Mid Power 2.4 GHz 802.11b and 802.11g (b/g) Compatible Indoor Bi-Directional WiFi Amplifiers with Active Power Control

GXI Series with Built-In Current Injector

Features :

- 802.1.1.g (b/g) model support 108Mbit/sec "Turbo Mode" data rate.
- Compatible to IEEE.802.1.1g (b/g) and 802.1.1 b only.
- Avaiable in several Models with Output Power 100mWatt to 2Watt.
- Receive Bandpass Filter with Streaming Media Ready.
- Transmit and Receive LEDs with Durable UV-Stable Finish.
- Aluminum Casing with N-Female Connector.
- 12Volt DC Power Supply.

BDS Series with separated Current Injector

Amplifier GXI-BDS series are compatible with 802.1.1g (b/g) and 802.1.1b only (see below table); The 802.1.1g (b/g) model support 108Mbit/sec " Turbo Mode" radios. Its active Power Control circuit automatically adjusts the amplifier's gain to provide a constant output power.

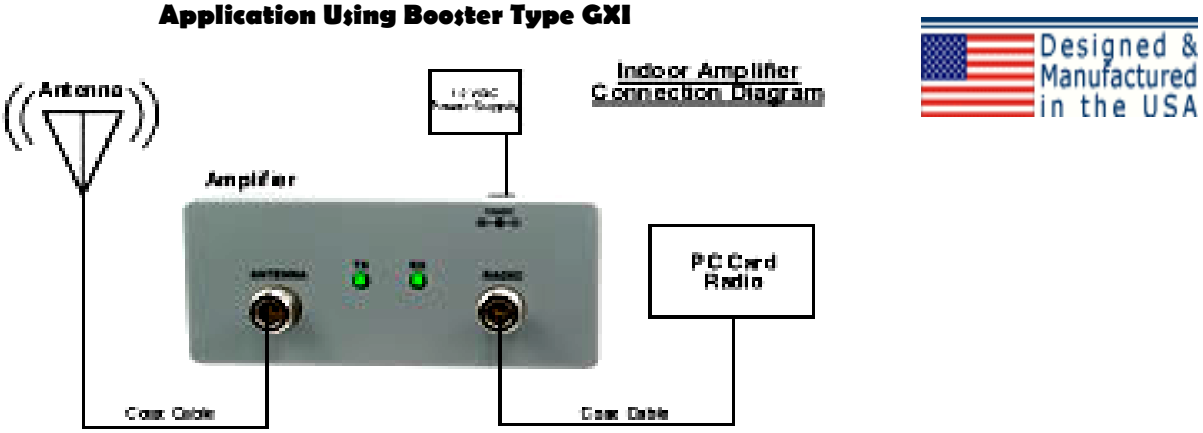
Amplifier GXI-BDS Series improves range by delivering full transmit power and receive gain directly at the antenna where it is most effective. This gain compensates for cable losses and actually increases the receive sensitivity of most wireless LAN radio. The unit can be configured to deliver the full transmit power as little as 1mWatt of input power.

GXI and BDS series feature rugged cast aluminum housings with integral mounting tabs which allow multiple amplifier to be positioned next to each other with minimum wasted space. This indoor series include a Power Supply rated at 100-240Volt AC @50/60Hz.

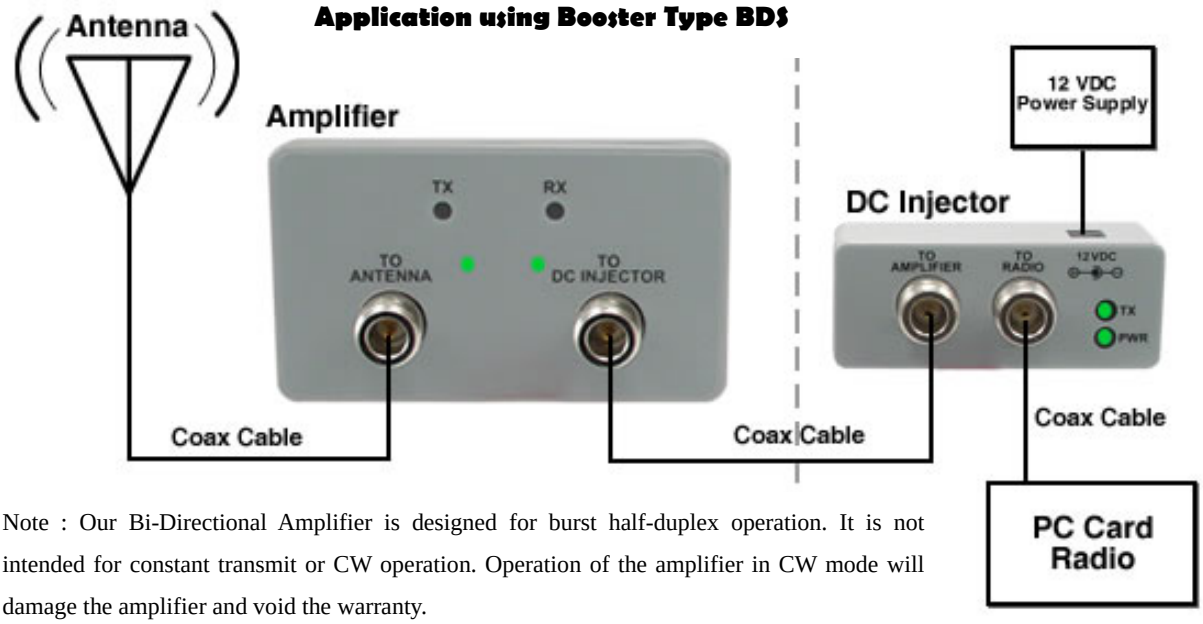
Indoor Models	Max Output Power	Receive Gain	802.1.1b	802.1.1g	Streaming Media	Dimension & Weight
PW-BDS-010-NF	100mWatt	15dB norm.	Yes	Yes	-	117x64x33mm 0.3Kg
PW-BDS-025-NF	250mWatt		Yes	Yes	-	
PW-BDS-050-NF	500mWatt		Yes	Yes	-	
PW-BDS-103-NF	1 Watt		Yes	-	Yes	
PW-BDS-203-NF	2 Watt		Yes	-	Yes	
PW-2401-GXI	1Watt	20dB norm.	Yes	Yes	Yes	150x64x33mm 0.44Kg
PW-2402-GXI	2Watt		Yes	Yes	Yes	
PW-2403-GXI	3Watt		Yes	Yes	Yes	183x98x38mm 0.74Kg
PW-2404-GTI-NF	4Watt		Yes	Yes	Yes	
PW-2405-GTI-NF	5Watt		Yes	Yes	Yes	

Most WiFi Amplifier cannot pass Streaming Media content for extended period of time without overheating because component used in Streaming video system work harder than ones carrying data only. Some Amplifier were designed for Data used only and have no method of heat-sink. Our "Streaming Media Ready" amplifier at early stage were designed to survive the extreme conditions that streaming media imposes. This amplifier will remain at safe operating temperature by using a proprietary Heat-sink and Biasing Techniques.

Application Using Booster Type GXI



Application using Booster Type BDS



Note : Our Bi-Directional Amplifier is designed for burst half-duplex operation. It is not intended for constant transmit or CW operation. Operation of the amplifier in CW mode will damage the amplifier and void the warranty.

General Specification :

Frequency	2400-2500Mhz
Max Input Power	100mWatt (20dBm)
Operating Mode	Bi-Directional, Half-duplex Time Division Duplex. Senses RF Carrier from transmitter and automatically switches from receive to transmit mode.
Water Resistant	IEC 60529 IPX7 (Outdoor Version)
Operating Temperature	-40^0C to 50^0C
Current Draw	1.25Amp Peak Tx and 0.14Amp Peak Rx
Supply Voltage	12Volt DC+/- 1Volt

Additional Technical Information :

- Minimum Input Power 5mW with Maximum Input Power 10mW.
- Our Amplifier produce full output power with +2dBm (5mW) of input power. This means :
  1Watt amplifier will produce 1Watt power output from +2dBm input power, and
  2Watt amplifier will produce 2Watt power output from +2dBm input power, etc.
- Delay from Tx -> Rx and Rx-> Tx is less 2usec.
- Maximum Receive Input has 2 Limitation :
  a. If input more than +10dBm into Antenna Port of Amplifier (you run the Risk of damaging LNA)
  b. If input more than -30dBm into Antenna Port of Amplifier (the Amplifier could oscillate between Tx and Rx modes)
- Our Amplfier don't provide bypass Switch which allow Signal WiFi pss the Amplifier (if any electrical supply was interrupted) as we don't find it necessary.
- It is not recommended to cascade Amplifier but it might work with certain radios – We need to guarantee not to exceed 100mW into Radio input of any Amplifier.
- AGC (Automatic Gain Control) Circuit will work over a 15-20dB range. If higher input power is required, changes need to be done during manufacturing process.
- Below is link to a Calculator/Formula which can be used to Calculate Coverage Radius Formula : http://www.afar.net/rf-link-budget-calculator/