

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

General Information

Locus Microwave Inc. designed the Redundant LNA systems 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.

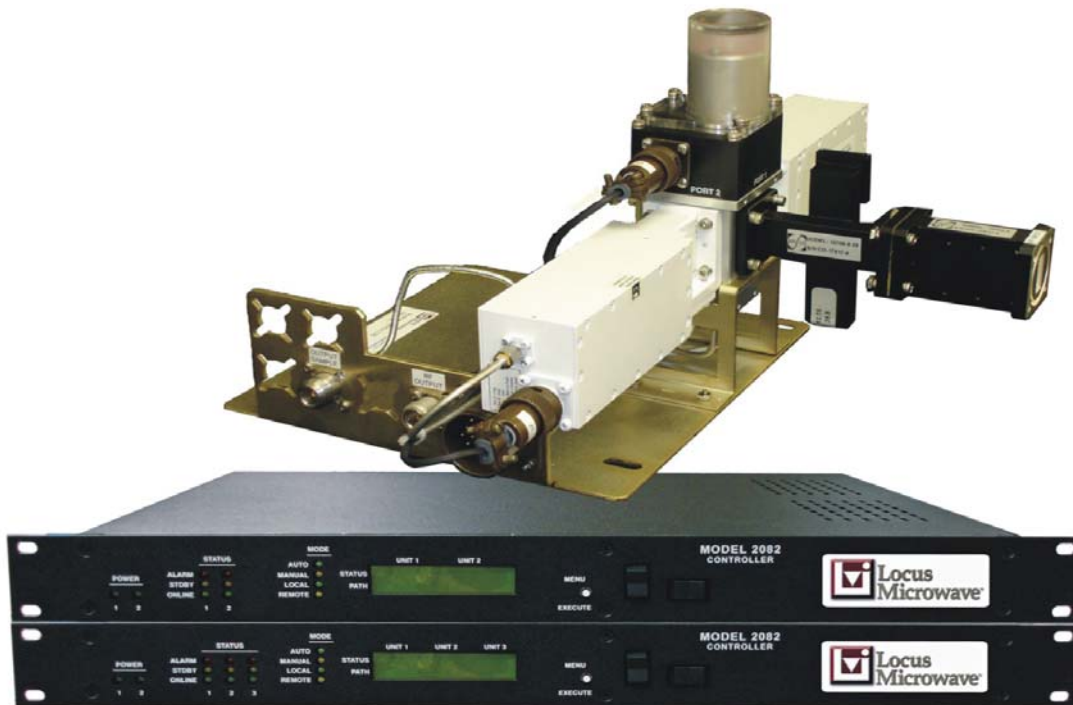
The controllers have serial and parallel control interfaces and can be operated manually or automatically.

Features

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

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
C-Band System				
	1:1	1:2		
		Pol 1	Pol 2	
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 (3.6-4.2 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	10k	--	Tx Filter & Coupler
System Noise Temp. vs Temperature	+0.40K/°C	--	--	(nominal change)
System Gain vs Ambient Temperature	-0.04dB/°C	--	--	(nominal change)
System VSWR				
Input				
On-line Input(s) 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	--	--	

Notes:

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

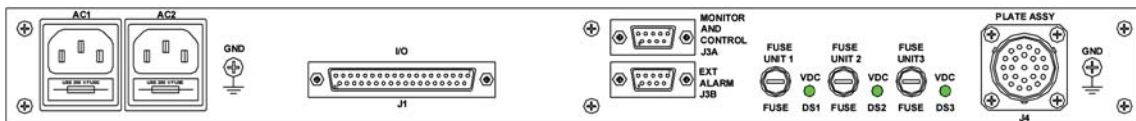
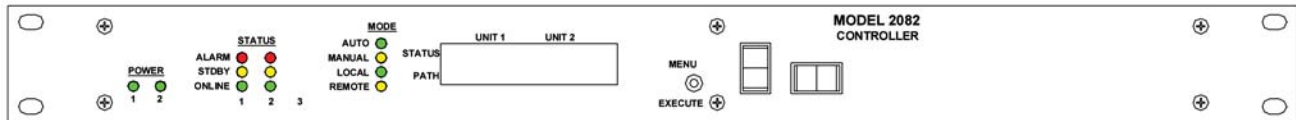
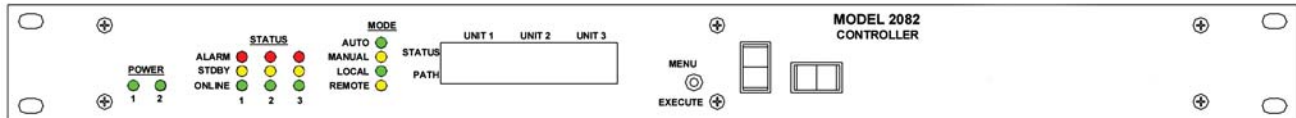
Parameter	System Performance ¹			Option
Ku-Band System				
	1:1	1:2		
		Pol 1	Pol 2	
System Noise Temperature Contribution (above specified LNA)	5K	5k	14K	None 40 dB Input Coupler Tx Filter Tx Filter & Coupler (nominal change) (nominal change)
	7K	7k	16K	
	15K	15k	24K	
	17K	17k	26K	
System Noise Temp. vs Temperature	+0.40K/°C	+0.40K/°C	+0.40K/°C	
System Gain vs Ambient Temperature	-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 40 dB Input Coupler Tx Filter Tx Filter & Coupler (nominal change) (nominal change)
	11K	--	--	
	22K	--	--	
	26K	--	--	
System Noise Temp. vs Temperature	+0.60K/°C	--	--	
System Gain vs Ambient Temperature	-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	--	--	

Notes:

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

3. Two outputs provided. Output switching not included.

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	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 w max., Redundant Power Supplies
Operating Temperature Range	0°C to +50°C



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