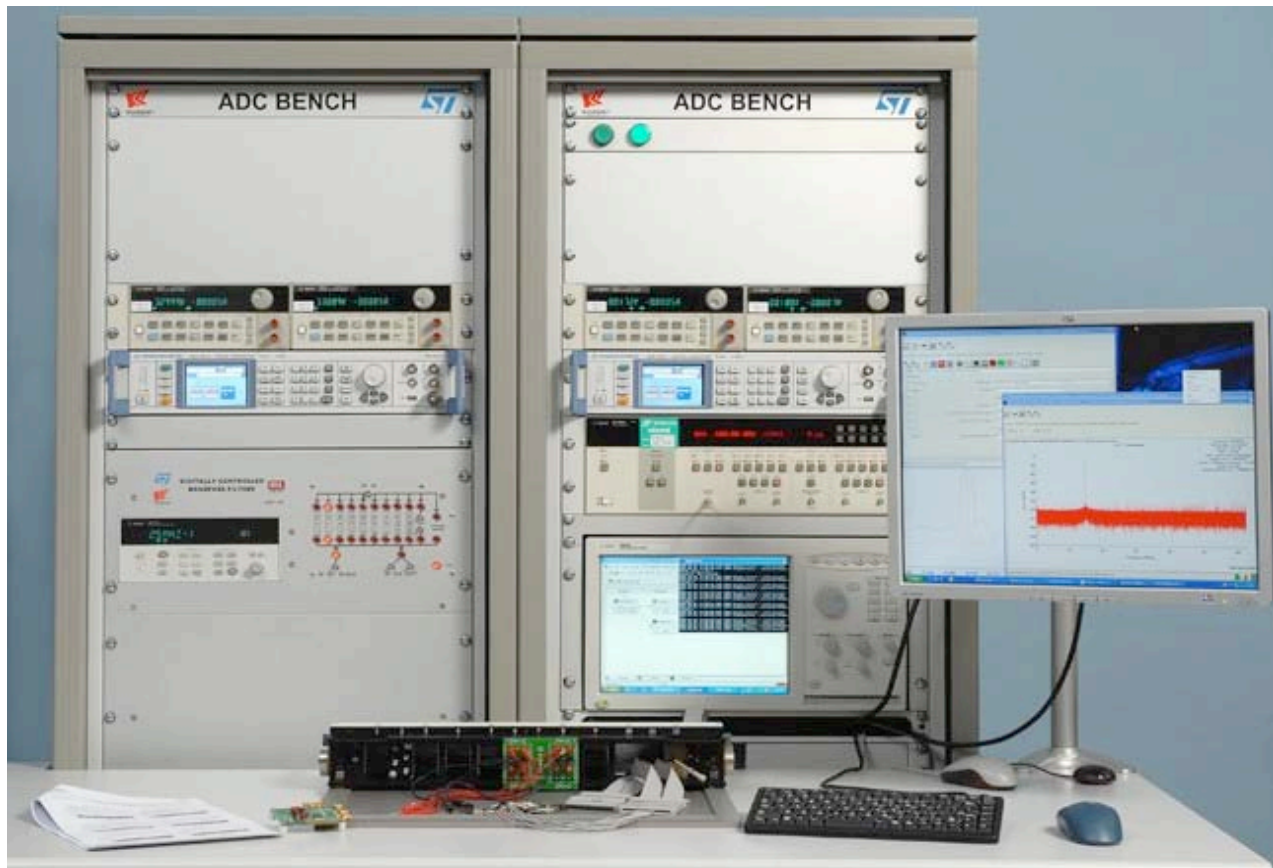




Advanced Test Tool for A/D Converters

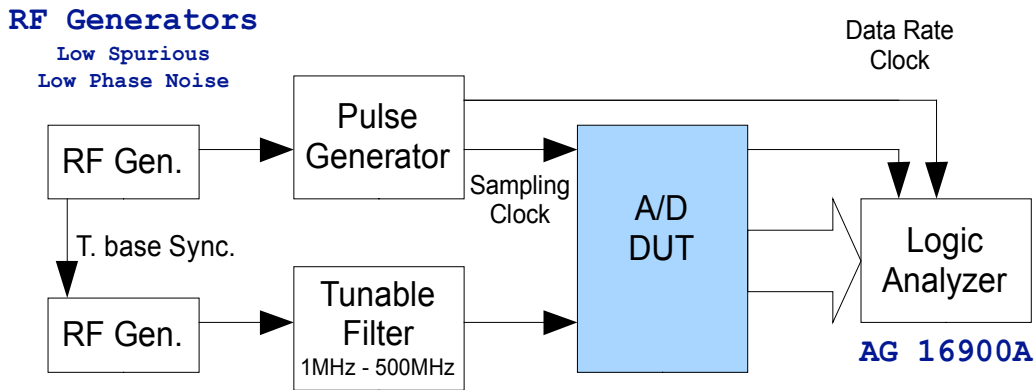


This test bench, designed by **Bourbaky** is used for high speed AD converters characterization. Based on **Bourbaky** EMA architecture (Electronic Measurement Automation). Use of high-end T&M equipments enables highly accurate measurements.

Key points:

- Enables Oversampling as well as Under sampling and Interleaved data
- Safety of use, as well during fine operator tuning as during long automated sequences
- Complete access to any instrument settling
- Easy to use, with complete test board deskew from LA sampling position adjustment
- Test suite creation from MS/Windows Explorer user interface
- Automated sequencing, enabling sweeps on each numeric parameter, with full traceability and reporting
- Embedded debug and development tools to add user scripts
- Off-line facilities as well as remote through LAN/WAN:
 - Measurement results exploitation, report generation
 - Elementary test procedure adjustment
 - Test suite creation
 - Launching automatic sequences remotely with full reporting
 - Exportation of results from a test suite to MS/Excel or as PNG for HTML report
- Flexible adaption to different instruments, many remote interface standard supported
- Open system, allowing customization for specific needs.

ATTADC - Schematic diagram

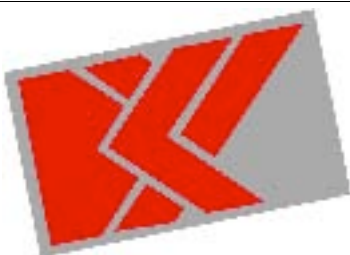


Instruments:

- Sampling Clock Generator - Agilent 81133A or Agilent 8133A or Agilent 81200
- Ext. Timebase Generator - R&S SMA 100A or Agilent E8663B or HP 8644A/B or AeroFlex 2023A
- RF Signal DUT - R&S SMA 100A or Agilent E8663B or HP 8644A/B or AeroFlex 2026A
- Tunable Filter Box - Specific design from K&L narrow band-pass tunable filters, covering continuous band from 1 MHz to 500MHz of fundamental frequency
- Logic Analyzer - Agilent 16903A/16950A/E5382A
- Power Supply - Agilent 6611C (typically 4 units)

Measurements Test Procedures:

- ADC Linearity measurement
 - Histogram, Corrected Histogram, Transfer Curve, DNL, INL (Two End Points and Best Fit Line methods)
 - Sweeps on Signal Level or Freq, Sampling Freq, DC voltages
- ADC Dynamic measurement
 - DC Level, Signal Level, THD, THD+N, SNR, Enob, SFDR, FFT (with automated noise correction versus windowing)
 - Coherent or not coherent sampling
 - Windowing (Blackman, Blackman-Harris(x4), FlatTop, Hanning, Kaiser-Bessel, Rectangle, Rife-Vincent(x3), + any user defined)
 - Nb of harmonics taken in account for computing, defined by user
 - Optional DC Suppress
 - Sweeps on Signal Level or Freq, Sampling Freq, DC voltages, ...
- ADC Rebuilt Signal - Sinus Rebuilt Signal, Delta, Raw Sampling



BOURBAKY

13, rue des Alpes
 BP36
 F-07302 TOURNON-SUR-RHÔNE Cedex
www.bourbaky.com
info@bourbaky.com
 Tel +33 4 75 07 81 20
 Fax +33 4 75 07 29 74