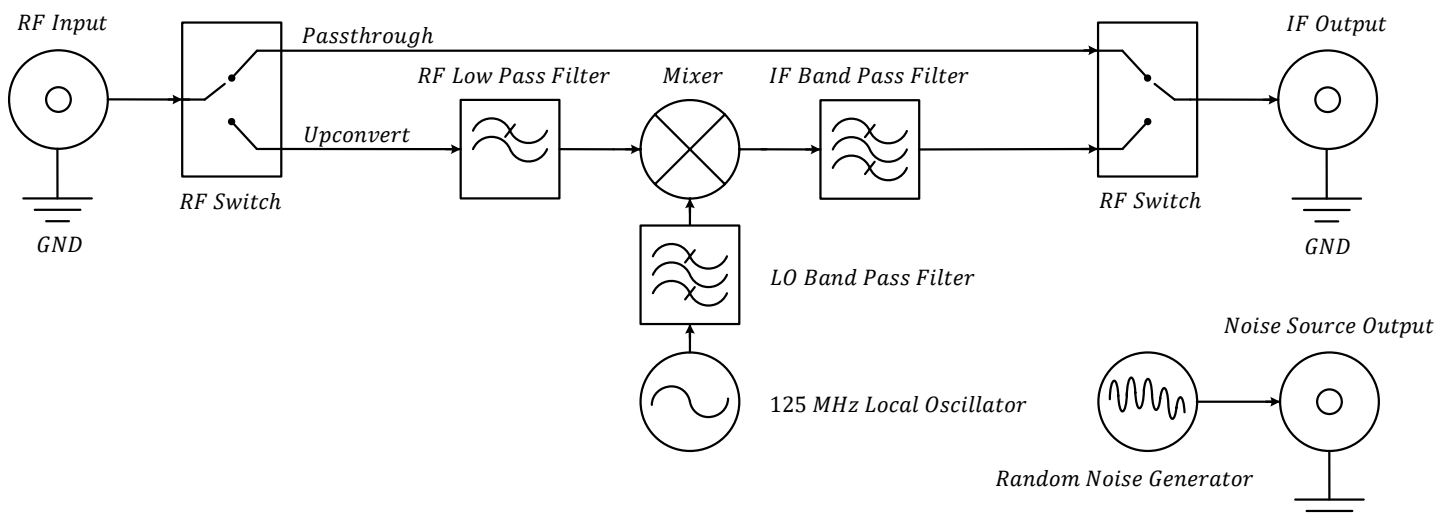
Features

- 50Ω RF mixer block
- +4V-5.5V single supply
- 145mA Current Draw
- Internal RF, IF and LO filters
- 125MHz LO frequency

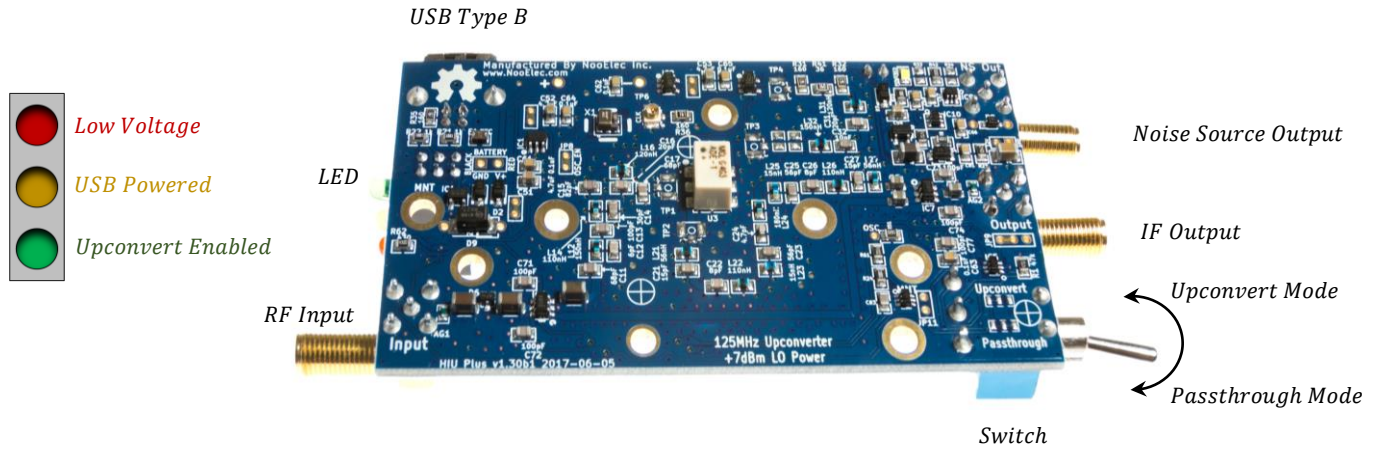
Applications

- Software defined radio
- ULF, VHF, LF, MF and HF reception
- Upconversion and frequency mixing

Simplified Schematic



Pin Configuration and Functions



Recommended Operating Conditions

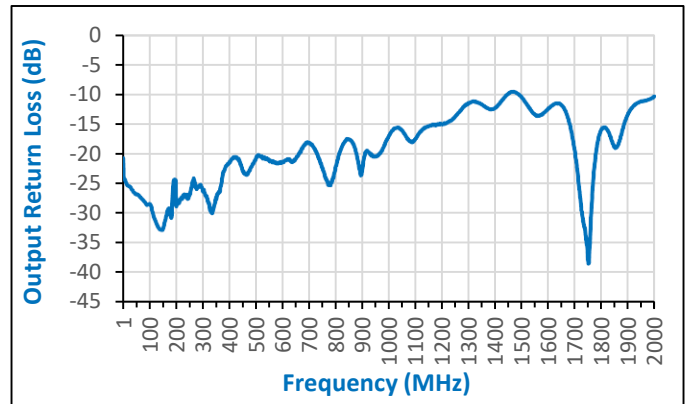
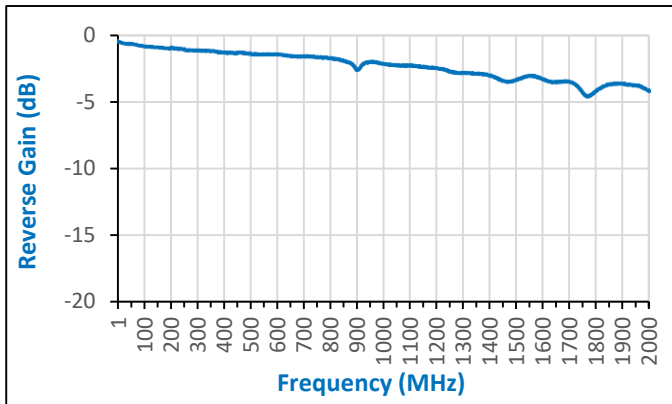
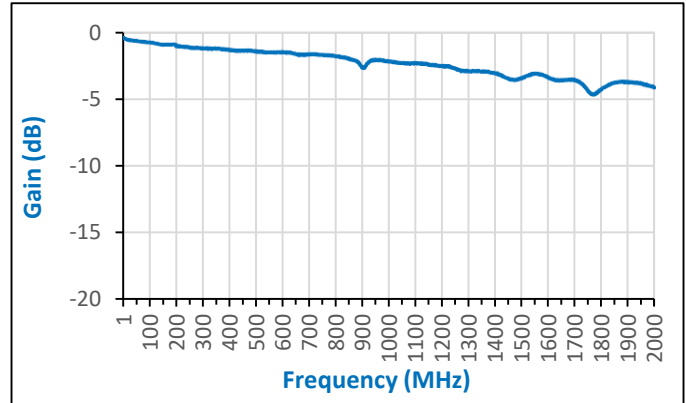
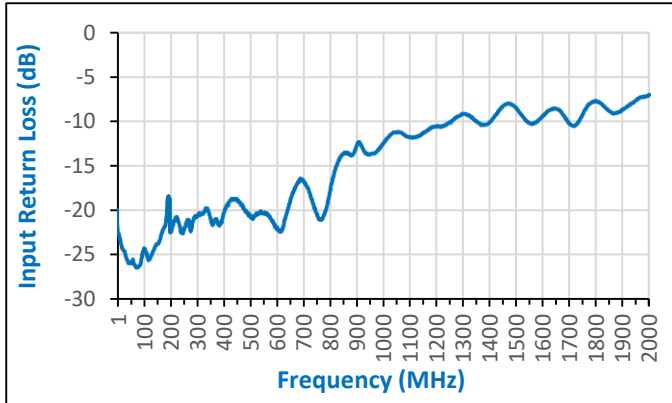
Parameter	Symbol	Min	Typical	Max	Unit
Input Voltage	V_{in}	4.0	5.0	5.5	Volts
Input Power	P_{in}	-	-	1	dBm

Electrical Specifications

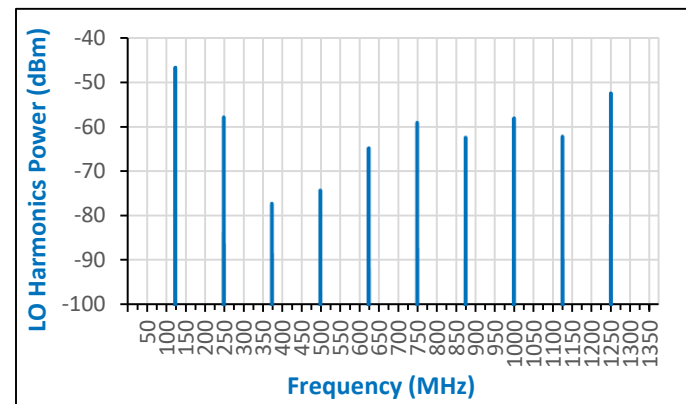
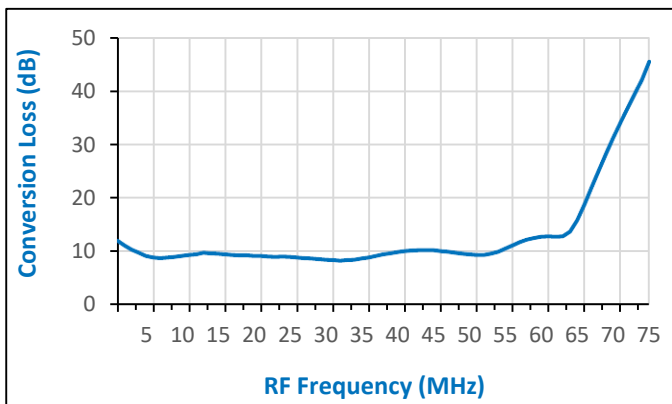
Test Conditions unless otherwise specified: $V_{in} = +5$ Vdc, 50 Ohm system.

Parameter	Symbol	Min	Typical	Max	Unit
Frequency Range in Upconvert Mode	$f_L - f_H$	0.3	-	65000	KHz
Frequency Range in Passthrough Mode	$f_L - f_H$	0.030	-	2000	MHz
Conversion Loss	CL	-8.5	10	-	dB
LO Power	P_{LO}	-48	-46	-43	dBm
LO Frequency	f_{LO}	124.9999	125.0000	125.0001	MHz
LO Stability	-	-	1	-	PPM
Input Return Loss	S11	-	-	-10	dB
Output Return Loss	S22	-	-	-10	dB
Supply Current in Upconvert Mode	I_{supply}	135	145	155	mA
Supply Current in Passthrough Mode	I_{supply}	85	93	100	mA

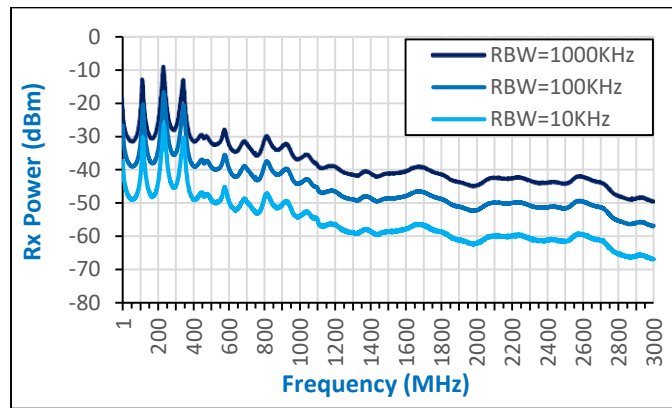
Passthrough: Electrical Characteristics Plots (1 MHz to 2000 MHz)



Upconvert: Electrical Characteristics Plots (1 MHz to 75 MHz)



Noise Source: Electrical Characteristics Plots (1 MHz to 3000 MHz)



Physical Specifications

Parameter	Value	Unit
Length	170 (6.69)	Millimeter (Inch)
Width	125 (4.92)	Millimeter (Inch)
Height	24 (0.95)	Millimeter (Inch)
Weight	41 (0.09)	Gram (Pound)

Accessories



Ham It Up - Battery Pack Upgrade for Ham It Up Plus	Nooelec NESDR SMART v4 Bundle - Premium RTL-SDR	Aluminum Enclosure Kit for Ham It Up Plus Barebones
SKU: 100763	SKU: 100700	SKU: 100768