

High-speed ADCs Automated Testing Equipment

Overview

The system is intended for automation of high-speed pipelined ADCs testing process. The current system allows testing of ADCs with sampling rate up to 100MHz, resolution 12 bit and with parallel digital output interface.

The system allows to measure the following static and dynamic parameters of ADC:

- INL
- DNL
- SNR
- SFDR
- High-level voltage
- Low-level voltage
- Offset error

The system contains a special fixture with built in 1GHz high-stable clock generator and programmable clock divider allowing achieving high stability of sampling clock and low jitter. The clock source for ADC can be selected from the software either built in 1GHz clock with programmable divider or external from NI PXI 6674 timing module. The special fixture allows testing UUT in temperature range from -60°C to $+80^{\circ}\text{C}$.

