

NJU9103 - Analog Front End with High Gain PGA

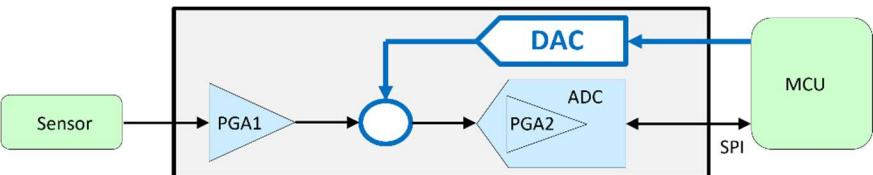
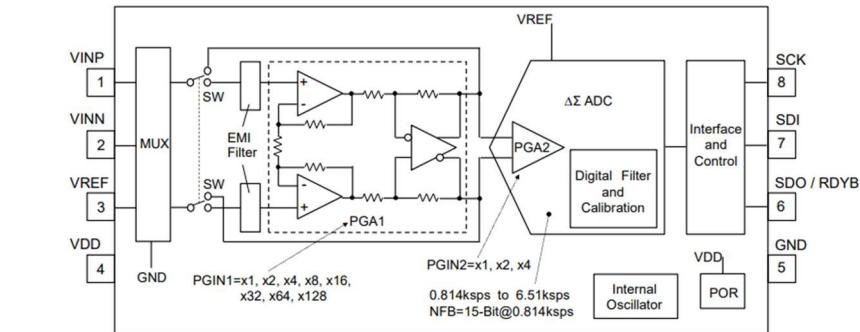
Product Highlights

NJU 9103 is a member of New Japan Radio's Analog Front End Lineup and incorporates a wealth of integrated features optimized to build all kind of fast, precise, and compact sensors.

It is a small size AFE with an up to 512 times internal PGA (Programmable Gain Amplifier). The integrated 16-bit $\Delta\Sigma$ type A/D converter performs

conversions with a speed ranging from 0.814ksps to 6.51ksps. Customers can choose between an internal A/D converter's input, a single-ended input, a differential input, or a pseudo-differential input.

NJU9103 can be programmed to apply the optimum gain suitable for the sensor used in the application, while at the same time compensating sensor offsets by the usage of an integrated D/A converter.



A MCU connected via SPI communication can set various parameters and presets such as gain, conversion speed and offset correction / compensation. NJU9103 will contribute to system cost reduction, smaller PCB area and a shorter design time.

NJU9103 comes in an 8pin DFN or SSOP package with a minimum size of 2.3 x 2.3 mm which enables the AFE to be mounted as close as possible to the sensor itself, maintaining a distance from the MCU with all its noise.

Technical Features:

Operating Voltage Range	2.7 to 3.6V	Datasheet:
Ambient Operating Temperature	-40°C to +125°C	
ADC Resolution	16bit no missing codes	
Data Rate	0.814k to 6.51ksps	
Input Modes	Differential Single-ended Pseudo-differential	
PGA Gain	x1 to x512	
Conversion Mode	Single – or Continuous conversion	
Interface	SPI	
Package	DFN8 (ESON8-V1) / 2.3mm x 2.3mm SSOP8 / 3.5mm x 6.4mm	

