



UNIVERSAL GPS RECEIVER

RF to Bits® architecture enables fully programmable GNSS receiver for worldwide GPS systems

The MAX2769B is a next-generation GNSS receiver that supports GPS, Galileo, GLONASS, and Compass navigation satellite systems on a single chip. This single-conversion GNSS receiver is designed to push performance and integration to new levels in automotive navigation systems.

It integrates a complete receiver chain, including a dual-input LNA and mixer, followed by an image-reject filter, PGA, VCO, fractional-N frequency synthesizer, crystal oscillator, and multibit ADC. The total cascaded noise figure of this receiver is as low as 1.4dB.

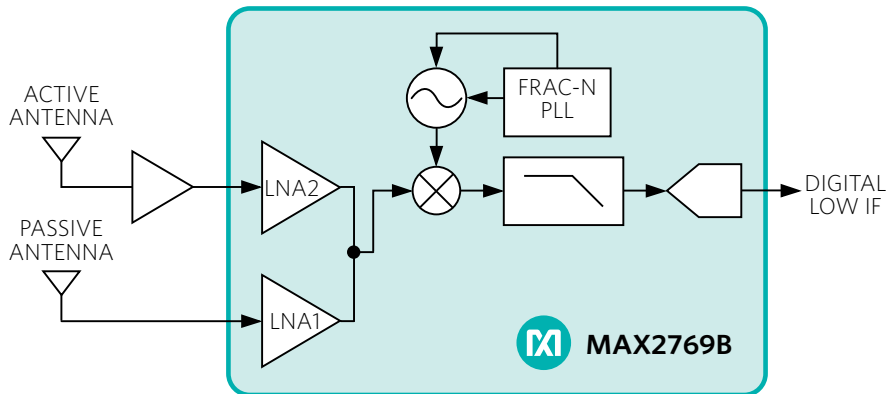
Maxim's innovative RF to Bits architecture makes this the most flexible receiver on the market. The integrated delta-sigma, fractional-N frequency synthesizer allows programming of the IF frequency with $\pm 30\text{Hz}$ accuracy while operating with any reference or crystal frequency available in the host system. The integrated ADC outputs 1 or 2 quantized bits for both I and Q channels, or up to 3 quantized bits for the I channel. I and Q analog outputs are also available.

The MAX2769B completely eliminates the need for external IF filters by implementing on-chip monolithic filters. Only a few external components are required to form a complete low-cost GPS RF receiver solution.

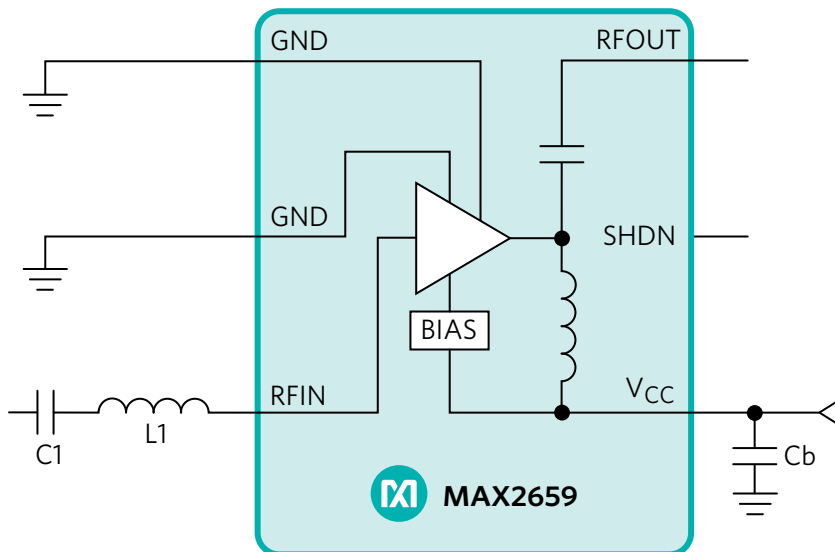
Key Features & Benefits

- RF to Bits architecture gives you the flexibility to support worldwide GPS systems using a single hardware platform
- Highly integrated receiver eliminates external ADC and IF filters to save space and cost
- Achieves low 1.4dB noise figure without an external LNA for efficient satellite syncing
- Noise figure falls to 0.8dB when paired with the MAX2659 GPS LNA

Complete GPS, GLONASS, Compass, and Galileo Front-End



Pair the MAX2769B with the MAX2659 GPS LNA for an Ultra-Low 0.8dB Noise Figure



Key Features

- High 20.5dB gain
- Ultra-low 0.8dB noise figure
- 4.1mA supply current
- 1.6V to 3.3V supply voltage
- Integrated 50Ω output-matching circuit
- Ultra-small, ROHS-compliant 1.5mm x 1.0mm, 6-pin μ DFN package

INPUT MATCH L1 = 6.8nH
 INPUT DC BLOCK C1 = 470pF
 SUPPLY BYPASS Cb = 33nF

www.maximintegrated.com/MAX2769B