DEMO CIRCUIT 1371
QUICK START GUIDE

High-Speed Data Acquisition Board

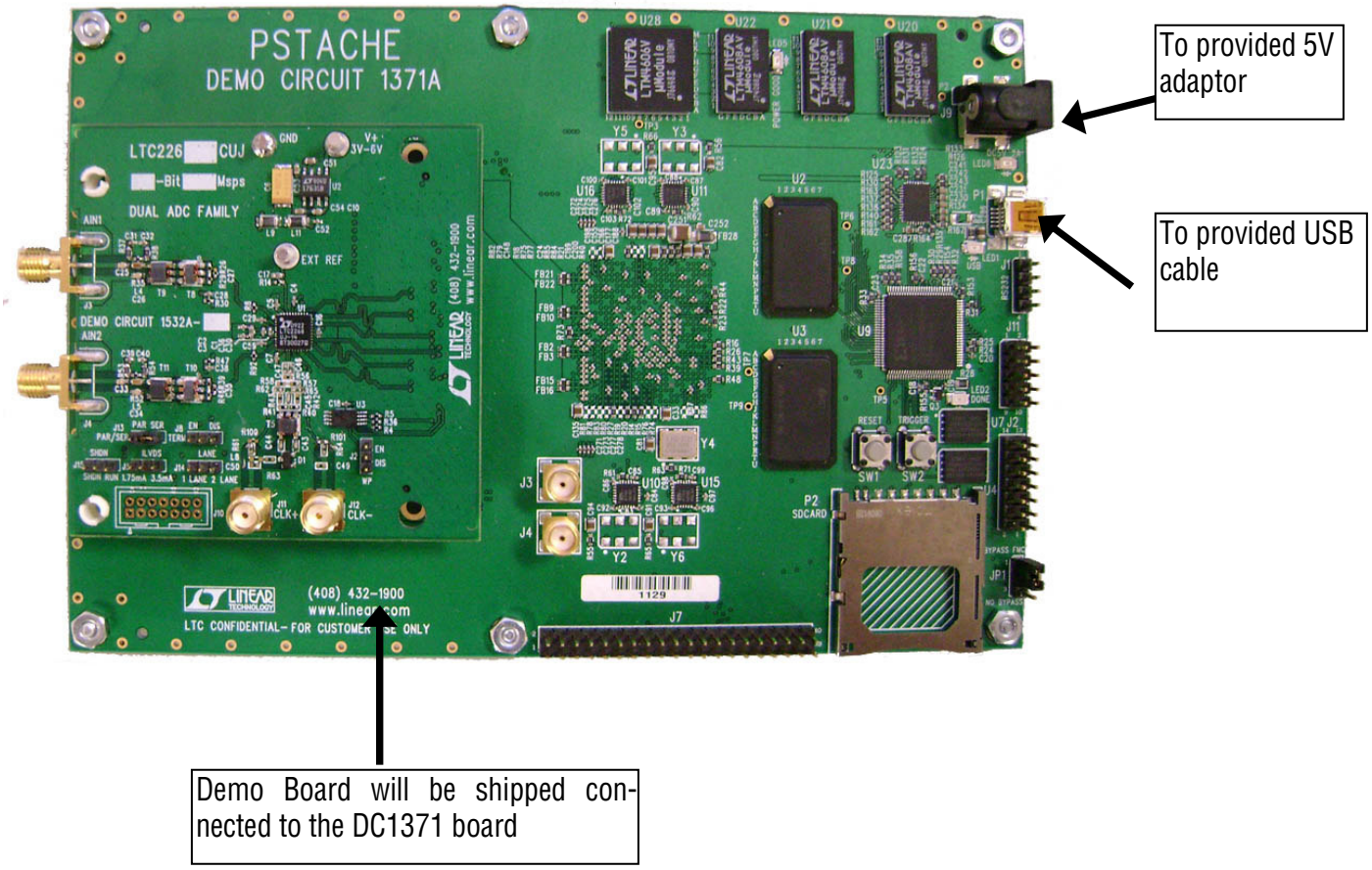
DESCRIPTION

Demonstration circuit DC1371, along with PScope software, provides a USB based, Windows PC hosted digital data acquisition system supporting high speed data converter products from Linear Technology. The DC1371 must be powered with the 5V power supply that is supplied with the demo board. The Linear Technology supplied PScope evaluation software automatically detects the DC1371 and the demonstration circuit board connected to it. The PScope system provides for fast and easy performance evaluation of high speed ADCs. DC1371 collects samples from high speed demonstration circuits and the PScope software performs various analyses on the data including calculating SNR, SINAD, THD, SFDR and ENOB. The digitized input, an FFT of the collected data, the Primitive Wave of the sample set or an IFFT of modified frequency domain data is plotted to a display window to facilitate analyzing noise and distortion products and their sources. Figure 1 shows a picture of the DC1371. The DC1371 is connected to the ADC demonstration circuit via a 400 pin FMC connector and to the PC by a mini-USB cable.

Design files for this circuit board are available. Call the LTC factory.

, LTC and LT are registered trademarks of Linear Technology Corporation. ThinSOT and PowerPath are trademarks of Linear Technology Corporation.

Figure 1. DC1371 Data Collection Board



QUICK START PROCEDURE

To prevent damage to the DC1371, it is important to follow the equipment setup procedure outlined below:

1. Do not plug the DC1371 into the PC USB port before running the PScope installation program.
2. Download the PScope installation program from http://www.linear.com/software/.
3. Run the PScope installation program and follow the on-screen instructions.

❑ **NOTE:** The PScope evaluation software requires a PC running Windows XP, Vista, or 7 with an available USB port.

4. Connect the DC1371 to a USB port and supply external power to the DC1371. **Only use the provided 5V power supply.**
5. The DC1371 should be provided with an ADC demoboard attached. **This demo board should not be removed**. The DC1371 does not supply power to the ADC demonstration circuit.
6. Each ADC demonstration board also comes with a Quick Start guide similar to this one and should be referred to for specific usage details relevant to the demonstration circuit being evaluated. Please refer to it for proper jumper settings, input power requirements and input signal levels and frequency ranges.
7. Apply an appropriate conversion clock and analog input signal to the ADC demonstration board.
8. The PScope software should automatically find and configure the DC1371 and the connected demo board.