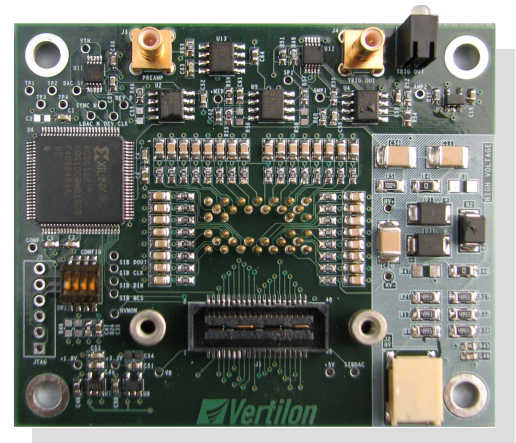


SIB332 Sensor Interface Board APD Array

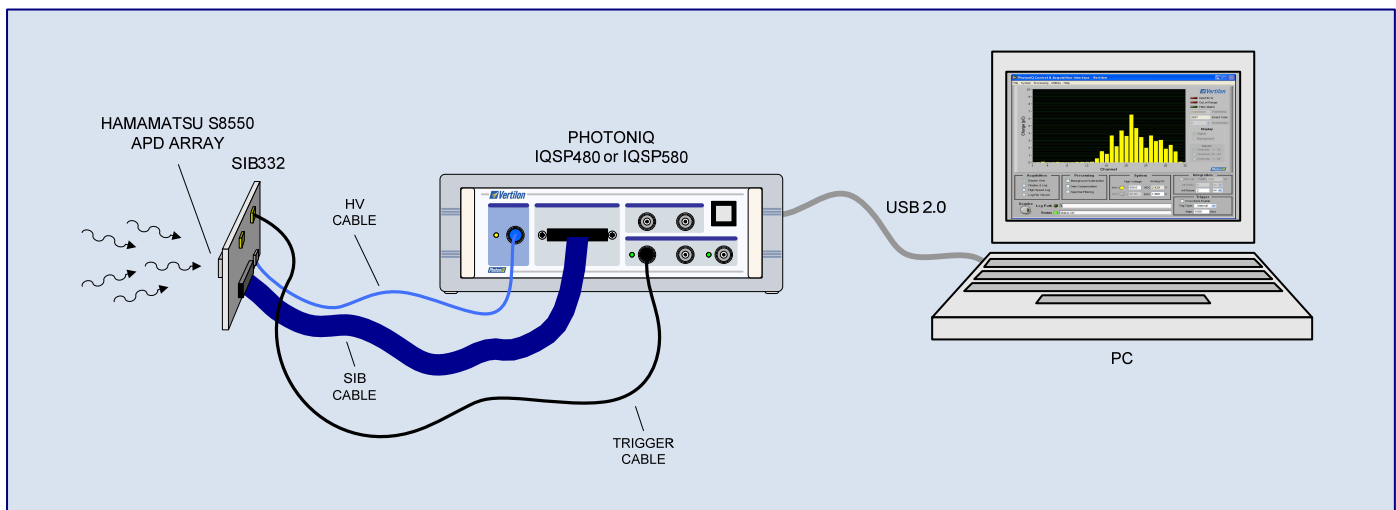
Product Sheet

Description

The SIB332 Sensor Interface Board (SIB) provides the electrical and mechanical connectivity between a Hamamatsu S8550 series 4 x 8 element APD array and a Vertilon PhotoniQ multi-channel data acquisition system. The S8550 mounts directly to the bottom of the SIB332 through 34 socket pins where electrical connections to the 32 APD anodes are made to the SIB connector located on the top of the board. The SIB connector conforms to Vertilon's standard, low-noise, multi-channel, cable interconnection system. It mates to a micro-coaxial cable assembly that connects the APD outputs to the PhotoniQ. The negative high voltage bias to the APD array is made through a separate dedicated connector where a high voltage cable connects between it and the high voltage output from the PhotoniQ. A passive circuit on the SIB332 divides the raw high voltage output from the PhotoniQ by two for input to the APD array. Also available on the SIB332 are two outputs that are used in conjunction with the APD array's common cathode current signal — an amplified version of the signal and a pulse discriminator trigger output.

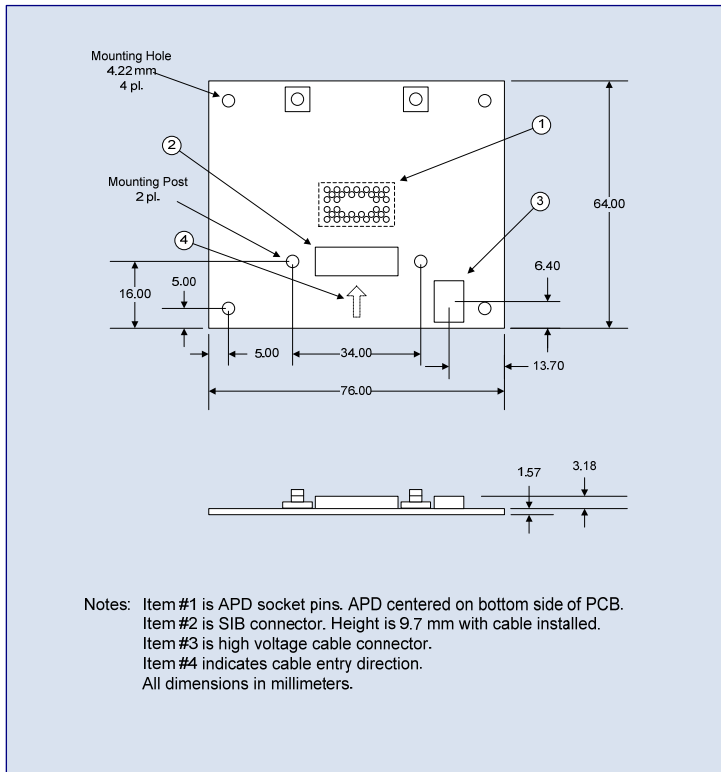


Typical Setup

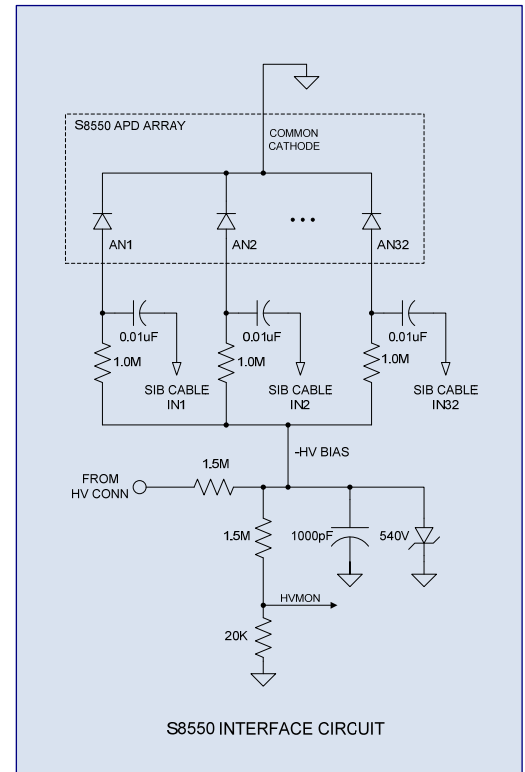


In a typical setup the Hamamatsu S8550 array is plugged into the SIB332 Sensor Interface Board which in turn connects to a Vertilon PhotoniQ IQSP480 or IQSP580 multi-channel data acquisition system using a SIB cable. When triggered from the trigger output on the board or from an external source, the PhotoniQ integrates and digitizes the 32 charge signals from the array and outputs a data packet to the PC over a USB connection. The PhotoniQ also supplies the negative high voltage bias to the APD array through a specialized high voltage cable.

Mechanical Data



Electrical Data



Ordering Information

SIB332 directly compatible with Vertilon PhotoniQ IQSP480 and IQSP580 32 channel data acquisition systems. PhotoniQ systems sold separately. See User Manual for performance specifications.

High voltage cable not included with SIB332. Included with high voltage power supply option HVPS001 or HVPS002 for IQSP480 / IQSP580.

Sensor interface board (SIB) cable ordered separately. Specify part number SBCxxx, where “xxx” equals length in centimeter.

See SIB332 User Guide for complete specification.

See Hamamatsu S8550 datasheet for specific device information

SIB Connector Pinout

#	NAME	#	NAME
1	VB	2	HVMON
3	SIB DIN	4	SIB CLK
5	IN16	6	IN32
7	IN15	8	IN31
9	IN14	10	IN30
11	IN13	12	IN29
13	IN12	14	IN28
15	IN11	16	IN27
17	IN10	18	IN26
19	IN9	20	IN25
21	IN8	22	IN24
23	IN7	24	IN23
25	IN6	26	IN22
27	IN5	28	IN21
29	IN4	30	IN20
31	IN3	32	IN19
33	IN2	34	IN18
35	IN1	36	IN17
37	SIB DOUT	38	SIB NCS
39	SIBDAC	40	+5V

Pins 3, 4, 37, 38, 39, 40 used by PhotoniQ and should be left unconnected

Ground supplied through cable shielding



Vertilon Corporation has made every attempt to ensure that the information in this document is accurate and complete. Vertilon assumes no liability for errors or for any incidental, consequential, indirect, or special damages including, without limitation, loss of use, loss or alteration of data, delays, lost profits or savings, arising from the use of this document or the products which it accompanies. Vertilon reserves the right to change its products without prior notice. No responsibility is assumed by Vertilon for any infringements of patents or other rights of third parties which may result from the use of its products. No license is granted by implication or otherwise under the patent and proprietary information rights of Vertilon Corporation.

© 2010 Vertilon Corporation, ALL RIGHTS RESERVED

PS2723.1.1 Sep 2010

AP Technologies Limited The Coach House Watery Lane Bath BA2 1RL
 T: +44 (0) 1225 780 400 F: +44 (0) 8701 266 449 E: info@aptechnologies.co.uk



Vertilon Corporation, 66 Tadmuck Road, Westford, MA 01886 / Tel: (978) 692-7070 / Fax: (978) 692-7010 / www.vertilon.com