

LNA-1000 Series High Performance C, X, Ku & K Band LNA Systems

General Information

Locus Microwave redundant LNA systems are designed to minimize system outages using waveguide switches to provide a spare amplifier in the event of a failure.

Various systems are available utilizing high performance C, X, Ku or K band LNAs in 1:1, 1:2 or dual 1:1 configurations. The plates are compact and easy to install.

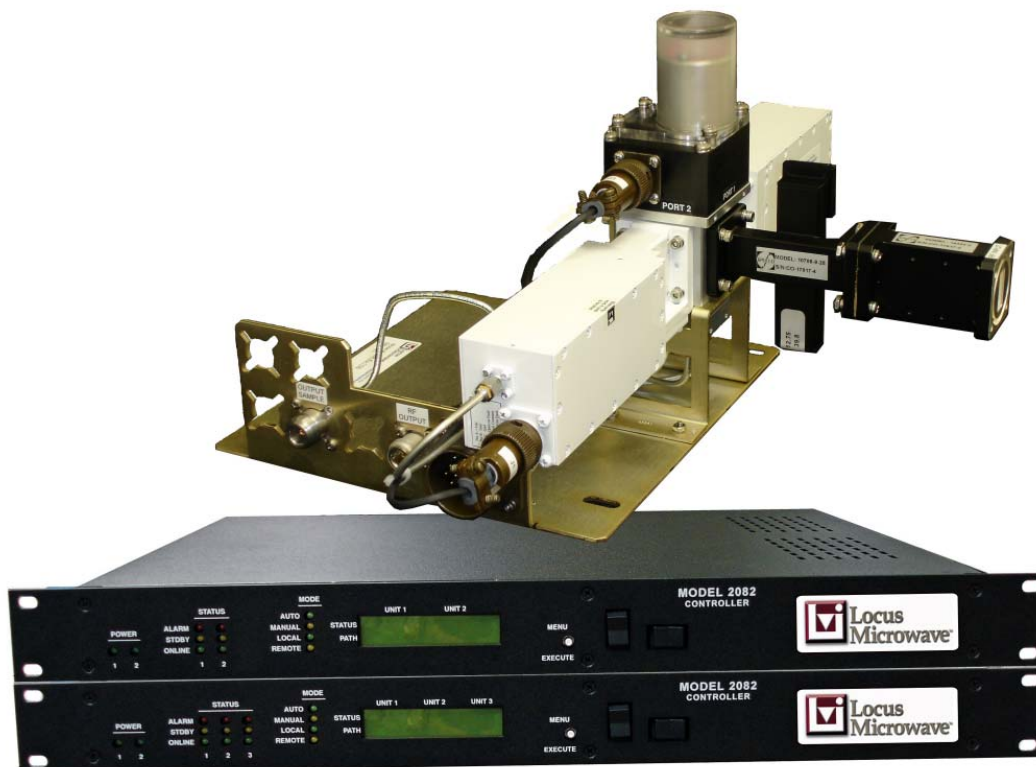
The controllers can manually or automatically cause switching and have serial and parallel control interfaces.

Features

- Outdoor packaged LNA Plates
- 1:1, 1:2 and Dual 1:1 Configurations
- C, X, Ku and K Bands
- Field proven, high performance LNAs

Options

- Tx Filters
- Offline I/O
- Input waveguide coupler(s)
- Output coax coupler(s)
- L or S Band (coax I/O)
- Custom Configurations



Parameter	System Performance ¹			Option
	1:1	1:2		
		Pol 1	Pol 2	
C Band System				
System Noise Temperature Contribution (above specified LNA)	2K	2K	4K	None
	3K	3K	5K	40 dB Input Coupler
	4K	4K	6K	Std. Tx Filter (3.6-4.2 GHz)
	10K	10K	12K	Ext. Tx Filter (3.4-4.2 GHz)
	5K	5K	7K	Std. Tx Filter & Coupler
	11K	11K	13K	Ext. Tx Filter & Coupler
System Noise Temp. vs Temperature	+0.36K/°C	+0.36K/°C	+0.36K/°C	(nominal change)
System Gain vs Ambient Temperature	-0.05 dB/°C	-0.05 dB/°C	-0.05 dB/°C	(nominal change)
System VSWR				
Input				
On-line Input(s) ²	1.25:1	1.25:1	1.25:1	
Off-line and Coupled Inputs	1.50:1	1.50:1	1.50:1	
Output				
Main Output(s)	1.25:1	1.25:1	1.25:1	
Options with isolator	1.25:1	1.25:1	1.25:1	
Options without isolator	1.50:1	1.50:1	1.50:1	
X Band System				
System Noise Temperature Contribution (above specified LNA)	3K	-	-	None
	5K	-	-	40 dB Input Coupler
	19K	-	-	Tx Filter
	21K	-	-	Tx. Filter & Coupler
System Noise Temp. vs Temperature (nominal change)	+0.40K/°C	-	-	
System Gain vs Ambient Temperature (nominal change)	-0.04 dB/°C	-	-	
System VSWR				
Input				
On-line Input ²	1.25:1	-	-	
Off-line and Coupled Inputs	1.50:1	-	-	
Output				
Main Output	1.25:1	-	-	
Options with isolator	1.25:1	-	-	
Options without isolator	1.50:1	-	-	

Note:

1. Other specifications may apply
2. Options may effect input VSWR

Specifications are subject to change at the discretion of Locus Microwave, Inc.

176 Technology Dr., Suite 200, Boalsburg, PA 16827 USA • Tel: +1 814 466 6275 • Fax: +1 814 466 1104

Parameter	System Performance ¹			Option
	1:1	1:2		
		Pol 1	Pol 2	
Ku Band System				
System Noise Temperature Contribution (above specified LNA)	5K	5K	14K	None
	7K	7K	16K	40 dB Input Coupler
	15K	15K	24K	Tx Filter
	17K	17K	26K	Tx Filter & Coupler
System Noise Temp. vs Temperature (nominal change)	+0.40K/°C	+0.40K/°C	+0.40K/°C	
System Gain vs Ambient Temperature (nominal change)	-0.05 dB/°C	-0.05 dB/°C	-0.05 dB/°C	
System VSWR				
Input				
On-line Input(s) ²	1.25:1	1.25:1	1.25:1	
Off-line and Coupled Inputs	1.50:1	1.50:1	1.50:1	
Output				
Main Output(s)	1.25:1	1.25:1	1.25:1	
Options with isolator	1.25:1	1.25:1	1.25:1	
Options without isolator	1.50:1	1.50:1	1.50:1	
K Band System				
System Noise Temperature Contribution (above specified LNA)	7K		-	None
	11K	-	-	40 dB Input Coupler
	22K	-	-	Tx Filter
	26K	-	-	Tx Filter & Coupler
System Noise Temp. vs Temperature (nominal change)	+0.60K/°C	-	-	
System Gain vs Ambient Temperature (nominal change)	-0.06dB/°C	-	-	
System VSWR				
Input				
On-line Input(s) ²	1.25:1	-	-	
Off-line and Coupled Inputs	1.50:1	-	-	
Output				
Main Outputs ³	1.25:1	-	-	
Options with isolator	1.25:1	-	-	
Options without isolator	1.50:1	-	-	

Note:

1. Other specifications may apply
2. Options may effect input VSWR
3. Two outputs provided. Output switching not included

Specifications are subject to change at the discretion of Locus Microwave, Inc.

176 Technology Dr., Suite 200, Boalsburg, PA 16827 USA • Tel: +1 814 466 6275 • Fax: +1 814 466 1104

www.locusmicrowave.com

General Controller Specifications

Parameter	Specification
Configuration Types	1:1, 1:2 and Dual 1:1 Redundancy
LNA Status Monitor	Current window. Alarm generated if current outside set window.
Window Width	+/-10% to +/-30% of nominal. Software selectable.
Switchover time	100ms max.
Serial I/O:	
Interface	RS-232C/RS-485 Selectable
Connector	9-Pin D, Female
Parallel I/O	
Status Outputs	Form 'C' dry contacts
Control Inputs	Contact closure to ground
Connector	37-Pin D, female
External Alarm Input	
Input	Contact closure to ground
Connector	9-Pin D, Female
Controller Dimensions	19" (483 mm) W x 1.75" (44.4 mm) H x 16" (406.4 mm) D
AC Input	90-260 VAC, 47-63 Hz, 100 watts max., Redundant Power Supplies
Operating Temperature Range	0°C to +50°C

