

# NEWS

## FOR IMMEDIATE RELEASE

### **Vertilon Targets PET and SPECT Applications with Introduction of PhotoniQ IQSP582**

*Sixty-Four Channel Data Acquisition Product Compatible with  
Hamamatsu H7546B and H8500D Multianode Photomultiplier Tubes*

**WESTFORD, MA (May 21, 2008)** – Vertilon Corporation (<http://www.vertilon.com>) announced today that it is now shipping its PhotoniQ IQSP582 sixty-four channel data acquisition system. Designed for medical imaging and particle detection applications such as positron emission tomography (PET), single photon emission computed tomography (SPECT) and high energy particle physics, the IQSP582 interfaces to multi-element optical sensors like multianode photomultiplier tubes, avalanche photodiode (APD) arrays, and silicon photomultipliers (SPM). Using one of several user-selectable trigger modes, event data from the input sensor is acquired simultaneously across all sixty-four channels by the unit where it is then digitized, processed, and packetized for transmission to a PC over a USB port. The PhotoniQ IQSP582 can be operated at trigger rates up to 250 KHz and has an input dynamic range of 84 dB when using typical PET or SPECT multianode photomultiplier tubes such as the Hamamatsu H7546B or H8500D. The product is shipped with a standard software package that includes a graphical user interface for control of the instrument and real-time viewing of event data. For data intensive applications the software facilitates high speed logging of event data directly to disk. An included DLL set allows the user to interface the IQSP582 to custom software programs that can further process and display the data. In a typical PET application, a 64 channel PMT like a Hamamatsu H8500D is mounted to a Vertilon SIB064 sensor interface board which in turn is connected through cables to the IQSP582. Circuitry on the SIB064 detects a scintillation event by monitoring the last dynode signal from the PMT. An event exceeding a preset threshold generates a trigger signal on the SIB064 which is then used to trigger the IQSP582 to collect the individual charge signals from the sixty-four PMT anodes. The trigger signal is also sent to a separate external instrument that performs the coincidence detection of the scintillation events. A PC connected to the IQSP582 and to the coincidence detector combines the data and processes it for analysis and display. “The latest generation of PET and SPECT medical imaging systems is achieving unprecedented performance by using the most advanced multianode photomultiplier tubes” said Vincent Palermo, President and Founder of Vertilon. “As the number of anodes has increased, so has the need for high performance electronics that can process the considerable amount of data generated by these devices.” He added “The PhotoniQ IQSP582 is an off-the-shelf data acquisition product that is perfectly suited for these particularly demanding imaging applications.” Vertilon says the IQSP582 as well as the sensor interface boards for many commonly available multianode PMTs and avalanche photodiode arrays is in production and available today.

**About Vertilon Corporation** (<http://www.vertilon.com>)

Vertilon manufactures advanced products for markets utilizing multi-anode photomultiplier tubes, avalanche photodiode arrays, silicon photomultipliers, and other multi-element charge-based sensors. Vertilon's core product line is the PhotoniQ, a family of high performance multi-channel data acquisition systems that interface to optical sensors and collect and process their output signals. Over the last seven years, Vertilon's PhotoniQ products have been used throughout the world by leading universities, government laboratories, and corporate R&D groups in applications that include particle physics, flow cytometry, bioaerosol detection, SPECT, positron emission tomography (PET), and confocal microscopy.

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