

## 2-Way GPS Antenna Splitter



The **LDCBS1X2 GPS Antenna Splitter** from GPS Networking, Inc. is a one input, two output device based on the Wilkinson splitter design. The frequency response covers the GPS L1 & L2 bands with excellent gain flatness. In the normal configuration, one of the splitter RF outputs (J1) passes DC from the connected GPS receiver through the splitter to the antenna. The other RF output (J2) is DC loaded with a 200Ω resistor to simulate the antenna current draw.



### Options:

**Network:** This option gives you a splitter that has its own power source & all output ports are DC-blocked. When you designate the Network option you must also designate the antenna voltage to be provided by the splitter power source as well as the source voltage. The antenna voltage range is 5 - 15VDC. The Source voltages available are 8-28VDC / 110AC / 220EuroAC / 240UKAC.

### Applications:

1. This is the perfect Zero Baseline Splitter. A Zero Baseline test is a test in which you connect two GPS receivers to the same antenna. You should display the same position with both receivers. If they are Survey receivers then you can run a survey on them and compute a baseline which should equal zero. The Zero Baseline test is the best GPS receiver integrity test available.
2. Eliminates the need to run two antenna cables from two antennas on the roof. You can just run one cable and split it, this makes your site installation easier and less expensive.
3. Any situation in which you want to compare different makes and models of GPS receivers.
4. Any situation in which you want to monitor the signal being provided by a specific GPS receiver.

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

Parameter	Conditions	Min	Typ	Max	Units
Frequency Range	Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω	1.1		1.7	GHz
Input/Output Impedance <sup>(1)</sup>	Ant, J1, J2		50		Ω
Input SWR	All ports - 50Ω			1.5:1	-
Output SWR	All ports - 50Ω			1.5:1	-
Insertion Loss	Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω	-5.0	-5.5	-6.0	dB
Gain Flatness	L1 – L2   ; Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω			0.5	dB
Amplitude Balance	J1 – J2   ; Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω			0.5	dB
Phase Balance	Phase (J1 – J2) ; Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω			1.0	deg
Isolation	J1 – J2, Ant - 50Ω	19		30	dB
Group delay Flatness	$\tau_{d,max} - \tau_{d,min}$ : Ant – J1, J2 - 50Ω ; Ant – J2, J1 - 50Ω			1	ns

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

## Mechanical

Dimensions	
Height	33,0 mm
Width (not including connectors)	63,5 mm
Length (not including connectors)	63,5 mm
Length Base Plate	82,5 mm
Weight	286 g
<b>Operating Temperature Range</b>	- 40°C to + 75°C