0.4-4GHz IF Board

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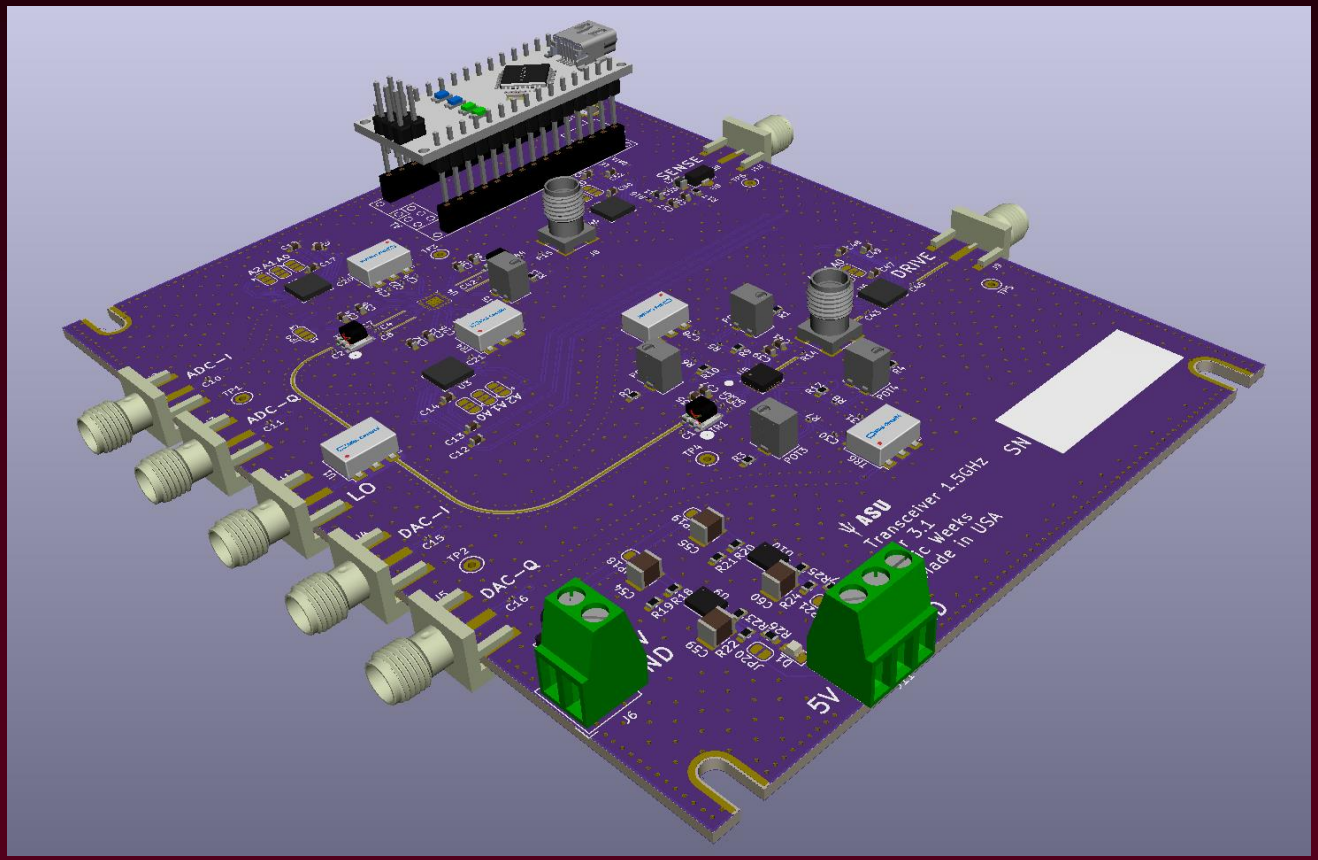


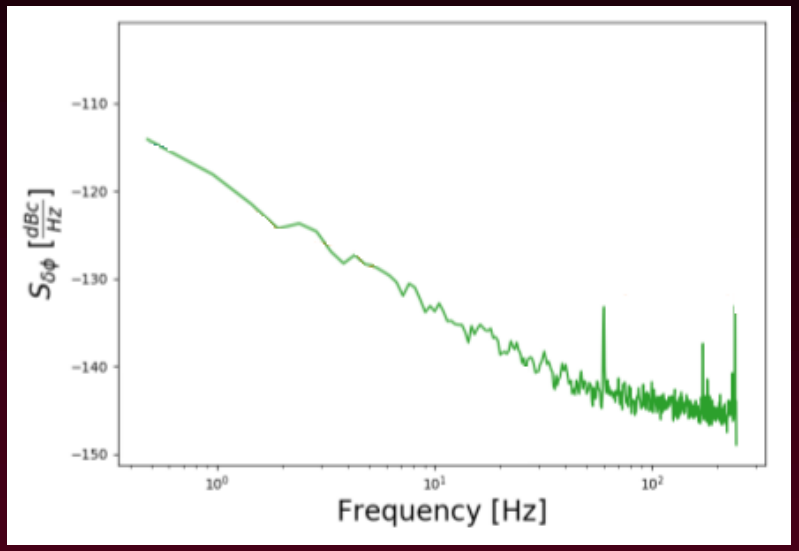
Features and Electrical Specifications

Features

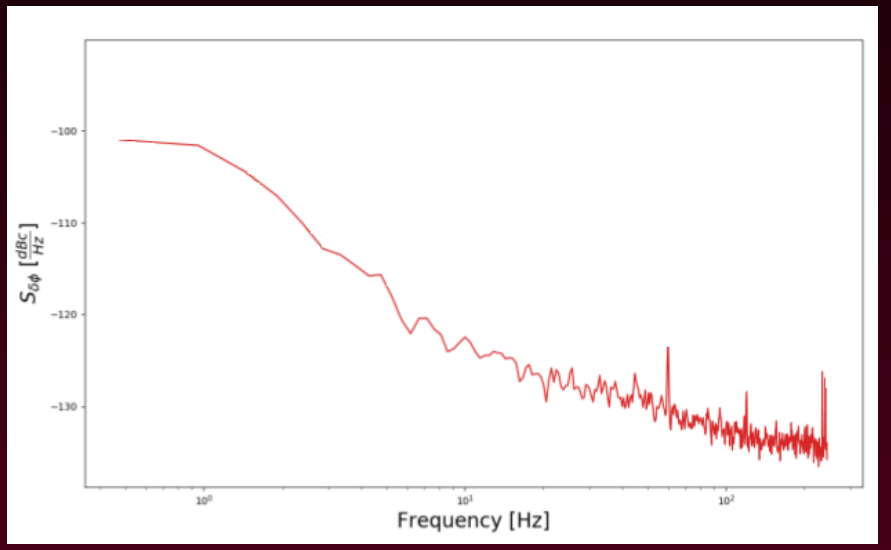
- IQ Up and Down conversion for selectable sideband
- Wide Bandwidth: 350MHz (single sideband)
- 20 dB RF receiver gain
- Programable RF attenuators on for transmit and receive signals.
- 5 and 6 Volt DC, 1 Amp outputs
- Serial control for programable functions

Electrical Specifications at 25°C				
	Min	Typical	Max	Unit
Supply Voltage	12	24	36	V
Supply Current @ 24V	131	138	145	mA
LO Frequency	0.4	-	4	GHz
Noise figure	-	15	-	dB
Image Tone (sideband) Surpression	10	20	40	dB
LO supersession	-	50	-	dB

Loopback Phase Noise

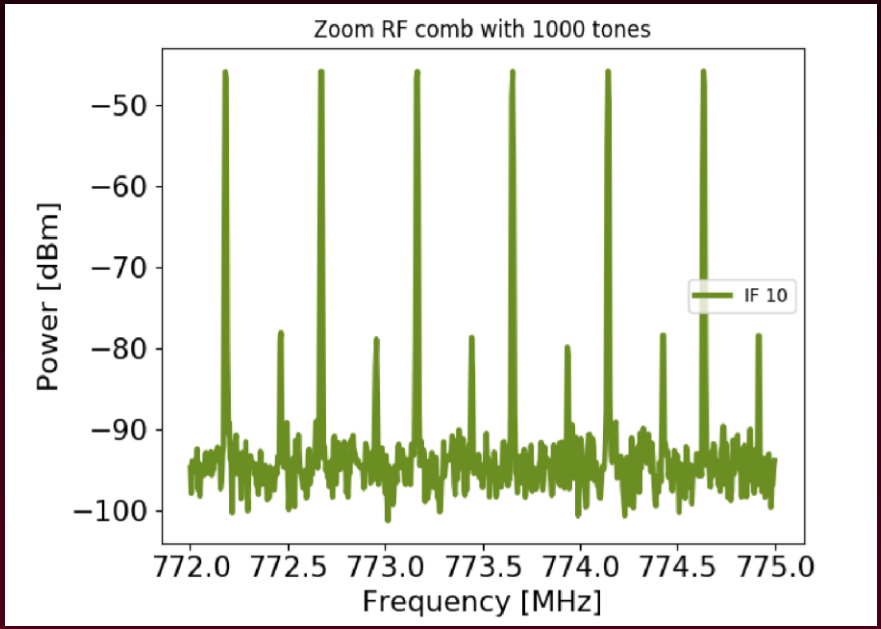


Signal source DAC to ADC Loopback noise. 10MHz tone from ROACH II with Music Board DAC/ADC

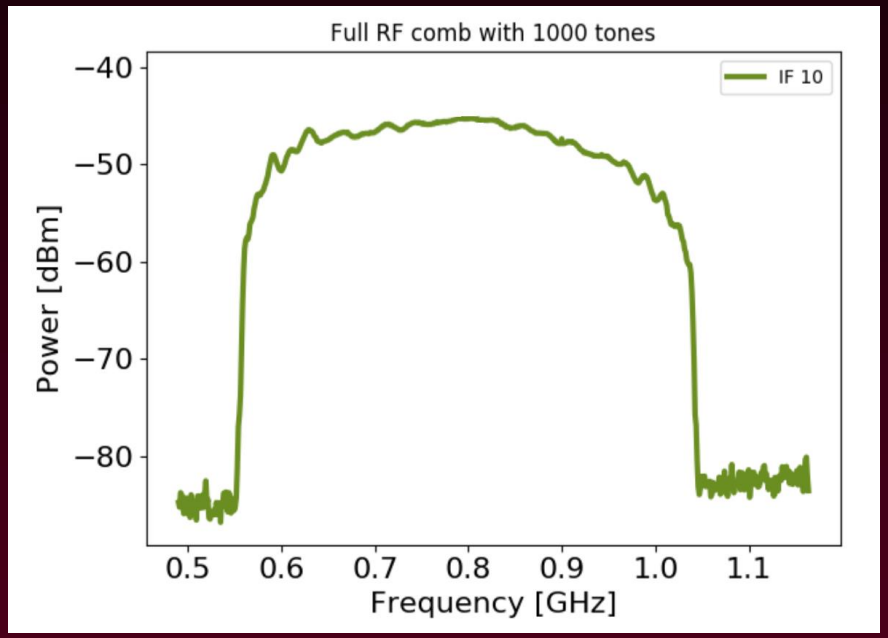


Signal source DAC, through IF board, to ADC Loopback noise. 10MHz tone from ROACH II with Music Board DAC/ADC. Showing 15dB Noise Figure.

Upconverted Frequency Comb

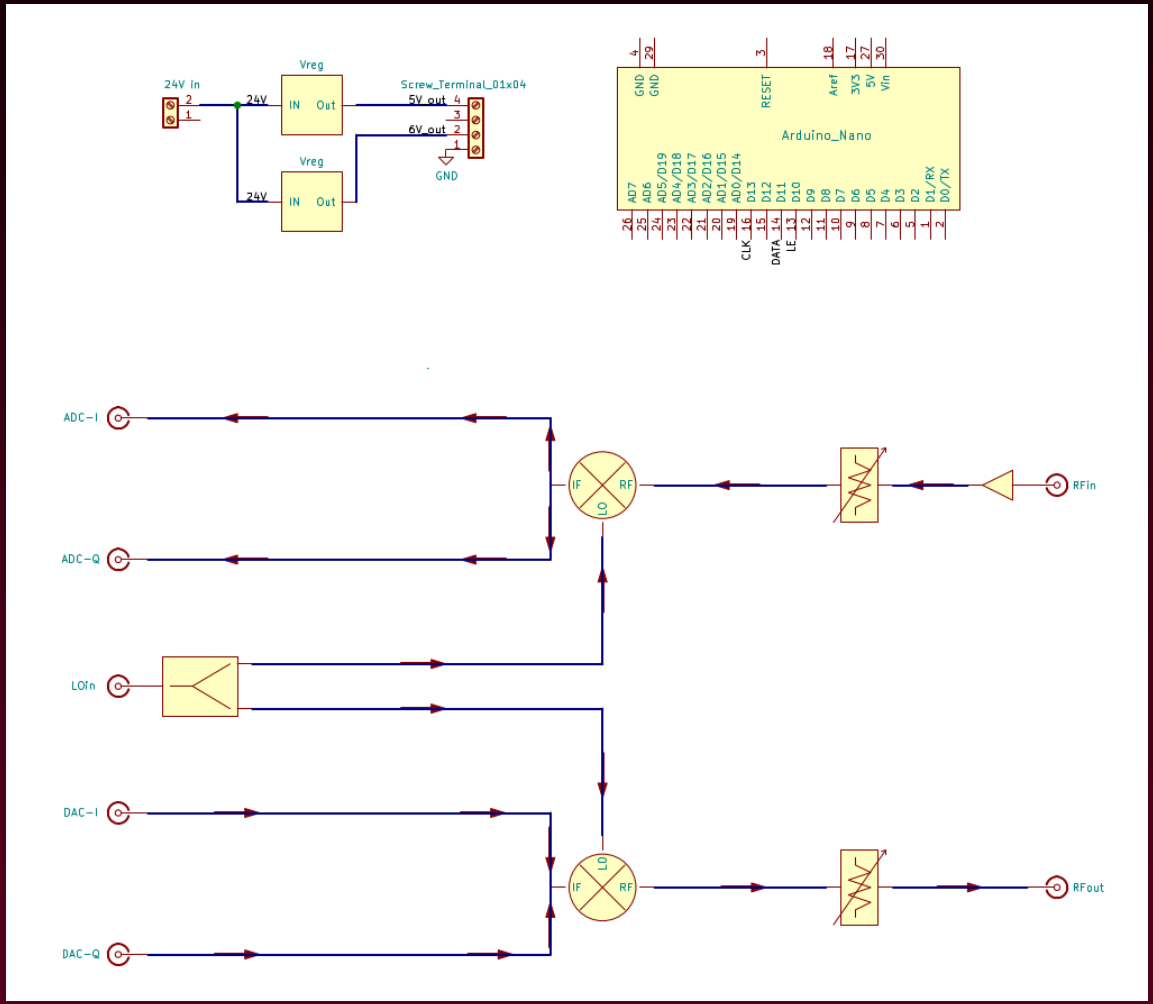


Zoom view of frequency comb to show image tone suppression. 1000 tones.

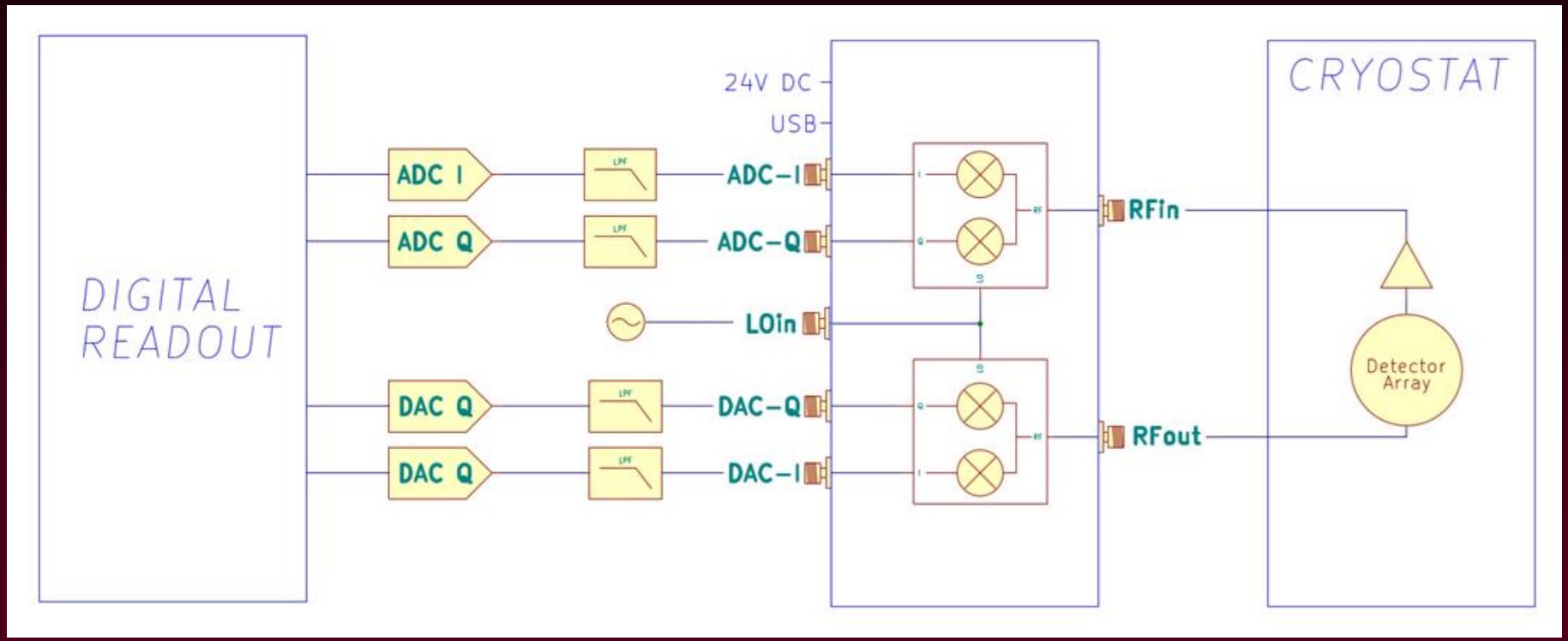


512MHz, 1000 tones, LO @ 800MHz

Block Diagram



Typical Application



Dimensions