

## **“Realizing the Inherent Performance of Modern ADCs in Real Systems”**

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Modern analog-to-digital converters (ADCs) and digital-to-analog converters (DACs) have been designed to provide very high performance in terms of instantaneous bandwidth, signal-to-noise ratio, and linearity. Realizing their inherent performance in a system requires careful engineering: Details matter! This paper will focus primarily on the application of high-resolution and/or high-sampling-rate ADCs, and to a lesser degree, DACs, including direct conversion converters. Topics will include power and ground distribution, analog/RF signal paths, digital signal paths, sampling clocks, timing, and special considerations for direct conversion. Standards for measuring ADC and DAC performance will also be addressed.