

# NEWS

## FOR IMMEDIATE RELEASE

### **Vertilon Introduces SIB2316 Sensor Interface Board for SensL SPMArray**

*New Product Targets PET and Radiation Detection Applications*

**WESTFORD, MA (November 5, 2008)** – Vertilon Corporation (<http://www.vertilon.com>) announced today that it has launched the SIB2316 sensor interface board for the SensL SPMArray 16 element silicon photomultiplier (SiPM) array. The first of its kind product supports up to two SPMArrays and provides the necessary interface and signal processing circuitry to capture high speed pulsed optical events such as those found in PET, SPECT, and radiation detection applications. Designed in cooperation with SensL (<http://www.sensl.com>), the SIB2316 seamlessly integrates the SPMArrays to a 32 channel data acquisition system like Vertilon's PhotoniQ IQSP480 or IQSP580 giving the user a complete, off-the-shelf solution for acquisition of multichannel particle data. Because the product is purposely built for PET and similar particle detection applications, the SIB2316 allows the user to easily setup the system to collect data with virtually no additional electronics or software. The unit is 100% compatible with the SensL SPMArray and readily configurable through the PhotoniQ's graphical user interface.

In a typical PET imaging application using SiPM detector arrays, two small FPC cables connect the SPMArrays to the SIB2316 which in turn is connected to a Vertilon PhotoniQ IQSP580. The 16 separate charge signals from each detector array are integrated, digitized, and collected by the PhotoniQ and then transferred to a PC over a USB connection for display, storage, or further processing. Bias for the silicon photomultiplier detectors is generated on the SIB2316 but adjusted through the PhotoniQ's GUI. Data is collected on an event by event basis with the SIB2316 supplying the trigger signal to the data acquisition unit. Although triggering can be accomplished in any number of ways, event coincidence triggering is widely used in PET scanners. The product's dual coincidence detector monitors the charge output from each device. A high speed, programmable-threshold pulse discriminator generates a timing signal that is precisely aligned with the charge pulse peak from its respective detector array. The SIB2316's coincidence detection logic generates a trigger output signal if the events from each array are found to occur within a user-specified time window. With full control over the pulse energy threshold and coincidence time window, the user can effortlessly fine tune his system to greatly reduce the number of false event triggers. For PET scanners requiring more than two detector arrays, the SIB2316 is expandable to accommodate up to six additional SPMArrays for a total of eight coincidence detectors and 128 signal channels.

The SIB2316 is the first product from Vertilon Corporation (<http://www.vertilon.com>) for silicon photomultiplier arrays. Recent industry trends indicate a significantly growing demand for devices of this type especially in PET scanners and radiation detection systems. The solid state nature of silicon photomultipliers offers robustness unmatched by conventional photomultiplier tubes. Their relative insensitivity to magnetic fields makes them extremely suitable for combination PET / MRI scanners. Furthermore, the small size and low bias voltage requirements make these devices ideal for applications requiring numerous detector channels. "We believe we have recognized a significant market opportunity for silicon photomultiplier devices — particularly the SPMArray from SensL" said Vincent Palermo,

President and Founder of Vertilon. “These unique devices are very well positioned to replace photomultiplier tubes in the next generation of PET scanners.” He added “the performance and size of the SensL SPMArray made it the only logical choice for Vertilon’s first silicon photomultiplier product.” Carl Jackson, founder and CTO of SensL commented “SensL is dedicated to providing low light sensing solutions to the marketplace and we are pleased with the Vertilon SIB2316 release which greatly simplifies the readout of our multichannel SPMArray products”. Carl added “Vertilon has done a great job of providing a plug and play readout system for SensL SPMArrays. Customers simply plug the SensL and Vertilon products together and add light, the system is that simple to operate.” Vertilon says the SIB2316 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), gamma cameras, and confocal microscopy.

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**About SensL** (<http://www.sensl.com>)

SensL provides low light sensing solutions to the market. Their goal is to provide the best solution for each customer application through the use of their breakthrough technology or through the integration of other commercially available detector products with their electronics. They provide standard as well as customizable and flexible products to suit all customer requirements for a variety of application areas including: radiation detection, analytical instruments, nuclear medicine, high resolution timing, POC/POU biagnostics and engineering services.

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