



## **Dual Output Sine Wave to Logic Converter Utilizes Selectable Input Filtering for Lowest Additive Jitter**

MILPITAS, CA – April 8, 2013 – MILPITAS, CA – Linear Technology Corporation introduces the [LTC6957](#), a DC to 300MHz dual output buffer/driver/logic translator, ideal for converting sine waves into low phase noise logic level signals. Prior solutions were unable to perform this conversion without introducing a significant amount of jitter. The LTC6957 converts any DC to 300MHz reference frequency into dual LVPECL, LVDS or CMOS outputs with exceptionally low additive jitter of  $45\text{fs}_{\text{RMS}}$  (LVPECL) over the 12kHz to 20MHz integration bandwidth and less than  $200\text{fs}_{\text{RMS}}$  total jitter. The device also features a proprietary, selectable, input stage bandwidth-limiting feature, which substantially improves the additive phase noise for slow slewing signals by 4-7dB.

While the LTC6957 can be used to convert any signal type to a logic level signal, it particularly excels with sine waves. The selectable, band-limited input stage enables optimal conversion of sine waves with the lowest additive jitter. The device is ideal for systems that distribute system clock references for board level synchronization. It can also be used as a clock driver for analog-to-digital converters (ADCs), digital-to-analog converters (DACs) or DDS (direct digital synthesis) ICs with clock rates up to 300MHz.

The LTC6957 is offered in four output logic signal types: the LTC6957-1 provides two LVPECL outputs, the LTC6957-2 provides two LVDS logic outputs, and the LTC6957-3 and LTC6957-4 offer two in-phase CMOS or complementary CMOS outputs, respectively, with output skew as low as 3ps (typ). Each device is available in small RoHS-compliant 12-pin MSOP or 3mm x 3mm DFN packages and can be ordered in industrial and automotive grades, supporting operating temperature ranges from -40°C to 85°C and -40°C to 125°C, respectively. The LTC6957 is in production, priced starting at \$3.60 each in 1,000-piece quantities. Samples and demo boards may be requested by visiting [www.linear.com/product/LTC6957](http://www.linear.com/product/LTC6957) or by contacting your local Linear Technology sales office.


## **Photo Caption: Low Phase Noise DC to 300MHz Buffer/Driver**

### **Summary of Features: LTC6957**

- Low Phase Noise Buffer/Driver
- Optimized Conversion of Sine Wave Signals to Logic Levels
- Three Logic Output Types Available:
  - LVPECL (LTC6957-1)
  - LVDS (LTC6957-2)
  - In-Phase & Complementary CMOS (LTC6957-3, LTC6957-4)
- Total Additive Jitter: <150fs<sub>RMS</sub>
- Frequency Range: DC to 300MHz
- 3.3V Supply Operation
- Low Output Skew: 3ps Typical
- Available in 12-Pin MSOP & 3mm x 3mm DFN Packages

### **About Linear Technology**

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs,  $\mu$ Module<sup>®</sup> subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

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