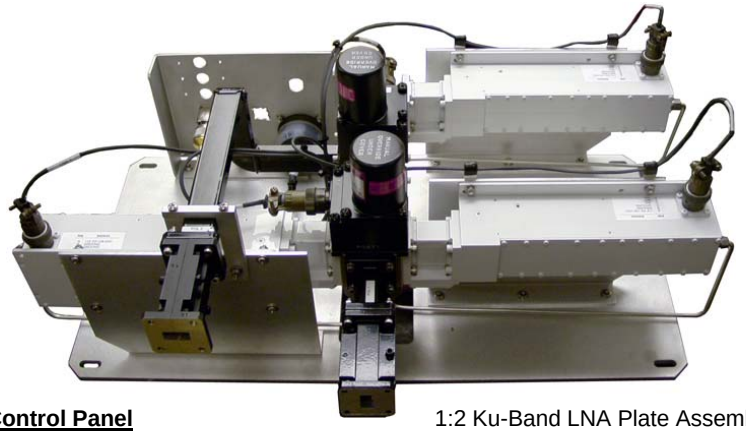
Redundant 1:1 and 1:2 Ku Band LNA

RADITEK

SATCOM
Ku Band LNA

RoHS COMPLIANT



1:2 Ku-Band LNA Plate Assemblies

Options
- LNB Redundant Systems
- Transmit-band Reject Filter
- Off-line RF I/O
- Waveguide Test Inject Input Coupler
- Coaxial Output Coupler
- Dual 1:1 Redundant Assembly
- Custom LNA Plate Configurations
- -48 VDC Operation
- Remote Control Panels

Control Panel
- User-friendly M&C provided locally as well as through a standard serial I/O. (RS-232, 485 or optional Ethernet interfaces)
- Auto-ranging redundant power supplies: 85-264 VAC @ 47 to 63 Hz
- High system level reliability

LNA Plate
- Compact plate assemblies facilitate convenient antenna hub mounting
- Standard feed orientations
- State-of-the-art noise temperatures
- All LNAs contain integral RF isolators

Our redundant LNA systems are the field-proven low noise amplifier product lines. Available in all common Ku-Band frequencies and offering state-of-the-art noise temperature performance, these LNAs can be configured for use in 1:1, 1:2 and custom redundant systems.

System monitoring and control is provided through the microprocessor-based 1:1 and 1:2 redundant control panels. Dual 1:1 systems are controlled via the dual redundant control panel.

LNA plate assemblies are designed for convenient integration into any antenna hub or facility with RF and user interfaces readily accessible.

Common feed interfaces are offered as standard and isolation is provided at all RF interfaces. A range of RF hardware options and custom plate configurations are offered to meet specific system requirements.

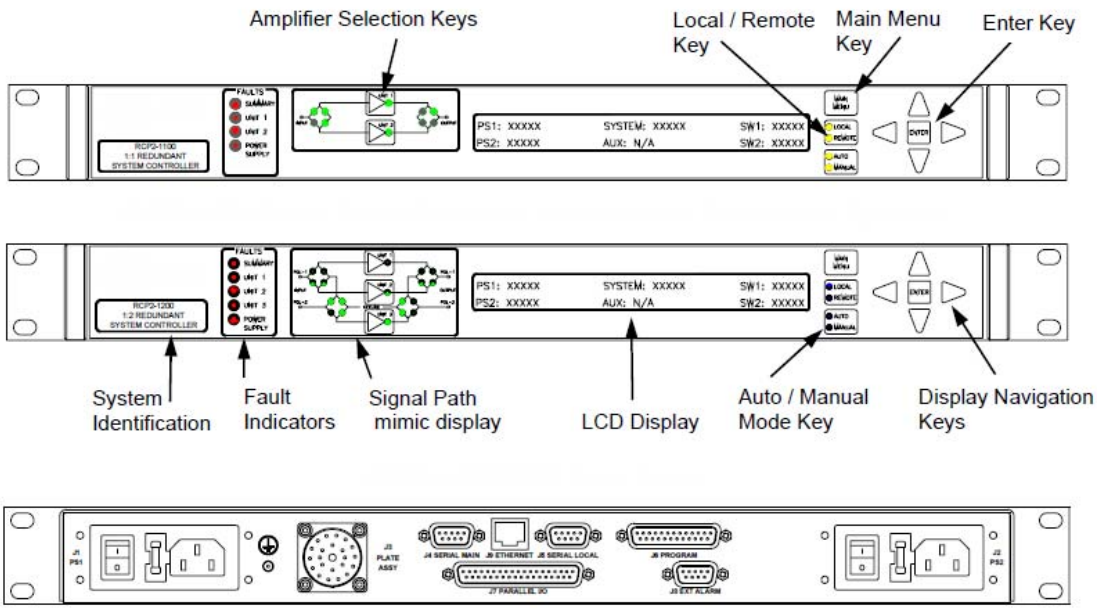
Order Examples: RLNA-1:2-Ku-(10.95-12.75)-90K-Sf-60d-ACV-opt1,2,3,4- p3
Description: *(1:2 Redundant LNA Systems Ku Band 10.95-12.75GHz, 90K Noise temperature, SMAf, 60dB gain, 85-265VAC (47-400Hz) , 1: 100ft control Cable, 2: No Tx filter, 3: Compatible Plate assembly, 4: No TP*

Options Table:

System / controller 1:1, 1:2 or Dual (1:1)	Freq Bands see below	LNA Gain 50, 60dB	LNA Noise Temp: 65, 75, 85, 95, 70, 80, 90, 100, or N/A	Input Voltage: 1*5-20Vdc,* 1*8-64Vdc, 85-265VAC (47-400Hz)*
1. Control Cables: None, 100ft, 150ft, Custom	**2.Tx Reject Filter** No (Std), Yes	**3.Special Options** None, Compatible plate assembly	**4.Offline & Test Ports** None, Offline, 30dB Test Input, 40 dB Test Input, Offline & 40 Test Input	
Freq Bands 10.95-12.75, 10.95-11.75, 11.70-12.20, 12.25-12.75,11.25-11.75, 10.70-12.75, 10.95-11.70, 10.95-12.20, 12.50-12.75, 10.70-11.70, 10.95-11.95, 10.70-12.20, 10.90-11.70, 12.20-12.75, 10.90-12.75, 11.70-12.75, 10.90-12.80, 11.80-13.00				

WORLD HQ: 1702L Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.
Tel: (408) 266-7404 FAX: (408) 266-4483
WEB: www.raditek.com E-mail: sales@raditek.com

Redundant 1:1 and 1:2 Ku Band LNA

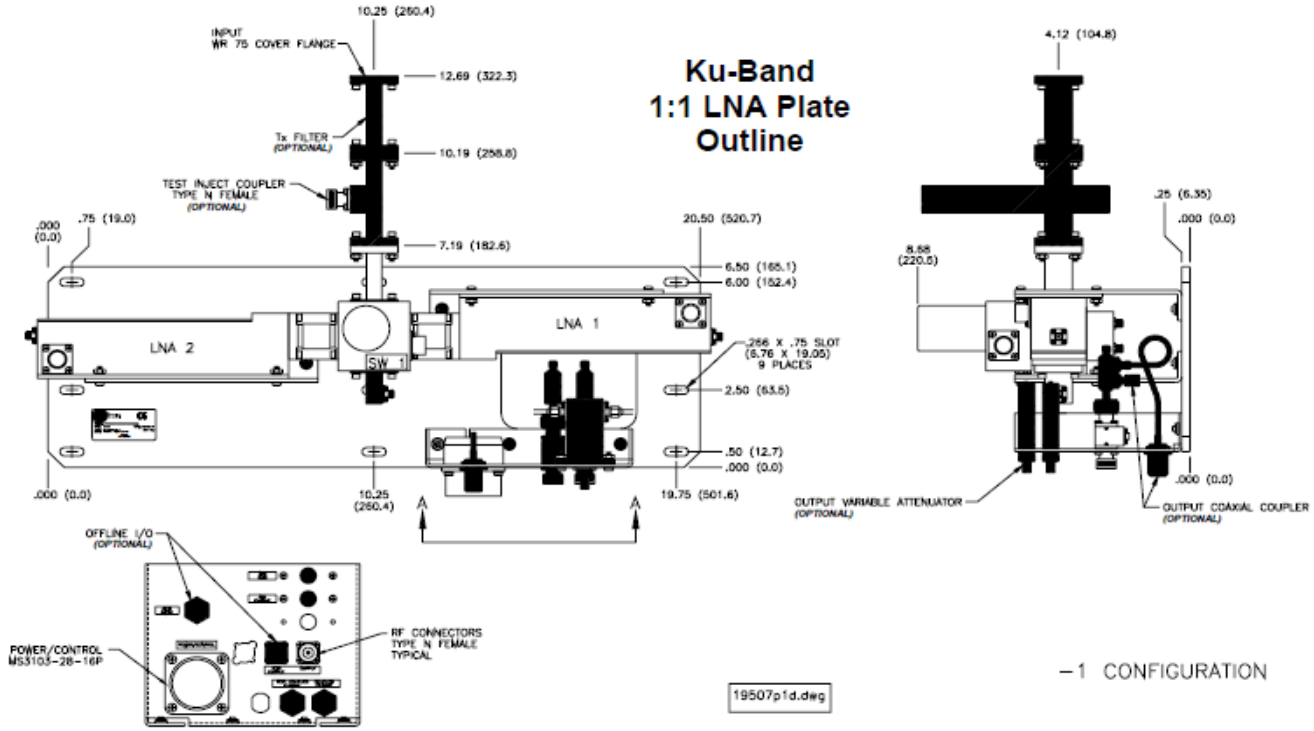


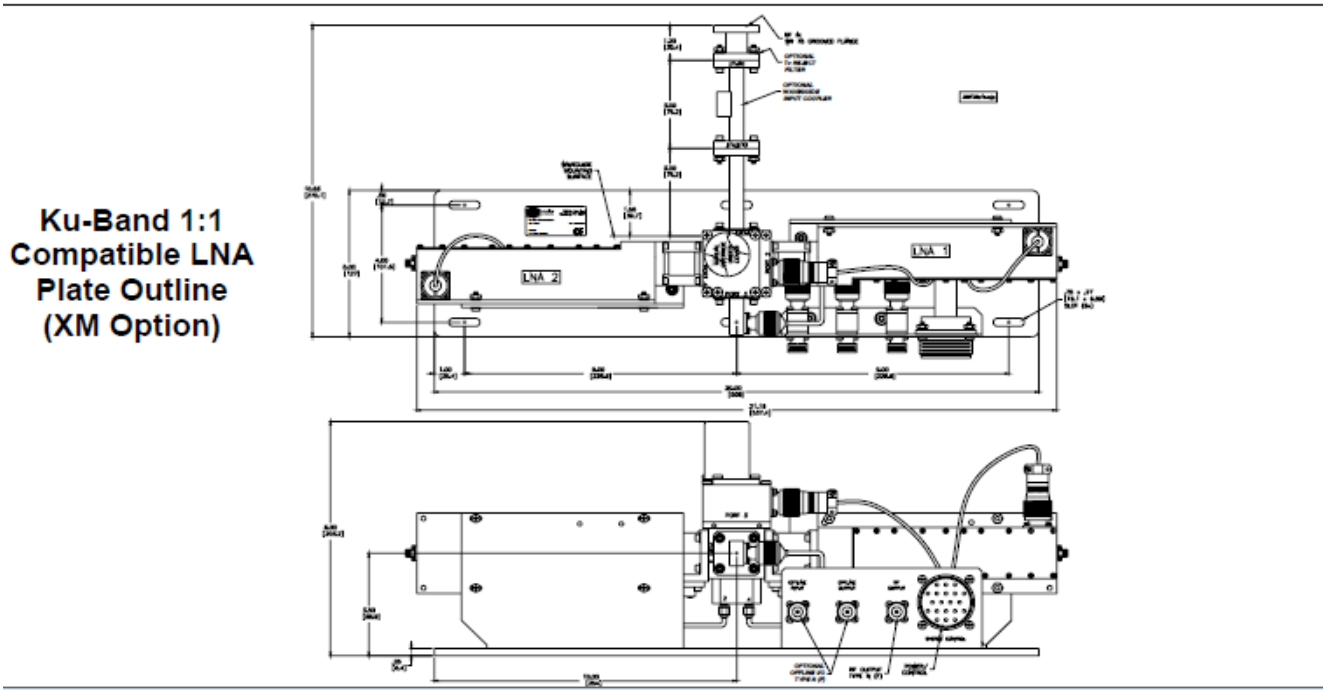
RCP2-1100/1200 General Specifications

Characteristic	Specifications
Configurations	1:1 Redundant System 1:2 Redundant System
Switch Time	Fault Detection, 20 - 50 msec Total Switchover (including mechanical switch) - 100 msec maximum
Switch Drive	26 VDC @ 5 Amps
Alarm Input	Closure to Ground, (Ground=OK / Open=Fault)
Serial Communication	RS232 / RS485 4 wire
Parallel I/O	
Status Outputs	Form C Relay Contacts (10 sets)
Control Inputs	Contact Closure to Ground
AC Input Power	85-265 VAC, 47-63 Hz, 1 A max, > 0.93 power factor
DC Input Power (48 VDC Input Option)	36-72 VDC, Maximum DC Input current @ 48V - 2 Amps

WORLD HQ: 1702L Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.
Tel: (408) 266-7404 FAX: (408) 266-4483
WEB: www.raditek.com E-mail: sales@raditek.com

Redundant 1:1 and 1:2 Ku Band LNA

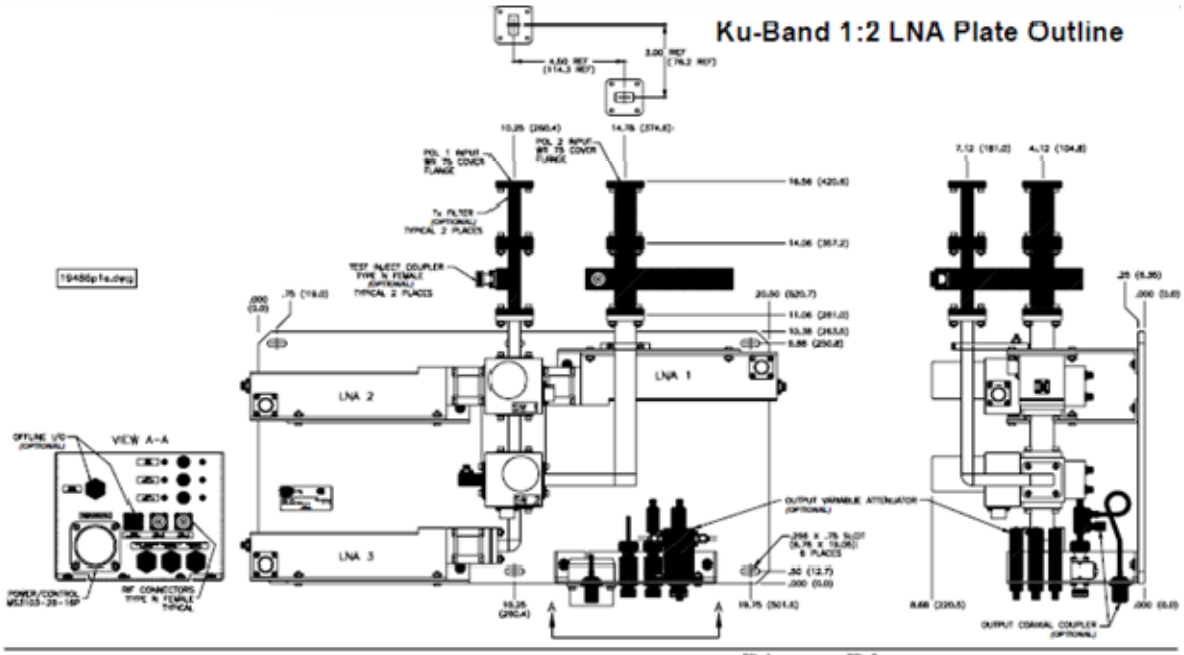




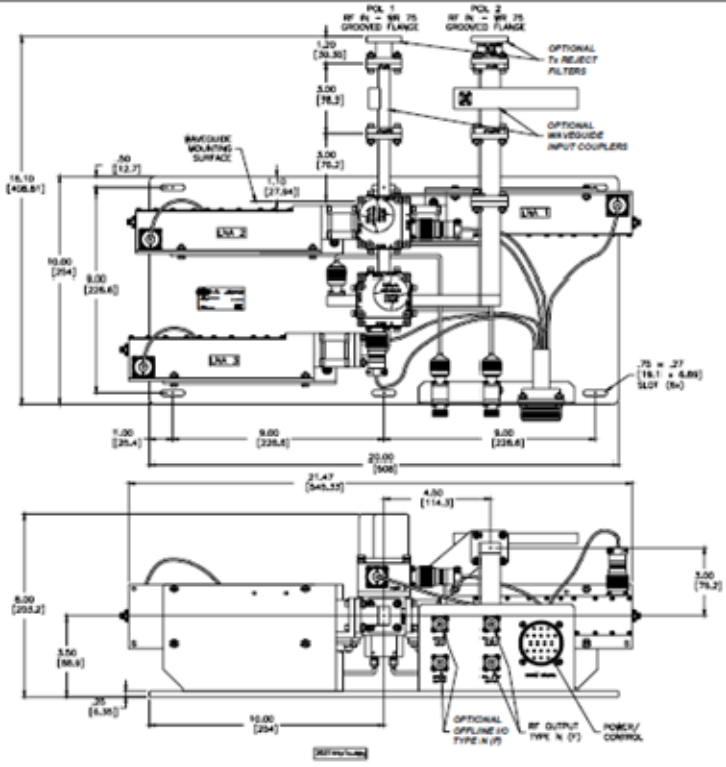
WORLD HQ: 1702L Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.
Tel: (408) 266-7404 FAX: (408) 266-4483
WEB: www.raditek.com E-mail: sales@raditek.com

Redundant 1:1 and 1:2 Ku Band LNA

Ku-Band 1:2 LNA Plate Outline



Ku-Band 1:2 Compatible LNA Plate Outline (XM Option)



WORLD HQ: 1702L Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.
Tel: (408) 266-7404 FAX: (408) 266-4483
WEB: www.raditek.com E-mail: sales@raditek.com

Redundant 1:1 and 1:2 Ku Band LNA

System level Equipment

Description	Quantity per system		NOTES
	1:1	1:2	
Antenna hub-mount plate assembly	1	1	1:1 system includes 1 ea. dual waveguide-coaxial protection switch. 1:2 system includes 2 ea. dual waveguide-coaxial protection switch.
RF2 Series Ku-band LNAs	2	3	Customer specified noise temperature and gain
Redundant control panel RCP-1100 (1:1) RCP-1200 (1:2)	 1 -	 - 1	
Interface control cable	1	1	100 ft. (30 m) standard Customer specified up to 1000 ft. (300 m)
Standard test data	1 lot	1 lot	Customer specified special testing available

System level performance

PARAMETER	SYSTEM PERFORMANCE*			WITH OPTION(S)
	1:1	1:2		
		Pol. 1	Pol. 2	
System Noise Temperature Contribution (above LNA noise temperature)	5 K	5 K	14 K	None
	15 K	15 K	25 K	Tx Filter
	7 K	7 K	17 K	Input Test Coupler
	18 K	18 K	28 K	Tx Filter & Input Test Coupler
System Noise Temperature v Ambient Temp. (approximate)	0.40 K/°C	0.40 K/°C	0.40 K/°C	Option-independent
System Gain v Ambient Temp. (approximate)	-0.04 dB/°C	-0.04 dB/°C	-0.04 dB/°C	Option-independent
System VSWR Input				
on-line RF thru-paths	1.3:1	1.3:1	1.3:1	
off-line & coaxial coupled input ports Output	1.5:1	1.5:1	1.5:1	
all RF output ports (except cpld. out)	1.25:1	1.25:1	1.25:1	

* System level performance based on use of Paradise Datacom RF2 Series Ku-Band low noise amplifiers (LNAs)
Specifications are subject to change.

WORLD HQ: 1702L Meridian Ave. Suite 127, San Jose, Ca 95125, U.S.A.
Tel: (408) 266-7404 FAX: (408) 266-4483
WEB: www.raditek.com E-mail: sales@raditek.com