

# vDAQ™ and High-Speed vDAQ™

A revolution in microscope control — powered by ScanImage®



The vDAQ is an all-in-one data acquisition card and breakout box for microscope control and data acquisition. Designed to work with ScanImage software. It controls galvos, resonant scanners, Pockels cells, Piezo-objective positioners, shutters, and much more. The vDAQ greatly simplifies the wiring complexity of microscopes by eliminating the need for additional 3rd party data-acquisition hardware. vDAQ is available in two configurations – Standard and High-Speed.



## A Single Breakout Box

Simplify your wiring diagram using the vDAQ and its single breakout box configured in a slick 2U, 19-inch rack-mount format. Even the connecting cable between card and breakout box are included with the vDAQ.



## Cost Effective, Flexible and Fast IO

vDAQ is the most advanced microscope controller for multi-photon systems. In addition to streamlining microscope control connections onto a single breakout box, it saves cost compared to conventional, modular systems.



## Synchronize with Any Clock

Unlike other data acquisition hardware, the vDAQ can be synchronized with any external clock, and can produce internal clock signals as well. Of course, it also supports all advanced ScanImage trigger capabilities.



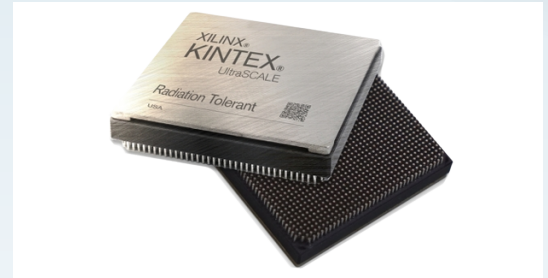
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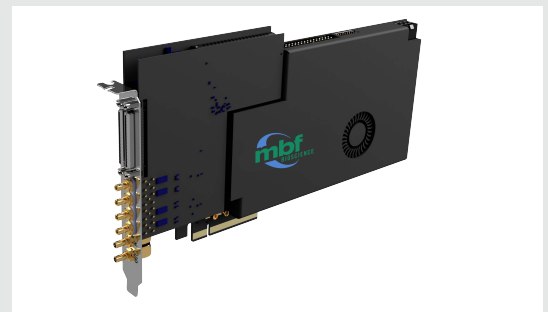
## Uses the Newest Xilinx FPGA

The Xilinx Kintex Ultrascale FPGA is state of the art and provides ample capacity for real-time image processing and closed loop experiments. The vDAQ comes standard with 4 GB of DRAM giving you more processing power.



## Photon Counting with a High-Speed vDAQ

The High-Speed vDAQ offers an even higher sample-rate configuration. With 2 channels sampling at up to 2.7GHz per channels, the High-Speed vDAQ is the perfect tool for time correlated, single photon counting with sub ns dead time, simultaneous photocurrent integration and photon counting, and time demultiplexing with up to 32 bins for an 80MHz Laser source.



## Technical Specifications

- Xilinx Kintex UltraScale FPGA
- High-Speed card (2 analog inputs, 2.7GHz, 12bit)
- Medium Speed card (4 analog inputs, 125MHz, 14bit)
- 12 Analog Inputs (1MHz, 16bit)
- 12 Analog Outputs (2MHz, 16bit)
- 32 Digital Inputs/Outputs
- 4GB DDR3 RAM
- 4GB/s data transfer rate

Learn more at: [mbfbioscience.com/products/vdaq](http://mbfbioscience.com/products/vdaq)



## About MBF Bioscience

A rich history of creating the future of neuroscience.

MBF Bioscience develops advanced tools for collecting and analyzing accurate, reproducible data from histological specimens, 2D and 3D microscope images, and freely moving *C. elegans* so that scientists can better understand brain diseases and processes at a cellular level.

Our products have helped researchers publish over 17,000 peer reviewed papers.

## What our customers say

“ ScanImage is extremely stable, allowing us to image for hours without bugs or crashes, and the user interface is intuitive but still provides detailed control over acquisition parameters.

Dan Wilson  
Harvard Medical School

“ MBF Bioscience is extremely responsive to the needs of scientists and is genuinely interested in helping all of us in science do the best job we can.

Sigrid Veasey, M.D.  
University of Pennsylvania