



For 90IP Instrumentation Platform

Dual Channel Programmable
Amplifier Slot Card

Description:

For use in the 90IP Instrumentation Platform, each 90PGA slot card provides design engineers with two channels of precision, low noise and distortion programmable amplifiers with up to 60 dB of adjustable gain in 0.50 dB steps over a 1 MHz bandwidth.

Front panel mounted BNC's offer easy access for connection of signal input and output. Other features include differential or single-ended input, AC or DC-coupled input, single ended output, LED clipping indicators and fine adjustment of DC offset.

Features:

- Selectable single-ended or differential input, AC or DC coupled.
- Gain/phase matched channels
- LED clipping indicators
- Memory storage for up to 9 set-ups/channel
- Input noise 12 nV/ $\sqrt{\text{Hz}}$ typ.
- Programmable gain, 60 dB in 0.5 dB steps
- Input protection to 150 Volts P-P
- Outputs able to drive full range into 50 Ω .
- Hard front panel with remote GPIB and RS232 interfaces provided.



Applications:

- Sound Measurement
- Noise Testing
- Audio Communications
- Medical Research
- Industrial Process Control
- Seismic Analysis
- Vibration Analysis

Providing Real World analog and DSP solutions for the following industries:

Health
Space
Defense
Science
Engineering
Technology



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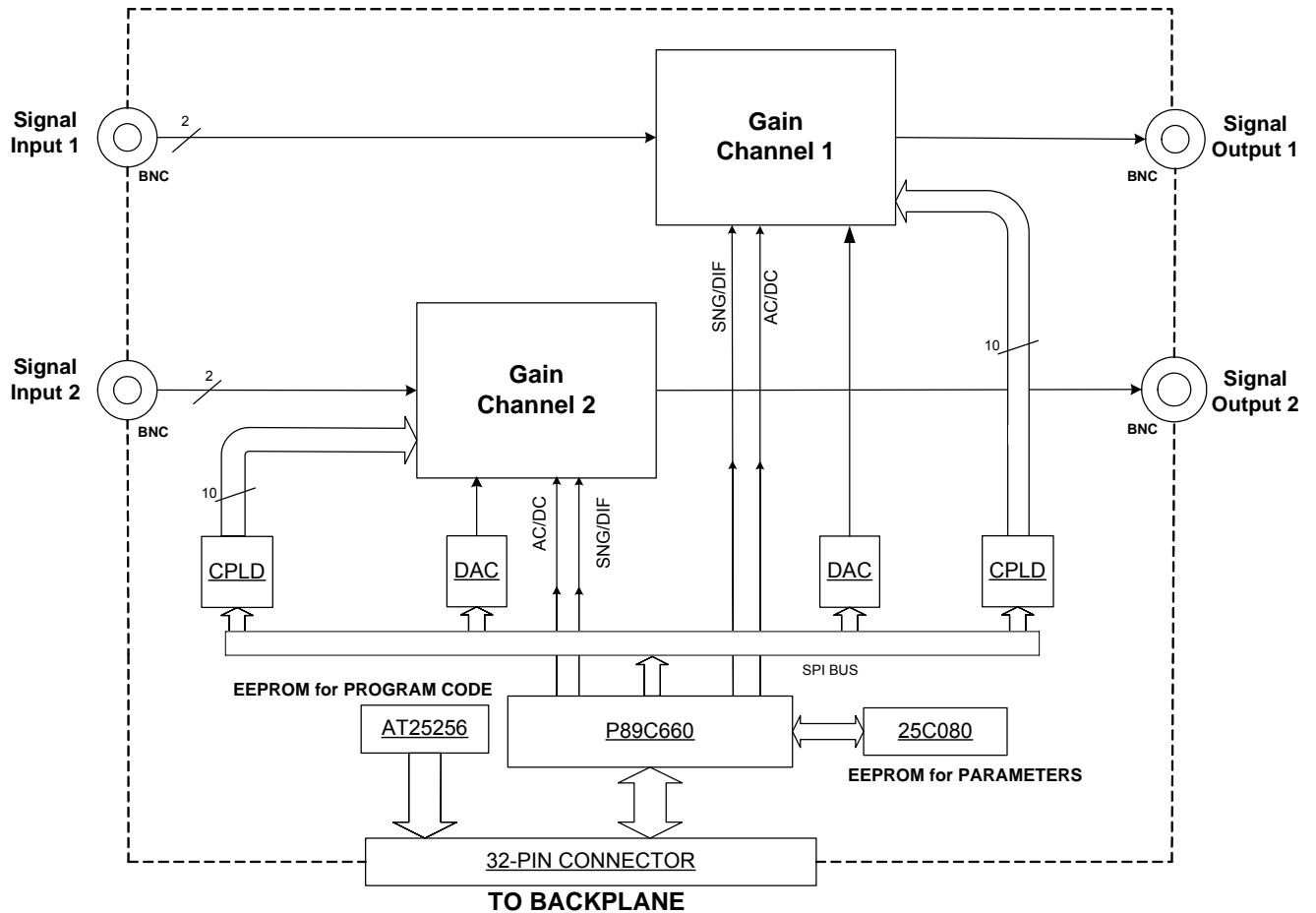


Figure 1 – Signal Path Block Diagram



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Specification @ 25°C

Input Characteristics:

Input Impedance:	
Differential	2 MΩ shunted by 47pF
Single Ended	1 MΩ shunted by 47pF
Coupling	AC or DC
Maximum Input Signal	±10V pk @0 dB
Input Voltage:	
Linear Differential	20Vp-p (Gain Set at 0 dB)
Max. Safe Differential	Any Continuous value between ±40V
Bias Current	1 nA typ., 2 nA max.
Common Mode Rejection Ratio with 2kΩ source unbalance and 0 dB gain	>60 dB, dc to 50kHz

Output Characteristics:

Full Power Bandwidth	dc to 1.0 MHz
Small Signal Bandwidth (1V pk-pk)	1.0 MHz @ -6dB
Related Output	10V p-p for R _L = 50Ω 20V p-p for R _L = 2kΩ
Output Protection	Short circuit to Ground
Output Impedance	50Ω
Offset Voltage (Range ±100mV dc)	Adjustable to zero in 1 mV steps.

Gain Settings:

Gain Settings:	0 to 60 dB in 0.5 dB steps
Tolerance	±0.05 dB
Signal Bandwidth	-6.0dB@1.0 MHz@ +60 dB
Amplitude Match	±0.1 dB @ DC
Gain Accuracy@ DC	±0.1 dB

Amplifier Characteristics:

Distortion @ 1 kHz	<-100 dB typ. @ 3.0 Vrms
Noise Density	12 nV/√Hz typ. 14 nV/√Hz max.

General:

Cross Talk between Channels	<-100 dB @ 1 kHz
Operating Temperature	0°C to 50°C
Offset Temperature Coeff.	10μV/°C RTI
Humidity	0 to 95%, non-condensing
Slot Card Dimensions	100 x 220 mm (3U)
Weight	0.60 Lbs., (0.3 Kg.)

Ordering Information

90PGA

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