

PCIBus WideBand Amplifier

MODEL 3322

- Single-width PCI card
- Wideband range to 20 MHz
- Low distortion
- High amplitude to 40Vp-p (into high impedance)
- Custom Configuration of:
 - Gain
 - Input Impedance
 - Output Impedance
 - Output Polarity
 - Signal Ground

Model 3322 is a 3U single-slot, PCI-based power amplifier designed for signal amplification. Offering unmatched signal purity, Model 3322 amplifies signals from dc to over 20 MHz. The unit has a fixed gain of x10, however, the same amplifier is available with custom gain, with no signal purity or performance degradation.

Solves common problems

A common problem with PCI equipment is the inability to produce high voltages resulting from low power supply rails. For example, waveform generators or similar signal source devices draw power from 12V rails. Consequently, they cannot produce signals above 16Vp-p. Model 3322 solves this problem by using dc/dc converters to increase rail voltages which, along with custom components and unique design, enable amplification of input signals to 40Vp-p into high impedance, or 20Vp-p into 50W.

Allows full current rating to other devices

The power amplifier draws current only from the +5V rail, leaving the other power supply rails free to supply their full current rating to other devices.

Ground level

Model 3322 can be supplied with input and output connectors that are isolated from case ground allowing the amplifier to float from case ground level up to 250Vdc. The only limitation is that the both the input and output grounds must connect to the same ground level. This capability is extremely important in applications where the amplifying device must reside on the same ground level as its source. The floating capability can be added or removed using a simple, user-accessible jumper connection.

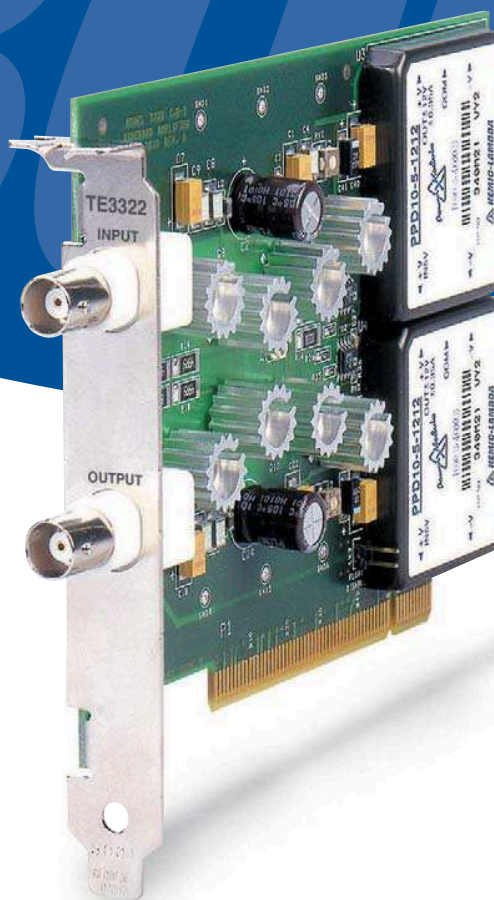
Target applications

Although the Model 3322 wideband amplifier occupies a single PCI slot, its performance is unique and outstanding by any standards. With 40Vp-p and over 20 MHz bandwidth one can use Model 3322 for virtually any application. A common application is in the automotive industry where signals need to be in the 12V to 28V range.

Another application would be in the aviation industry where even higher levels are required to route signals throughout the aircraft body.

Cost effective solution

Priced around \$1000 Model 3322 is a cost-effective, versatile power amplifier that opens the door to numerous applications, specifically implemented with PCI equipment.



Specification PCIBus WideBand Amplifier

Model 3322



INPUT CHARACTERISTICS

Connector: BNC
Impedance: 50Ω or 1MΩ, DC coupled
Damage Level: 50Ω, ±2V; 1MΩ, ±5V
Frequency Range: DC to 20MHz

OUTPUT CHARACTERISTICS

Specification is given for the standard configuration only

GENERAL

Connector: BNC
Impedance: 50Ω, 75Ω or 600Ω, DC coupled
Protection: Short-circuit, 10 seconds
Gain: x10, fixed (can be ordered from factory with different gain setting)
Polarity: Output normal, or inverted
Amplitude: 0 to 20Vp-p into matching impedance (50Ω, 75Ω, or 600Ω);
 0 to 40Vp-p into high impedance

SQUARE WAVE CHARACTERISTICS

Transition Time: <20ns
Aberrations: <7%

SINE WAVE CHARACTERISTICS

Bandwidth: -3dB
 Small Signal 50MHz, at 2Vp-p
 Large Signal 20MHz, at 20Vp-p
Gain Accuracy: ±(2% of full-scale amplitude range +25mV), 1KHz
Flatness (10Vp-p): 5% of amplitude to 1MHz;
 10% of amplitude to 20MHz
THD: 0.1%, 10Hz to 100KHz
Harmonics: <-50dBc, 100KHz to 5MHz;
 <-40dBc, 5MHz to 20MHz (10Vp-p)

ENVIRONMENTAL

Operating Temperature: 0°C - 50°C,
Humidity: RH 80% (non-condensing)
Storage Temperature: -30°C - 80°C

GENERAL

Physical Size: Single-slot, 3U high PCI module
Power Requirements: 7.2W maximum
Current Consumption: +5V, 3.5A maximum.
Signal Ground: Floated to the same level as the source, 250V dc+ Peak ac maximum
EMC Certification: CE marked
Reliability: MTBF per MIL-HDBK- 217E, 25°C, Ground Benign
Safety: Designed to meet IEC EN61010-1, UL 3111-1
Workmanship Standard: Conform to IPC-A-610D
Warranty: 3 years standaard.

ORDERING INFORMATION

MODEL 3322-50-50-10-I-G ⁽¹⁾

PCIBus WideBand Amplifier

Input Impedance:	50 = 50Ω 1M = 1MΩ ⁽³⁾
Output Impedance:	50 = 50Ω 75 = 75Ω 600 = 600Ω
Gain:	1 through 10 , fixed ⁽²⁾
Output Polarity:	I = Inverted N = Normal
Signal Ground:	G = Tied to Ground F = Floated Ground

⁽¹⁾ Standard configuration. Custom configuration may change amplifier characteristics, and may affect minimum quantity, price and delivery time. please contact the factory for a quotation before placing an order for any configuration other than standard.

⁽²⁾ Custom gain above x10 is available for special requirements.

⁽³⁾ 1MΩ is option available with none inverting (N) output polarity only.



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