

## Ultrasonic NDT Position Encoder



[VIEW MORE](#)

**NEW** - GaGe eXpert FPGA option allowing for direct position encoder reading capability for fastest possible scan rates for use with modern ultrasonic non-destructive testing (NDT) inspection systems.

Features include:

- Compatible with Step & Direction and Quadrature Encoders
- Compatible with Multiple Manufacturer Position Encoders
- Provides 2 Independent Set of Differential Position Encoder Inputs
- Encoder Inputs are High Z, Support TTL-Type Logic Levels, and Capable of Counting Encoder Signal Frequencies up to 1 MHz
- 2 Operating Modes: Pulse On Position and Position Stamping
- Transparent to Standard Digitizer Drivers for Windows/Linux, Requiring no Special Software

## Optical Coherence Tomography (OCT)



[VIEW MORE](#)

**NEW** - GaGe eXpert FPGA option allows for variable rate k-clocking or inactive external clock by simultaneously digitizing the interferometer signal with the returned optical signal for OCT applications.

Features include:

- Allows Variable Rate K-Clocking or Inactive External Clock with Digitizer
- Simultaneously Digitize Interferometer Signal with Returned Optical Signal
- Allows for Rejection of Rising Edges for Pulses Below Specified Amplitudes
- Allows for Manual Clock Management for Pulses Occurring on Border Between K-Clock Activity & Inactivity by Returning Raw Data Sample #
- Transparent to Standard Digitizer Drivers for Windows/Linux, Requiring no Special Software
- C/C# SDK Provides Ready-Made

- C/C# SDK Provides Ready-Made Compiled Sample Programs

Compiled Sample Programs

## eXpert FPGA DSP Features for Data Acquisition



GaGe provides several eXpert FPGA processing firmware options for use with CompuScope Digitizers allowing for some signal processing analysis, or other specific functionality, to be performed on the digitizer hardware itself within its onboard Field Programmable Gate Array (FPGA). These include:

### PCIe Data Streaming

[VIEW MORE](#)

Stream acquired data directly through PCIe to host PC RAM and on to targeted host based CPUs or GPUs for analysis and/or to high-speed storage for real-time signal recordings.

### Signal Averaging

[VIEW MORE](#)

Using rapid signal averaging, small signals can be extracted from a background of high amplitude noise, which may even be larger than the actual signal itself.

### Fast Fourier Transform

[VIEW MORE](#)

Allows 8192 point FFT calculation analysis, with Real & Imaginary spectral components, directly on the digitizer and transfer of multiple Fourier Spectra to host PC in single PCIe transfer.

All GaGe eXpert FPGA features are supported with Software Development Kits (SDKs) that provide ready-made compiled sample programs illustrating how to configure and use the targeted feature with documentation for its use in custom developed applications.

GaGe can also develop customized firmware (e.g. DDC, FIR Filtering, Peak Detect, etc.) to meet specific customer application requirements. Please contact us with a summarized listing of application requirements to evaluate for design feasibility. Pricing for customized FPGA development is highly dependent on the scope of the project work and on expected product volume.

[VIEW MORE](#)



Call Us Toll-Free:  
1-800-567-GAGE

[About DynamicSignals](#)

GaGe, Signatec and KineticSystems are



Email Us:  
[sales@gage-applied.com](mailto:sales@gage-applied.com)



Application Engineer  
 Consult:  
[Request a Call](#)



Global Distributors:  
[Find Local Distributor](#)

Follow Us:



[LinkedIn](#)



[Twitter](#)



[YouTube](#)



[Scholar](#)

product brands of DynamicSignals LLC.

We are a customer oriented industry leader in high-performance, accurate, and reliable data acquisition solutions. Our core competencies include engineering, manufacturing and integration of data acquisition cards, digitizers, signal conditioners, and waveform generators into continuous signal data recording, processing and arbitrary signal generation systems.

DynamicSignals LLC is a USA Small Business ISO 9001:2008 Certified Company.

### [PCIe/PCI Digitizers](#)

With sampling rates up to 6 GS/s and deep on-board acquisition memory up to 16 GB, our high speed multi-channel digitizers provide optimal combination of sampling speed, resolution and memory.

### [FCiX LAN Digitizers](#)

Faceless Connected Instruments (FCiX) provide for integrating high resolution, multi-channel digitizers into Ethernet and LAN enabled measurement systems.

### [High-Performance Systems](#)

Customized PC Workstations tailored for real-time signal recording, processing and playback applications that require guaranteed continuous sustained data streaming rates with no

### [eXpert FPGA Processing](#)

PCIe Streaming, Signal Averaging, Ultrasonic NDT Position Encoder, OCT, FFT, or Custom FPGA processing routines provide a fast and efficient means of analyzing only data of interest.

### [Waveform Generators](#)

Arbitrary waveform generators or function generators capable of creating custom stimuli for testing complex analog and digital circuits.

### [Oscilloscope Software](#)

Programming-free PC oscilloscope software for GaGe high speed digitizers or digital oscilloscopes and arbitrary waveform generators. SDKs for C/C#/C++, LabVIEW, and MATLAB are

missing data. Available in portable,  
tower, and rackmount form factors.

also available for custom application  
development.

DynamicSignals LLC

900 North State Street · Lockport, Illinois 60441-2200 USA

Tel (815) 838-0005 · Fax (815) 838-4424 · <http://www.dynamicsignals.com>