

GPS Line Amplifier



The LA20RPDC GPS Line Amplifier from GPS Networking, Inc. is a one input, one output device with a 20dB min. gain block. The frequency response covers the GPS L1 & L2 bands with excellent flatness. In the normal configuration, the RF output (J1) passes DC from the connected GPS receiver through the amplifier to the antenna, allowing the GPS receiver to power both the antenna and the amplifier. All GPS Line Amplifiers are available with N-type, SMA, BNC or TNC connectors.



Options:

Network: This option gives you a amplifier that has its own power source. When you designate the Network option you do have to designate the source voltage. The antenna voltage range is 5 - 15VDC. The Source voltages available are 8-28VDC/110AC/220EuroAC/240UKAC.

Applications:

1. This product was designed specifically for long cable runs. With a 20dB Line Amplifier you can expect to drive 200 feet of RG213/U at the GPS frequencies.
2. Allows you to use less expensive, more readily available cable for your installations.
3. Allows your installation to have the GPS antenna at the best possible position with the best view of the constellation regardless of distance from the GPS receiver.
4. Can be used as a GPS power boost for GPS networks with multiple splits and/or re-radiating kits.

Electrical Specifications, $T_A = 25^\circ\text{C}$

Parameter	Conditions	Min	Typ	Max	Units
Frequency Range	Ant – J1	1.1		1.7	GHz
Input/Output Impedance ⁽¹⁾	Ant, J1		50		Ω
Gain	Ant – J1	20	24.5	26	dB
Input SWR	J1 - 50 Ω			1.8:1	-
Output SWR	Ant - 50 Ω			1.8:1	-
Noise Figure	Ant – J1		3.3	3.5	dB
Gain Flatness	L1 – L2 ; Ant – J1		0.5	1	dB
Reverse Isolation	J1 – Ant	35			dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$; Ant – J1			1	Ns
Required Dc Input Voltage	Non-Network Configuration, DC Input on J1			15	VDC
Current ⁽²⁾	Amplifier Current Draw, All ports - 50 Ω			15	mA

(1) Input/Output Impedance = 75 Ω for 75 Ω connector option.

(2) Current draw on J1 port in the non-networked configuration.

Mechanical

Dimensions	
Height	32,0 mm
Width	63,5 mm
Length (not including connectors)	82,5 mm
Length Base Plate	63,5 mm
Weight	286 g
Operating Temperature Range	- 40 $^\circ\text{C}$ to + 75 $^\circ\text{C}$