



## LEA1 1002 MHz One or Two Output Line Extender Amplifiers

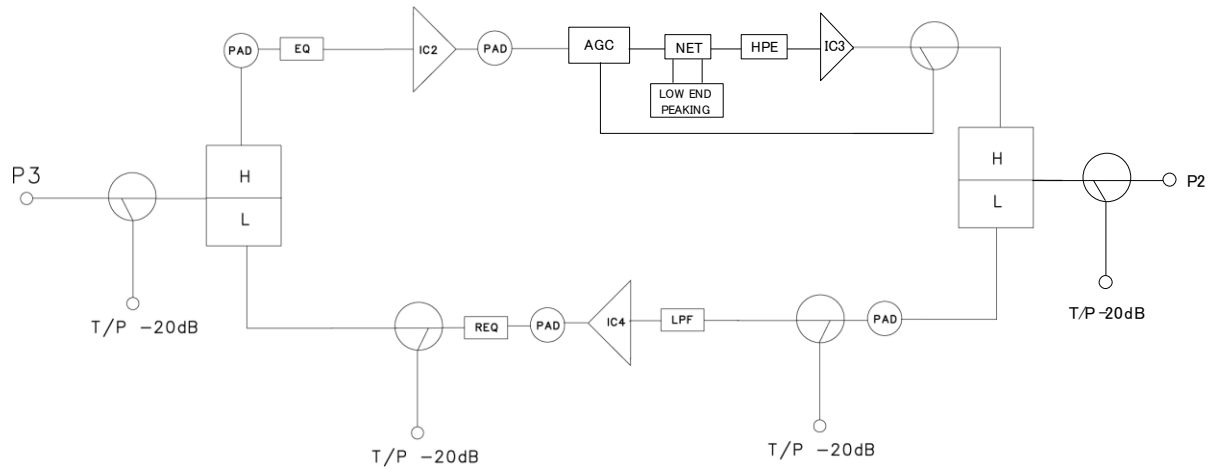
The LEA1 is a one or two output line extender amplifier. This amplifier provides high quality RF distribution for HFC (hybrid fiber coaxial) or fiber deep networks. All amplifiers support two-way operation at various standard frequency splits available.

### Features

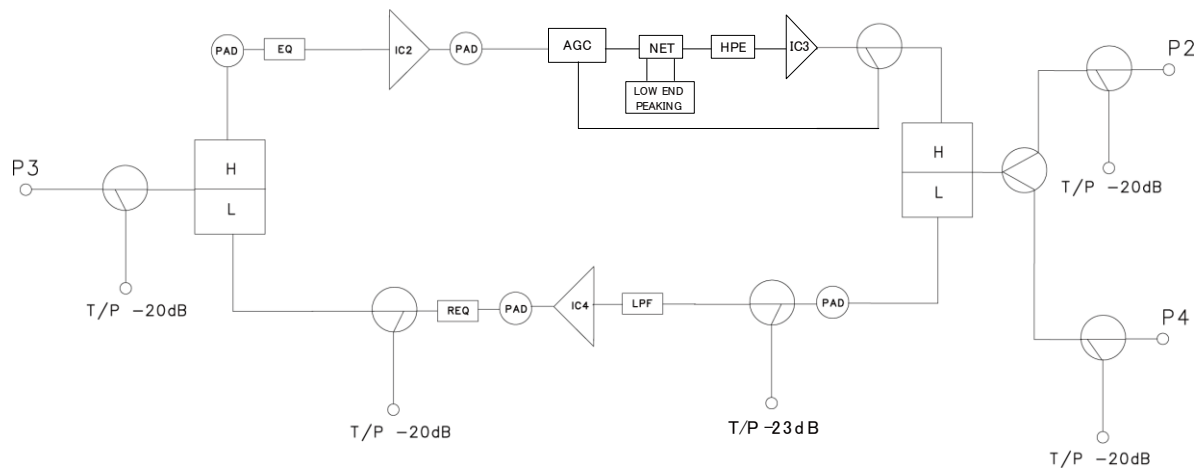
- ◆ Operating bandwidth 1002 MHz
- ◆ 40-90 VAC cable power
- ◆ -20 dB directional test points at the input and output port and after the return signal amplifier
- ◆ Pad Adjustable EQs & REQs
- ◆ Attenuator pad & equalizer guides to aid in proper insertion of plug-ins
- ◆ Two-way operation
- ◆ 10 Amp power passing
- ◆ Compact size

## BLOCK DIAGRAMS

LEA1 Amplifier Block Diagram (JXP Platform)  
(One Output)



LEA1 Amplifier Block Diagram (JXP Platform)  
(Two Outputs)



# SPECIFICATIONS

ACI		LEA1 1002 MHz		
STATION PARAMETERS:				
DESCRIPTION	CONDITIONS	UNITS	SPECIFICATIONS	NOTES
Forward Bandwidth		MHz	54 ~ 1002	
Flatness		dB	± 0.5	
Gain Control Range		dB	0 to 20.0	In 0.5 dB step
Slope Control Range		dB	-9.0 to +18.0	
Operation Gain with AGC/Thermal PAD	Min.	dB	1 output = 32 2 outputs = 28	
Return Loss	Min.	dB	16	
Test Point		dB	-20 ± 1	
Frequency		MHz	@54 / 550 / 750 / 870 / 1002	
Output Level	@1002 MHz	dBmV	1 output = 50 2 outputs = 46	
Station Slope		dB	0 / 9.0 / 12.6 / 14.8 / 17.2	
Distortion: 550 MHz analog channel loading, 79 channels +450 MHz digital channel loading, 256 QAM at -6 dBc relative to its associated visual carrier				
Composite Triple Beat (CTB)		dBc	-75	
Composite Second Order (CSO)		dBc	-67	
Cross Modulation (XMOD)		dBc	-67	
Noise Figure		dB	< 10.0	
Surge Protection		kv	4	
REVERSE SPECTRUM				
Reverse Bandwidth		MHz	5 ~ 42	
Operation Gain	Min.	dB	18	
Return Loss	Min.	dB	16	
Input Test Point		dB	- 20 ± 1 / -23 ± 1	-20 dB for 1 output; -23 dB for 2 outputs
Output Test Point		dB	- 20 ± 1	
Station Slope	Max.	dB	1.0	
Output Level	Flat	dBmV	39	

DESCRIPTION	CONDITIONS	UNITS	SPECIFICATIONS	NOTES
<b>Distortions</b>				
Channel loading		Channel	6	
Composite Triple Beat (CTB)		dBc	-77	
Composite Second Order (CSO)		dBc	-77	
Cross Modulation (XMOD)		dBc	-70	
Noise Figure		dB	< 10.0	
Maximum		W	24	
AC voltage input range		VAC	40-90	
<b>Power Requirement</b>				
Current Capacity		A	10	
Hum modulation		dBc	-60	
<b>Physical</b>				
Dimensions	W x H x L	In (cm)	6.7 x 4.5 x 9.25 (17 x 11.5 x 23.5)	
Weight		Lbs. (kg)	6.6 (3)	
<b>Environmental</b>				
Operating temperature		°F (°C)	- 40 to + 140 (- 40 to + 60)	

# Ordering Matrix

## LEA1 1002 MHz Configuration Sheet

Customer: \_\_\_\_\_

Created By: \_\_\_\_\_

Order Date: \_\_\_\_\_

### ORDERING MATRIX

May 29, 2018

Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PART NUMBER	L	E	A	1											

1-2-3 L E A

4  1 BANDWIDTH FREQUENCY  
1 = 1002 MHz Upper Frequency

10-11   CONTROL TYPE / FREQUENCY  
OM = Manual (AGC bypass)  
TP = Thermal Pad at Interstage Pad Location

5-6   GAIN (Station Port to Port)

12  REVERSE AMPLIFIER STATION GAIN  
0 = None  
1 = Passive  
2 = 18 dB min ( 2 output)  
3 = 18 dB min ( 1 output)      6 = 24 dB min ( 1 output)

	LEA1 (JXP Platform)	
	1 Output	2 Outputs
Max gain with AGC/Thermal PAD	32	28
Max gain w/bypass	37	33

7  TYPE OF STATION  
1 = 1 Output Line Extender Amplifier  
2 = 2 Passive Output Line Extender Amplifier

13  SURGE PROTECTOR  
1 = Gas Tube

8  DIPLEX FILTER SPLIT  
2 = 204/258      4 = 42/53  
6 = 65/85      8 = 85/105

14  HOUSING  
0 = No housing, Module only  
1 = STD w / PS

9  STATION SLOPE  
1 = 17.2 dB @ 1002 MHz  
2 = 14 dB @ 1002 MHz

15  SPECIAL SPEC (Determinened by Product Management)  
H = Hybrid & Plug-in Platform of JXP structure

### NOTES:

#### JXP Platform

#### Accessories:

Forward all units-reverse if active

Plug-in equalizers	1 Reverse	1 Forward
Plug-in pad	2 Reverse(1 for EQ)	2 Forward(1 for EQ)

#### Attenuator Pads:

Pad: JXP100-xx dB from 0 to 20 in .5 dB increments



ACI Communications, Inc.  
23307 66th Avenue South  
Kent, WA 98032

Rev C 05-29-2018 Printed in U.S.A.

ACI Communications, Inc. reserves the right to discontinue the manufacture or change specifications without prior notice on any parts illustrated in this data sheet. Registered trademarks are the property of their respective owners