



GPS Active Splitter

KEY FEATURES

- Multiple Ports
- High Isolation
- Waterproof
- Base Station Applications

INTRODUCTION

Symmetricom's Active Splitter allows multiple GPS receivers to share a single antenna. Designed for both manufacturing and position/timing redundancy applications, the GPS L1 Active Splitter provides dependable signals for two GPS receivers.

With built-in amplification to overcome splitter losses, the Active Splitter can be conveniently cascaded without adding separate amplifiers and bias-tees between splitters.

HIGH ISOLATION ELIMINATES RECEIVER INTERACTIONS

The Symmetricom GPS Active Splitter has the essential port-to-port isolation required to eliminate interaction between multiple GPS receivers. Without such isolation, local oscillator (LO) leakage from one GPS receiver can prevent other receivers from acquiring time and position signals and maintaining lock. In wireless base station applications, poor isolation can disable cell sites. In GPS

manufacturing tests, poor isolation causes repeatability problems which can reduce yields and cause false rework.

The Symmetricom Active Splitter has a minimum of 40 dB isolation at common GPS L0 frequencies between the output ports. Extensive field testing by GPS and cellular base station manufacturers has demonstrated suitability for use and the long-term dependability of the Symmetricom GPS L1 Active Splitter.

CONVENIENT DC POWER SIMPLIFIES YOUR INSTALLATION

Power is conveniently obtained from the GPS receiver(s) connected to the amplifier. This eliminates the need for a separate dc power supply and wiring. DC power applied to the splitter is also passed on for use by an active antenna, further simplifying your installation. The splitter 150-711 (2 outputs), obtains power from a GPS receiver connected to any port.



The Symmetricom GPS Active Splitter

GPS Active Splitter Specifications

OUTPUT PORTS

- Number of ports: 2

ELECTRICAL SPECIFICATIONS

- Input/output impedance: 50 Ω
- VSWR (typical)
 - Input: 1.2
 - Output: 1.6
- Bandwidth (-3 dB): L1 (1575.42 MHz) \pm 20 MHz
- Gain (antenna input to any output at L1): 3dB \pm 3dB
- Noise figure: 5dB typical
- Port-to-port isolation (L1 +/-40 MHz): 54dB typical
- AC input level: -25dBm max.
- Damage threshold: +17dBm
- DC power (Operating voltage): +4.5 to +13 V* dc
 - *Caution: Operating voltage is passed through to the antenna. The 58532A Antenna operates on +5 Vdc nominal. Applying more than +5 Vdc may damage the 58532A.
- Damage threshold: 18 V dc either polarity
- Operating current: 23 to 48 mA depending on voltage
- Passthrough current: 450 mA
- Group delay: 40 ns typical

PHYSICAL SPECIFICATIONS

- RF connectors: Female N-type
- DC power connector: Female SMC
- Dimensions (including RF connectors): 95 mm W x 130 mm L x 35 mm H (3.75 in. x 5.12 in. x 1.38 in.)
- Weight: 0.5 kg
- RF connectors: N-Type
- Dimensions: 185 mm W x 64 mm L x 34.5 mm H (7.3 in. x 2.5 in. x 1.4 in.)
- Operating temperature: -35°C to +75°C

ORDERING INFORMATION

- (Contact Symmetricom for pricing and availability)
- 150-711 GPS L1 1:2 Active Splitter

PRODUCT INCLUDES

- 1:2 GPS Active Splitter, x2 TNC (f) to N (m) adapter, x1 BNC (f) to N (m) adapter, and x2 3' adapter cable with TNC to BNC terminations



GPS 1:2 Splitter Kit



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