

# LamaPLC: CJMCU-8221 Analog Devices Precision instrumentation amplifier module

The CJMCU-8221 is a high-performance, gain-programmable precision instrumentation amplifier module based on the AD8221AR chip by Analog Devices. It is specifically designed to amplify small signals in noisy environments with high accuracy.

## Key Technical Specifications

Core Chip: Analog Devices AD8221. Programmable Gain: Set via a single external resistor from 1 to 1000. Supply Voltage: Supports single or dual supplies ranging from  $\pm 2.3$  V to  $\pm 18$  V. High CMRR: Minimum Common-Mode Rejection Ratio (CMRR) of 80 dB to 90 dB (at G=1), allowing it to reject wideband interference and line harmonics. Low Noise: Input voltage noise of approximately 8 nV/ $\sqrt{\text{Hz}}$  at 1 kHz. Form Factor: Compact MSOP package on a breakout board for easy prototyping.

## Gain Calculation

The gain (G) of the module is determined by the external resistor (RG) connected across the RG pins. Use the following formula:

Target Gain	Resistor (RG)
1	Open (No resistor)
10	
100	
1000	

[CJMCU-8221](#), [AD8221AR](#), [Analog Devices](#), [amplifier](#), [sensor](#)

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Last update: **2026/02/12 18:55**

