

## Fiber Optic GPS/GLONASS Antenna Splitter Model FOA-160

### Features:

- **16 way Optical GPS/GLONASS Antenna Distributor**
- **Dual Redundant Power Supplies**
- **Alarm Output**
- **Run secure GNSS antenna feeds within buildings up to 2000m**



The Brandywine Communications Model FOA-160 is a specialized distribution amplifier system used to distribute GPS or GLONASS signals over fiber optic cable to up to 16 receivers. The Model FOA-160 head-end unit connects to a standard GPS antenna/preamplifier, which receives the GPS/GLONASS signals, transmitted from the satellites. The FOA-160 converts the received signal to an optical intensity modulated signal, and routes it through a passive optical splitter to 16 outputs. These signals are available at the rear panel for distribution throughout a building or campus over single mode fiber optic cable. The low loss characteristics of fiber optic cable overcome the traditional distance limitations encountered with direct electrical distribution of low power GPS/GLONASS signals. A companion optical receiver module, installed at the other end of the optical cable, converts the optical signal back to the electrical domain and provides a RF output format for use by a standard GPS or GLONASS receiver. The 16 output ports of the head-end unit support a flexible point-to-multipoint distribution architecture.

The Model FOA-160 contains redundant power supplies, which may be either AC or 24/48VDC or a combination of both. The FOA-160 includes an RS232 interface for remote control monitoring, as well as alarm contact closure. The FOA-160 Receiver Module is a small wall or shelf mounted module that requires only 15VDC for operation. Optional rack mounting packaging is available.

## FOA-160 Specifications

### Head-End Specifications

#### Inputs

#### Antenna Input:

Connector	BNC
Preamplifier	5V 100mA center conductor
Power	1000MHz to 3000MHz
Frequency Range	1000MHz to 3000MHz
Small Signal Gain	0.0 ±dB
VSWR (max)	2:1
Burnout Protection	1.0W, CW in-band

#### Control and Alarm Functions

Control Interface	RS-232C 19200, N, 8, 1
Control Functions	Transmitter status
Alarm Interface	Dry contact relay closure form C
Alarm Type	Critical Alarm, Alarm
Alarm Functions	Transmitter Power (Critical) Loss of Redundant Power (Minor)
Display	Power LED Fault LED

#### Optical Outputs

No of Outputs	16
Operating Wavelength	1319nm ±5nm
Optical Power	-13.0dBm (min.)
Optical Reflections	<-55dB
Laser Type	Distributed feedback
Connector Type	FC/APC

#### Physical

Size	19" rack-mount 1U high (1.75") 9" deep
Weight	5 lbs nominal

### Receiver Specifications

#### Inputs

Optical Input:	-15 dbm
Operating wavelength:	1310nm ±25nm
Optical Power	+3.0dBm, max
Optical Fault Threshold	-18 dBm factory set
Connector Type	FC/APC

#### Receiver Control and Alarm Functions

Control Interface	RS-232C 19200, N, 8, 1
Control Functions	Set Attenuator Set Alarm Threshold
Alarm Interface	Open Collector
Alarm Functions	Received power

#### RF Outputs

No of Outputs	1
Connector Type	SMA

#### Physical

Size	3.7" x 3.0" x 1.26"
Weight	8 oz nominal

#### Environmental Conditions

##### Temperature

Operating	-20°C to +50°C
Storage	-55°C to +85°C

Humidity	Up to 85% RH (non-condensing)
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#### Power

No of Power Supplies	2 Hot Swappable
AC Power	85-264VAC (50/60Hz) 10W Max IEC320 connector Fuse 0.2A 250V UL60950
DC Power	18-36 to 36-72VDC
Altitude	30,000 ft
Vibration	MIL-STD-167-1
Shock	20g/15ms per MIL-STD-810F
EMC	FCC Part 15

### Ordering Information

FOA-160 Head-End (Includes GPS Antenna, 50' lead-in cable)	P/N 032000001
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Must specify up to two power supply modules at the time of ordering

85-264VAC	P/N 002-0224
18-36VDC	P/N 002-0225
36-72VDC	P/N 002-0226
Blank Panel	P/N 003001051
FOA-160 Receiver	P/N 032000002