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## Industry's Lowest Power Zero-Drift Op Amp Consumes only 1.3 $\mu$ A

MILPITAS, CA & NORWOOD, MA – July 10, 2017 – Analog Devices, Inc., which recently acquired Linear Technology Corporation, announces the [LTC2063](#) zero-drift op amp which draws just 1.3 $\mu$ A typ (2 $\mu$ A max) on a 1.8V supply. This micropower amplifier maintains uncompromised precision: maximum input offset voltage is 5 $\mu$ V at 25°C, maximum drift is 0.06 $\mu$ V/°C from –40°C to 125°C. Maximum input bias current is 15pA at 25°C, and 100pA from –40°C to 125°C. These high precision input characteristics allow the use of large value feedback network resistors, keeping power consumption low without compromising accuracy, even at elevated temperature.

Rail-to-rail inputs and outputs simplify single supply use and enhance dynamic range. An integrated EMI filter provides 114dB electromagnetic interference rejection at 1.8GHz. With low 1/f noise inherent to its zero-drift architecture the LTC2063 is well suited for amplifying and conditioning low frequency sensor signals in high temperature industrial and automotive systems as well as portable and wireless sensor network applications.

The LTC2063 is available in SOT-23 and SC70 packages. The SC70 version includes a shutdown mode which reduces current consumption to just 90nA when the amplifier is not in use. This enables ultralow power duty cycled sensor applications. For example, a precision low duty cycle oxygen sensor circuit shown in the data sheet consumes less than 200nA average current.

“The LTC2063 enables a whole new class of precision measurement solutions which can be placed anywhere,” stated Ross Yu, Dust Networks<sup>®</sup> marketing manager. “Its ultralow power and high precision are a perfect companion for Dust Networks’ SmartMesh<sup>®</sup> wireless sensor networks, expanding the reach of precision measurements to places previously not practical.”

An example is the [DC2369A wireless current sense reference board](#) which uses the LTC2063 and LTP<sup>™</sup>5901-IPM SmartMesh IP<sup>™</sup> module and other micropower components to create an isolated floating current sense measurement platform which operates for years on small batteries.

The LTC2063 operates on supply voltages from 1.7V to 5.25V and is fully specified from  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$ . Pricing starts at \$1.50 each in 1,000-piece quantities. For more information, visit [www.linear.com/product/LTC2063](http://www.linear.com/product/LTC2063).

**Photo Caption:** Micropower Zero-Drift Op Amp Achieves 5µV Max  $V_{OS}$  at 2µA Max  $I_S$

### Summary of Features: LTC2063


- Low Supply Current: 2µA Maximum
- Offset Voltage: 5µV Maximum
- Offset Voltage Drift: 0.02µV/ $^{\circ}\text{C}$  Maximum
- Input Bias Current: 3pA Typical, 30pA Maximum  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ , 100pA Maximum  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$
- Integrated EMI Filter (114dB Rejection at 1.8GHz)
- Shutdown Current: 90nA Typical, 170nA Maximum
- Rail-to-Rail Input and Output
- 1.7V to 5.25V Operating Supply Range
- $A_{VOL}$ : 140dB Typical
- Low Charge Power-Up for Duty Cycled Applications
- Specified Temperature Ranges:
  - $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$
  - $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$
- 6-Lead SC70, 5-Lead TSOT-23 Packages

Pricing shown is for budgetary use only and may differ due to local duties, taxes, fees and exchange rates.

**Analog Devices just got more Powerful. On March 10, Analog Devices acquired Linear Technology, creating the premier high-performance analog company. More info at <http://lt.linear.com/07c>**

### About Analog Devices

Analog Devices (NASDAQ: ADI) is the leading global high-performance analog technology company dedicated to solving the toughest engineering challenges. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure, power, connect and interpret. Visit <http://www.analog.com>

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