



Blue Tops RF Modules > Low Noise Integrated Mixer

Features:

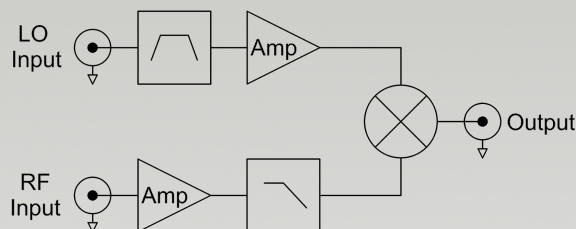
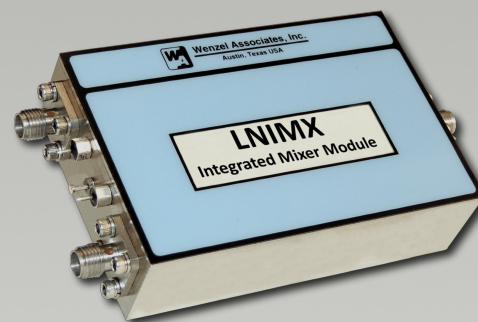
- LO Input Frequency to 3.4 GHz
- RF Input Frequency to 2 GHz
- Intrinsic Phase Noise to -170 dBc/Hz
- Integral Amplifiers, Filters and Mixer

Applications:

- Synthesizer Building Block
- Communication Systems
- Radar Systems
- Electronic Warfare Systems

Description:

The LNIMX module is an integrated mixer module which incorporates a low noise mixer, band-pass and low-pass filters and low noise amplifiers, providing a space saving solution for combining two RF signals. The standard low noise mixer is the M/A Com M8TH, but other mixers options are available. The user can select the desired signal by following the unfiltered output with the appropriate customer provided filter. Many internal amplifier options are available and will be selected based on the input signal frequencies, input signal levels and phase noise performance. Please consult our technical staff for assistance in configuring an LNIMX module to meet your needs.



Electrical Specifications

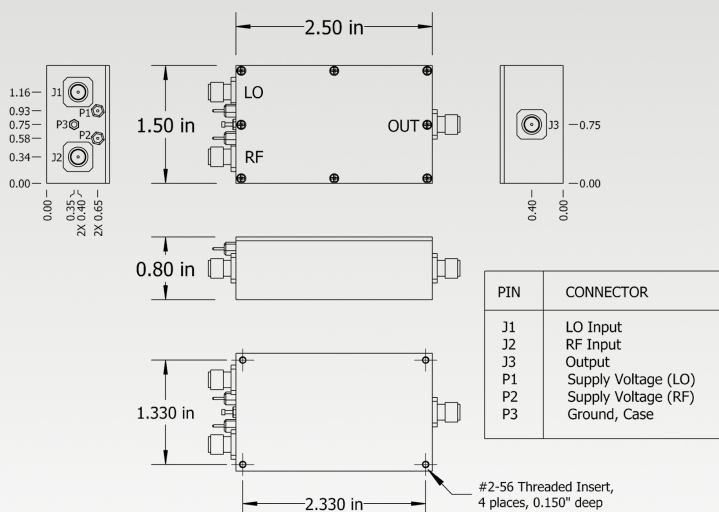
LO Input Frequency Range	1 MHz to 3.4 GHz, fixed
LO Input Level	+13 dBm to +23 dBm, fixed (±1 dB)
RF Input Frequency Range	1 MHz to 2 GHz, fixed
RF Input Level	+4 dBm to +16 dBm, fixed (±1 dB)
Output Frequency **	up to 3.4 GHz, max
Output Level	+8 dBm, typical (±2 dB)
Input/Output VSWR	≤ 2.0:1
Phase Noise Floor (Intrinsic, Input Referred)	≤ -170 dBc/Hz (100 kHz offset)
LO and RF Supply Voltage	+15 VDC (±2%)
Current Draw	≤ 200 mA
Operating Temperature	0 to +50°C
Storage Temperature	-40 to +85°C

Mechanical

Dimensions	2.5" x 1.5" x 0.8"
Package	Nickel-Plated Machined Aluminum
DC Supply	Feed Thru Capacitor Solder Pins
Ground	Turret Terminal Solder Pin
RF Inputs / Output	SMA female *

* SMA female connectors are used unless otherwise specified. Other options include SMA male, right angle SMAs, BNC female and others. Contact factory for custom configurations.

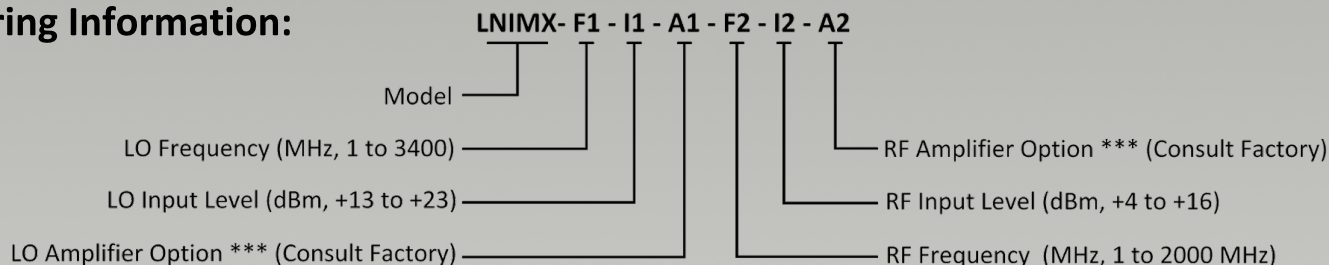
** Output will consist of the unfiltered result of mixing the LO and RF signals, including the sum, difference and two originals. The output frequency will be limited to a maximum of 3.4 GHz.





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Ordering Information:



*** Amplifier selections will be defined after careful consideration of key parameters such as input frequencies, levels and phase noise performance. Consult factory for assistance in configuring a module to meet your specific requirement.

Standard P/N	LO Input Frequency	LO Input Level	LO Amplifier Option	RF Input Frequency	RF Input Level	RF Amplifier Option	Supply Voltage
LNIMX-3000-13-BT-400-13-CT	3000 MHz	+13 dBm	BT	400 MHz	+13 dBm	CT	+15 VDC
LNIMX-2000-13-BT-500-10-BT	2000 MHz	+13 dBm	BT	500 MHz	+10 dBm	BT	+15 VDC
LNIMX-1000-13-BT-200-13-CT	1000 MHz	+13 dBm	BT	200 MHz	+13 dBm	CT	+15 VDC
LNIMX-500-13-AU-50-10-CT	500 MHz	+13 dBm	AU	50 MHz	+10 dBm	CT	+15 VDC
LNIMX-320-13-AU-40-13-CT	320 MHz	+13 dBm	AU	40 MHz	+13 dBm	CT	+15 VDC
LNIMX-100-16-BP-20-5-BT	100 MHz	+16 dBm	BP	20 MHz	+5 dBm	BT	+15 VDC
LNIMX-90-13-AU-10-10-CT	90 MHz	+13 dBm	AU	10 MHz	+10 dBm	CT	+15 VDC
LNIMX-80-13-AU-20-6-BT	80 MHz	+13 dBm	AU	20 MHz	+6 dBm	BT	+15 VDC

Standard Amplifier Options:

Amplifier ***	Frequency Range		Gain (dB)		P1dB (dBm)		Input Referred Residual Phase Noise (dBc/Hz), typical				Supply Voltage (VDC)	Current Draw (mA)
	Min.	Max.	Min.	Max.	Min.	Max.	100 Hz	1 kHz	10 kHz	100 kHz		
AA	50 MHz	1.3 GHz	10	12	15	17	-155	-165	-170	-170	+8, +10, +12 or +15	60
AB	DC	4 GHz	16	20	16	18	-155	-165	-170	-170	+5, +8, +10, +12 or +15	65
AC	5 MHz	500 MHz	12	14	19	21	-158	-168	-175	-175	+15	90
AD	5 MHz	1 GHz	10	12	18	20	-158	-168	-175	-175	+15	90
AE	10 MHz	1 GHz	11	13	23	26	-156	-166	-173	-173	+15	205
AU	5 MHz	500 MHz	12	14	20	22	-158	-168	-175	-175	+15	88
AV	5 MHz	300 MHz	12	14	19	21	-158	-168	-175	-175	+15	85
BA	100 MHz	2 GHz	9	11	24	26	-156	-166	-172	-172	+15	175
BP	10 MHz	200 MHz	7	8	18	20	-158	-168	-178	-178	+15	30
BT	DC	4 GHz	13	18	16	18	-155	-165	-170	-170	+5, +8, +10, +12 or +15	65
CK	10 MHz	1.5 GHz	12	13	21	23	-156	-166	-172	-172	+15 VDC	195
CT	DC	4 GHz	9	10	14	16	-155	-165	-170	-170	+5, +8, +10, +12 or +15	70
CZ	DC	6 GHz	23	25	17	19	-155	-165	-170	-170	+8, +10, +12 or +15	80
DB	30 MHz	200 MHz	7	8	18	20	-158	-168	-178	-178	+12	30

*** See the complete [Amplifier Selection Table](#) for additional amplifier options.

