

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 $\pm 2.3\text{ V}$ to $\pm 18\text{ V}$. 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 (R_G) connected across the R_G pins. Use the following formula:

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

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

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