



News Release | www.linear.com

1.8/1.3GHz, Low Distortion, Dual ADC Drivers Deliver Guaranteed Matching & Low Noise

MILPITAS, CA – May 5, 2008 – Linear Technology announces the LTC6420-20 and LTC6421-20, the industry's first high-speed dual differential ADC drivers with guaranteed gain matching, and exceptional noise and distortion performance. With guaranteed matched gain of $\pm 0.25\text{dB}$ and matched phase of $\pm 0.1^\circ$ (typ), the LTC6420-20 reduces errors in multichannel systems such as IQ demodulation or diversity receivers. Channel separation is 80dB at 100MHz.

The LTC6420-20 provides a fixed gain of 20dB with -84dBc third-order intermodulation distortion at 100MHz input frequency. Input voltage noise is just $2.2\text{nV}/\sqrt{\text{Hz}}$, including internal gain-setting resistors. These amplifiers achieve their excellent distortion and noise specs on a single 3V supply and have rail-to-rail output swing. This allows the dual ADCs and amplifiers to share the same voltage supply in many applications. These drivers can drive an ADC directly without any external output impedance matching and can convert single-ended inputs into differential outputs.

"The LTC6420-20 and LTC6421-20 are the dual versions of our award-winning LTC6400/LTC6401," says Brian Black, Product Marketing Manager. "These new products extend the benefits of outstanding noise and distortion performance, low voltage operation, and excellent stability to applications which require close matching between ADC channels."

The LTC6420-20 is ideal for processing signals from DC to 300MHz. LTC6421-20 is a lower power (40mA) version of the LTC6420-20 and is optimized for lower input frequencies of DC to 140MHz.

These parts are available in a tiny 3mm x 4mm 20 lead plastic QFN package and are fully specified over the commercial (0°C to 70°C) and industrial (-40°C to $+85^\circ\text{C}$) temperature range. Pricing starts at \$5.22 for the LTC6420-20 and \$4.82 for the LTC6421-20 in 1,000 piece quantities.


Photo Caption: Dual Differential ADC Drivers with $\pm 0.1\text{dB}$ and $\pm 0.1^\circ$ Matching at 100MHz

Summary of Features: LTC6420-20 & LTC6421-20

- Matched Gain $\pm 0.25\text{dB}$
- Matched Phase $\pm 0.1^\circ$
- 1.8GHz -3dB Bandwidth (LTC6420-20)
- 1.3GHz -3dB Bandwidth (LTC6421-20)
- Fixed Gain of 10V/V (20dB)
- -84dBc IMD_3 at 100MHz (Equivalent OIP3 = 46dBm)
- 1nV/ $\sqrt{\text{Hz}}$ Internal Op Amp Noise
- 6.2dB Noise Figure
- Differential Inputs & Outputs
- Rail-to-Rail Output Swing on 3V Supply
- 80mA/40mA Supply Current (240mW/150mW @ 3V)
- 1V to 1.6V Output Common Mode Voltage, Adjustable
- DC- or AC-Coupled Operation
- Small 20-Lead 3mm x 4mm x 0.75mm QFN Package

About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, uModule™ products, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems. For more information, visit www.linear.com.

LT, LTC, LTM and  are registered trademarks and uModule is a trademark of Linear Technology Corp. All other trademarks are the property of their respective owners.

Press Contacts:

John Hamburger, Director Marketing Communications
jhamburger@linear.com
Tel: 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com

Tel: 408-432-1900 ext 2233