

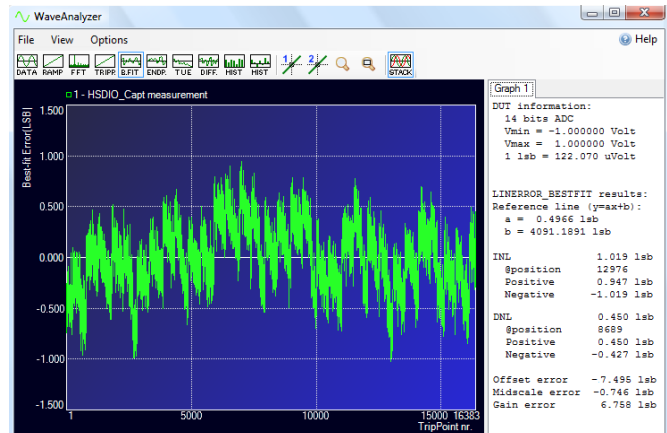
ATX-Express compact data converter test system



Features

- Fully integrated data converter test solution
- Sample rates from DC up to 200/400MHz
- Unsurpassed signal quality and accuracy
- Coherent measuring by default
- Flexible and versatile digital IO
- Extended Analysis software included
- Static, Dynamic and Histogram testing
- Lua script for easy user test implementation

The ATX-Express is a fully integrated solution for testing ADCs, DACs and other Analog functions. It features the same signal quality and versatility as the ATX7006, but is limited to 5 slots. Further it has no built-in display, all system settings are accessed via Ethernet or USB. If desired an external monitor can be connected. The ATX-Express is ideal for test labs that don't have a wide range of converters to test and therefore can settle with less slots. The ATX-Express is a single instrument for testing data converters. This saves the investment in various high end rack and stack instruments and writing proprietary software to control them.



INL / DNL measurement of a 14-bit / 65Msps ADC

This means you can concentrate on testing your converters rather than fine-tuning the test set-up. The ATX-Express is capable of testing converters from 4 to 24-bit. Its versatile digital I/O makes interfacing to the DUT easy, even for embedded converters. The Single Reference Architecture improves the stability and reduces calibration effort. The backplane distributed clock ensures coherent measuring.

The ATX-Express can also be used as an add-on upgrade for ATE systems.

Please see the ATX7006 documentation for more details.

ATX-Express compact data converter test system

General specifications:

- 4U high Case Frame with integrated air cooling
- Power supplies, 115 / 230VAC
- Controller module running Windows™ XP embedded
- Ethernet and USB communication ports
- Built-in signal generation and error calculations for production measurements
- ATView Analysis software for Engineering and Qualification purposes (for Windows PC)

Standard configuration: Digital-IO module, 20-bit AWG, Dual Reference Source.



ATX-Express inside, screened modules, linear power supplies.

Summary of modules specifications:

AWG20 module

Resolution	20-bit
Update rate (max.)	2Msps
Pattern depth	4M-words
Output ranges (Vpp, SE)	80mV to 10.24V in x2 steps
Common mode voltage	-5V to + 5V (20-bit resolution)
Output configuration	Differential, Single Ended, 50Ω
Output filters	None, 200kHz, 40kHz, 12kHz, 1.2kHz
Absolute accuracy	±(40μV + 10ppm of range)
Non Linearity	±8ppm of range (4ppm typical)
SNR (1kHz, 5Vpp)	92dB (BW= DC-800kHz)
THD (1kHz, 5Vpp)	-108dB (-115dB with 1.2kHz filter on)
THD (10kHz, 5Vpp)	-106dB
SFDR (1kHz, 5Vpp, 1.67Ms)	108dB (no filter)

AWG16 module

Resolution	16-bit
Update rate (max.)	200Msps DIO clk/400Msps ext. clk
Pattern depth	8M-words
Output ranges Single Ended	480mVpp to 5.12Vpp in 8 ranges
Output ranges Differential	960mVpp to 10.24Vpp in 8 ranges
Common mode voltage	-2.56 to +2.56V (16-bit resolution)
Output configuration	Differential or single ended, 50Ω
Output filters	None, 60MHz, 30MHz, 15MHz
Absolute accuracy	±(500μV+0.08% of range)
SNR (fs=200Ms, fout=1MHz)	70dB (BW DC-100MHz)
THD (fs=200Ms, fout=1MHz)	-87dB
SFDR (fs=200Ms, fout=1MHz)	88dB

	Dual Reference Source	Dual Power Supply
No. of outputs	2	2
Resolution	20-bit	16-bit
Settling time	20ms	10ms
Output configuration	2 or 4-wire	2 or 4 wire
Output range	±10V	±12V
Accuracy	±(25μV+10ppm.Vo)	±(4mV+0.2%.Vout)
Noise (DC- 100kHz)	5μVrms (typical)	18μVrms (typical)
Output current	10mA	200mA
Current limit range	n.a.	10mA - 200mA
Voltage readback	24-bit (DVM function)	16-bit (volt¤t)
V-out modulation	n.a.	1mHz - 1kHz

WFD20 module

Resolution	20-bit
Sample rate (max.)	2Msps
Capture memory	4M-words
Input ranges (Vpp)	0.544V to 8.16V in 8 ranges
DC offset voltage	-5V to + 5V (19-bit resolution)
Input configuration	differential or single, 100MΩ / 35pF
Input filters	Bypass, 800kHz, 250kHz, 40kHz
Non Linearity	±(40μV + 10ppm of range)
Relative accuracy (INL)	±8ppm of range (3ppm typical)
SNR (1kHz, 5Vpp)	93dB (BW= DC-800kHz)
THD (1kHz, 2Vpp)	-110dB
THD (10kHz, 2Vpp)	-106dB
SFDR (1kHz, 2Vpp, 1.67Ms)	108dB (no filter)

WFD16 module

Resolution	16-bit
Sample rate (max.)	180Msps
Capture memory	8M-words
Input ranges	0.512Vpp to 7.688Vpp in 16 ranges
Input impedance	50Ω or 10kΩ/25pF
Input configuration	Differential/single ended, AC/DC
Input filters	Bypass, 60MHz, 30MHz, 15MHz
Absolute accuracy	±(800μV+0.1% of range)
Non Linearity	±0.006 of range
SNR (fs=160Ms, fout=1MHz)	70dB (BW DC-80MHz)
THD (fs=160Ms, fout=1MHz)	-89dB
SFDR (fs=160Ms, fout=1MHz)	90dB

Digital-IO module

Data In- Outputs	20-bit parallel, 24-bit serial
Data IO Formats	parallel, byte by byte, serial
Capture / Stimuli memory	4Mword x 24 bits
Maximum data rate	50MHz (low speed mode)
Pattern generator	100MHz, 64kword x 16 bits
Digital I/O levels	1.2V to 3.3V/5V CMOS.
<i>High Speed Mode:</i>	
Data source / capture rate	200MHz (max.)
External clock rate	400MHz (max.)
Capture / Stimuli memory	8Mword x 16 bits
Digital I/O levels	LVDS (or converter board)

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION