

DATA SHEET

Preliminary Information

UDA100

1.6G Sample/s Data Acquisition unit with USB2.0 interface

World's fastest USB Data Acquisition Unit



Overview

The *UDA100* is a truly high performance, high speed, low power, USB-based data acquisition system. The *UDA100* integrates all the capabilities of PCI plug-in boards, easy-to-use and hot-swapping features for portable solutions.

Besides the unique PnP and hot-swapping features of USB, the data and power share the same cable. All connections are external and there is no need to open computer chassis for any installation.

The *UDA100* is the World's fastest and flexible USB Data Acquisition Unit, supports Sampling Rate of up to 1.6G Samples/s for repetitive signals with either 10-bit or 8-bit resolution. The USB link is fully compatible with both USB 1.1 and USB 2.0 interfaces, supporting data transfer speed up to 480 Mbps.

The *UDA100* incorporate an ultra-low noise front-end with 80dB programmable gain amplifier and 4 programmable filters.

Calibration of *UDA100* has been designed to be traceable to NIST standards.

This traceability provides the user with the ability to make accurate and repeatable settings and measurements.

The *UDA100p* model includes high voltage pulser, mainly for Laser or Ultrasound applications.

System adaptation to any other application is also available.

Features

- Portable, Powerful & Durable USB 2.0 interface (up to 480 Mbps)
- 10 bit, 100 MS/s Digitization rate, 1.6GS/s for repetitive signals
- Up to 128 Megabytes SDRAM memory on board
- Onboard DSP capabilities with real time features
- Ultra Low Noise Front-End with dynamic Variable Gain capabilities
- Programmable RF Filters
- Internal or External Trigger
- Programmable Time Stamping
- Customizable user settings to fit most applications
- Small footprint
- Various low power sleep modes
- Plug and Play (powered from USB port)
- Hot-Swappable Interface (no rebooting when connecting or disconnecting)
- Windows 98, ME, 2000, XP compatible



General Specification

Digitizer:

Sampling Rate	100MS/s
Max Sampling Rate (interleave mode)	1.6GS/s
Resolution	8/10bit
Memory	Up to 256 Megabytes SDRAM
Triggering	Internal, ext., software
Pre-Trigger	Up to 100% of record length
Internal Clock Source:	Crystal oscillator , ±100 ppm

Analog Front - End:

Variable Gain Amplifier	0dB-80dB @ 0.2dB steps
Bandwidth	1MHz - 50MHz
Filters	SW select from bank of 4 filters
Signal	AC coupled 2Vp-p Max.
Input impedance:	50 ohm
Input Noise	<4nV/Hz

Interface:

Compatible with	USB 1.1, USB 2.0 spec.
Data transfer speed	up to 480 Mbps
Connectors	USB type B, BNC for RF

Miscellaneous:

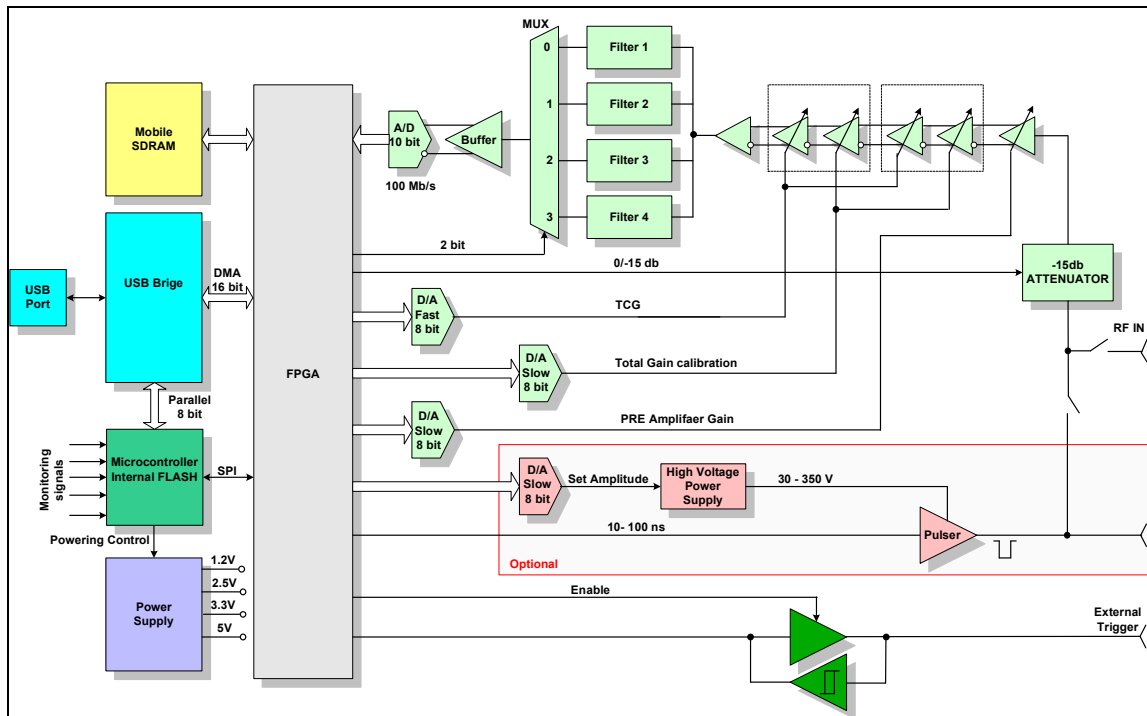
Powering	5V (from USB port)
Power consumption:	< 2.5 W
Operating Temperature Range	0 – 70°C
Dimensions (L x W x H)	154 x 82 x 22 mm
Operating Systems	Windows 98/ME//2000/XP

High Voltage Pulser (UDA100p model)

Type of Pulser	Square Wave
Pulser Width Range	10nS – 100nS
Pulse Width Increment	Steps of 1ns
Burst Mode	Up to 8 pulses in one frame
Max Pulse Amplitude (50ohm load)	35V - 350V (256 steps)
PRF	1Hz – 2,000Hz

* Specifications are subject to change

Block Diagram



Applications

□ Laser Measurement and Testing (Wafers, Flat Panel Displays, Disks)	□ Digital Oscilloscope
□ Semiconductor Testing	□ HDTV
□ Ultrasonic Imaging Systems	□ Explosion Testing
□ Radar and sonar systems	□ Shock Wave Testing
□ Machine Vision and Inspection	□ High Speed Analysis
□ Video, HDTV and image processing systems	□ Imaging
□ Communications Link Testing	□ LIDAR
□ Deep Capture of Medical Sonography Signals.	□ Laser Doppler Velocimetry
□ Nuclear Decay Experiment and Measurement.	□ Machine Monitoring
□ Cable TV Testing	□ Military and Aerospace
□ Image Acquisition from Analog Cameras	□ Mass Spectrometry
□ Analytical Instrumentation	□ Oceanography Survey
□ Acoustic Emission	□ Process Control Systems
□ Communication	□ Time Domain Analysis
□ CCD Imaging	□ Time of Flight Measurement
□ Disc Drive Testing	□ Process Automation
□ Digital Spectrum Analyzer	□ Scanning Laser
□ Time Domain Reflectometer	□ Seismic Exploration
□ Transient Capture	□ EMI Detection
□ Logic Analyzer	□ Environmental Monitoring

About SeBo Technologies

SeBo Technologies design, manufacture and integrate innovative, practical and easy to implement Data Acquisition solutions. These solutions provide our customers a fast track to either incorporate technology within their current products, or to simply design a new product range.

By leveraging our expertise we are able to offer products and services to our customers to enable cost effective, rapid time to market solutions.

More Information...

For more information on our products, please use the following contact:

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