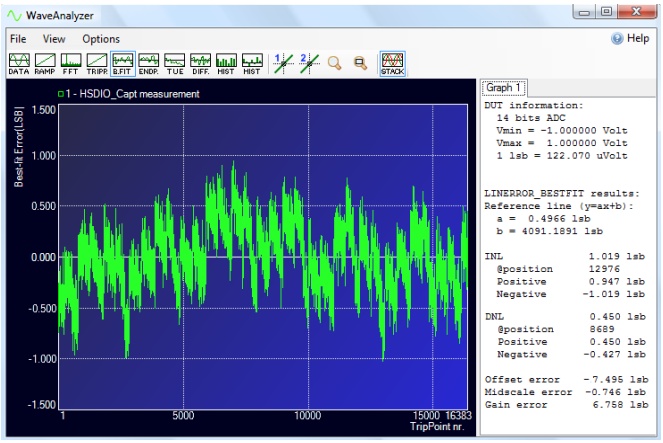
ATX-Express compact data converter test system

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
- Static, Dynamic and Histogram testing
- Easy -user defined- test scripting



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

The ATX-Express is a fully integrated solution for testing ADCs, DACs and other Analog functions. It is compatible with the ATX7006A, but is limited to 5 module slots. Further it has no GPIB communication interface. 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.

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 ATX7006A documentation for more details.

APPLICOS
a SALLAND Engineering Company

ATX-Express compact data converter test system

General specifications:

- 4U high Case Frame with integrated air cooling
- Power supplies, 115 / 230VAC
- Controller running Windows 10™ LTSB from SSD
- Ethernet and USB communication ports
- Built-in signal generation
- 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 / Update rate	20-bit / 2Msps
Pattern memory depth	4M-words
Output ranges (Vpp, SE)	80mV to 10.24V in x2 steps
Absolute accuracy	±(40µV + 10ppm of range)
Non Linearity (INL)	±8ppm of range (4ppm typical)
THD / SNR	-108dB / 92dB (@ f-out=1kHz)

AWG22 module

Resolution / Update rate	22-bit / 2Msps
Pattern memory depth	4M-words
Output ranges (Vpp, SE)	80mV to 10.20V in x2 steps
Absolute accuracy	±(25µV + 8ppm of range)
Non Linearity (INL)	±3ppm of range (1.5ppm typical)
THD / SNR	-111dB / 97dB (@ f-out=1kHz)

AWG16 module (for optimal jitter performance use ATX7006A)

Resolution / Update rate*	16-bit / 400Msps
Pattern memory depth	8M-words
Output ranges (Vpp, SE)	480mVpp to 5.12Vpp in 8 ranges
Absolute accuracy	±(500µV+0.08% of range)
Non Linearity	±0.003% of range
THD / SNR	-87dB / 70dB (@1MHz)

AWG18 module (for optimal jitter performance use ATX7006A)

Resolution / Update rate*	18-bit / 300Msps (600Msps, 1.2Gsps)
Pattern memory depth	8M-words
Output ranges (Vpp, SE)	580mVpp to 6.56Vpp in 8 ranges
Absolute accuracy	±(300µV+0.02% of range)
Non Linearity	±0.004% of range
THD / SNR	-99dB / 73dB (@10MHz)

DIO module

Data In- Outputs	20/24-bit, parallel, byte-byte, serial
Capture & Stimuli memory	8Mword x 16 or 4Mword x 24 bits
Max. data&clock rate	50MHz LS mode / 200MHz HS mode
Digital I/O levels	1.2V - 3.3/5V CMOS & LVDS
Clock jitter	300fs (typical@100MHz)

WFD20 module

Resolution / Sample rate	20-bit / 2Msps
Capture memory depth	4M-words
Input ranges (Vpp)	0.544V to 8.16V in 8 ranges
Absolute accuracy	±(40µV + 10ppm of range)
Non Linearity (INL)	±8ppm of range (3ppm typical)
THD / SNR	-110dB / 93dB (@ f-in=1kHz)

WFD22 module

Resolution / Sample rate	2-bit / 1Msps
Capture memory depth	32M-words
Input ranges (Vpp)	0.425V to 10.20V in 10 ranges
Absolute accuracy	±(25µV+10ppm of range)
Non Linearity (INL)	±3ppm of range (1.5ppm typical)
THD / SNR	-115dB / 99dB (@ f-in=1kHz)

WFD16 module (for optimal jitter performance use ATX7006A)

Resolution / Sample rate	16-bit / 180Msps
Capture memory depth	8M-words
Input ranges (Vpp)	0.512V to 7.688V in 16 ranges
Absolute accuracy	±(800µV+0.1% of range)
Non Linearity (INL)	±0.006% of range
THD / SNR	-89dB / 70dB (@1MHz)

DC modules →	**Dual Ref. Source**	**Dual Power Supply**
Outputs/ res./ settl.	2ch. / 20-bit / 20ms	2ch. / 16-bit / 10ms
Output range/config.	±10V / 2 or 4-wire	±12V / 2 or 4 wire
Accuracy	±(25µV+10ppm.Vo)	±(4mV+0.2%.Vout)
Noise (DC- 100kHz)	5µVrms (typical)	18µVrms (typical)
Output current	10mA	200mA
Voltage readback	24-bit (DVM function)	16-bit (volt&current)
V-out modulation	n.a.	1mHz - 1kHz
Digital I/O levels	LVDS (or converter board)	

* Update rates >200MHz require an external clock source

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION

Document revision 3.0

Applicos || Boerendanserdijk 39 || 8024 AE Zwolle || Netherlands || Tel: +31 578 696769 || www.applicos.com