

# GPS RF Antenna Splitter

## 8224 Series

- Enables the ability to share an existing GPS antenna or GPS RF generator across several devices
- Eliminates the expense of additional cable runs for multiple GPS receivers
- Various configurations include block, pass, or generate DC; and some offer signal amplification

A GPS antenna splitter makes it possible to use a single GPS antenna and cable arrangement for multiple synchronization systems. Or, a splitter can enable a single GPS RF generator/simulator to simultaneously test multiple GPS devices. For example a 1:2 (1 input, 2 output) splitter eliminates the need for, and expense of, a second antenna and connected cable for installations with two devices with GPS receivers.

The antenna splitter can be used with any RF coax-based antenna and cabling system with type N connectors. These splitters operate across the GPS L1/L2 carrier frequencies and are compatible with other GNSS signals operating in these bands.

### GPS Synchronization with Spectracom Equipment

Normally, one output of a splitter is set for DC pass-through to power the antenna from the Spectracom equipment to which it is connected. The other output leg is DC-blocked and has a 200 ohm DC load to ground, simulating a GPS pre-amp current draw. Splitters that are DC-blocked on all outputs require an external power supply to provide the 5VDC required to power the antenna. All DC-blocked versions have a connector for an external DC source. A compatible wall transformer can be supplied for 110, 220, or 240VAC with USA, UK or EU plug type. When external power is available, the splitter can also act as a signal amplifier.

### GPS Testing by RF Generation/Simulation

Splitters that block DC power from all connected devices are compatible with Spectracom GSG series GPS simulators for testing multiple receivers simultaneously.



Sample 1:2 splitter shown.  
Actual physical characteristics may vary.

### Typical Specifications\*

**Frequency:** 1.1 to 1.7 GHz  
**RF Connectors:** Type N female (50 ohm)  
**Temperature:** -30 to 60°C (-22 to 140°F)  
**Isolation:** 10 to 25 dB (splitter configuration dependent, high isolation options are available)

Inputs:Outputs	1:2	1:2	1:4	1:4	1:8	1:8
<b>Typ Insertion Loss/Gain<sup>1</sup></b>	-5.5 dB	22 dB	-8.5 dB	18 dB	-10.5 dB	4.5 dB
<b>Max Footprint</b> (not including connectors) <sup>2</sup>						
<b>Length</b>	3.25" / 82.5 mm		3.94" / 100 mm		7.09" / 180 mm	
<b>Width</b>	2.5" / 63 mm				3.35" / 85 mm	
<b>Height</b>	1.3" / 32 mm					
<b>Max Weight</b>	10 oz / 286 g		11.8 oz / 340 g		16.2 oz / 459 g	

<sup>1</sup> Gain via internal amplifier requires power source.

<sup>2</sup> Contact factory if dimensions are critical to your installation.

### Ordering Information

#### Model

8224-ABCDE

A	B	C	D	E
<b>Number of Outputs</b>	<b>DC-blocked Outputs</b>	<b>Amplifier</b>	<b>5VDC on Input</b>	<b>External Power</b>
2	1=DC-pass one output	1=Yes	5=Yes	0=None
4	0=DC-block all	0=No	0=No	1=9.32VDC customer supplied
8				2=110 VAC with USA plug
				3=220 VAC with EU plug
				4=240 VAC with UK plug

\*As our source of supply may change, these specifications are considered typical and subject to change without notice. If you have a specific requirement, contact us so we can be sure to supply you a splitter with the exact specifications needed for your application.