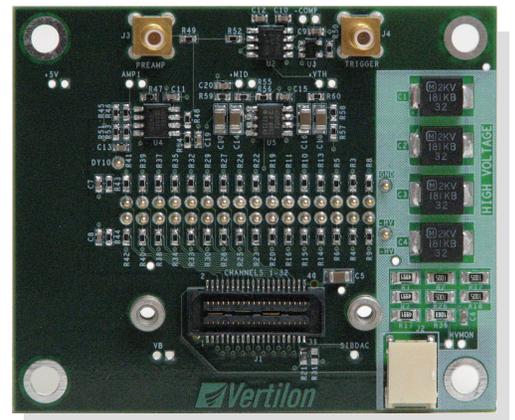
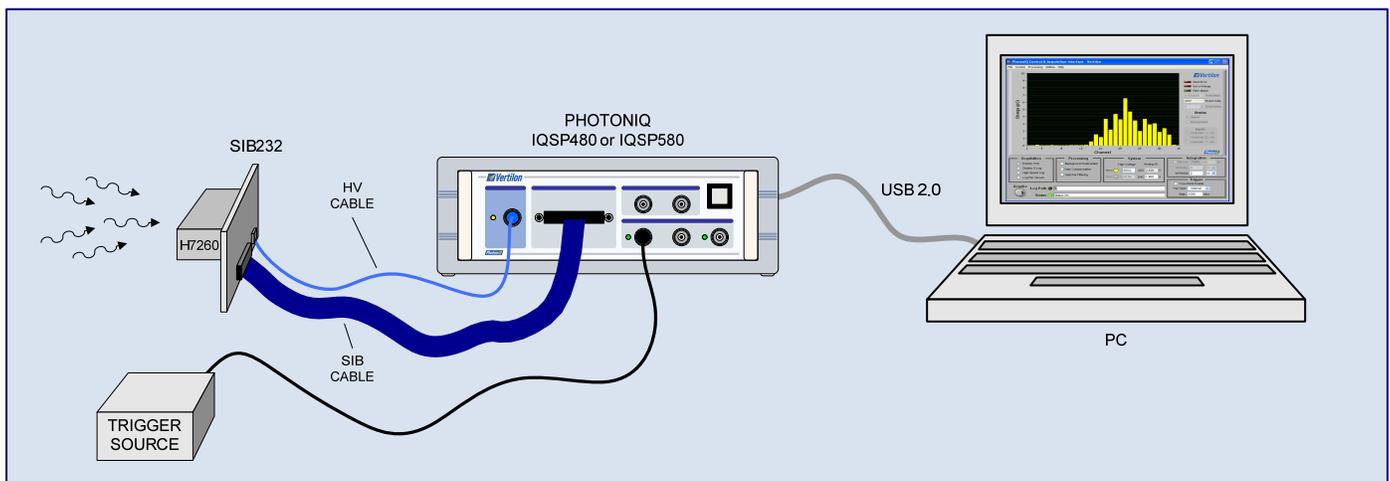


Description

The SIB232 PMT Sensor Interface Board (SIB) provides the electrical and mechanical connectivity between a Hamamatsu H7260 series linear 32 channel photomultiplier tube and a Vertilon PhotoniQ multi-channel data acquisition system. The H7260 mounts directly to the bottom of the SIB232 through 35 socket pins where electrical connections to the 32 PMT outputs 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 PMT outputs to the PhotoniQ. The negative bias to the H7260 is supplied from the high voltage output on the PhotoniQ through a high voltage cable to a dedicated connector on the SIB232. Also available on the SIB232 are two outputs that are used in conjunction with the PMT's last dynode signal — an amplified version of the signal and a pulse discriminator trigger output.

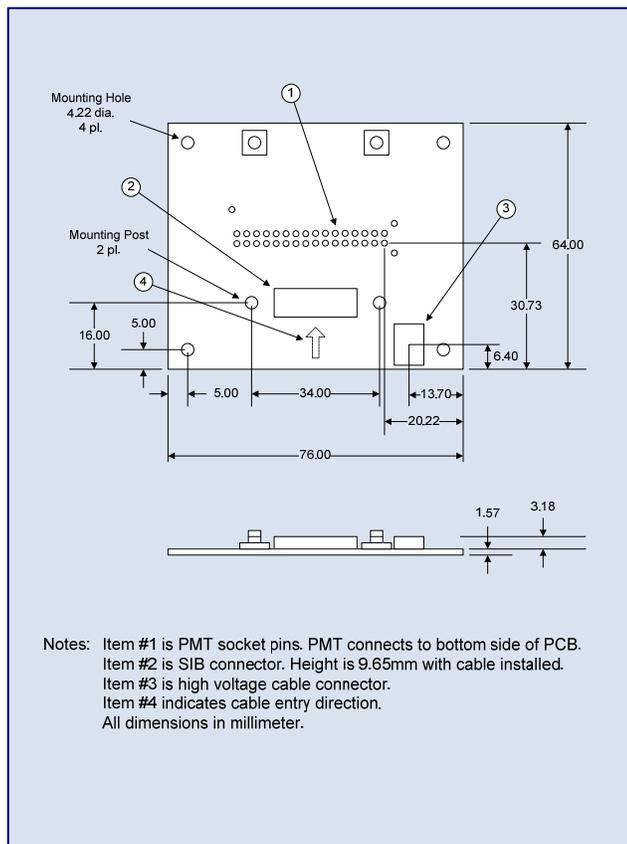


Typical Setup

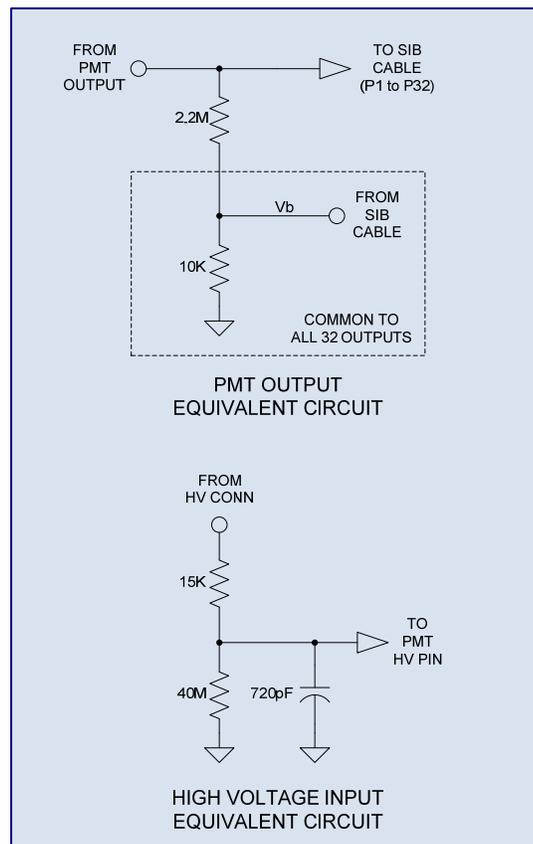


In a typical fluorescence detection setup, the Hamamatsu H7260 PMT is plugged into the SIB232 sensor interface board which in turn connects using a SIB cable to a Vertilon PhotoniQ IQSP480 or IQSP580 multichannel data acquisition system. An optical grating on the front surface of the PMT filters the incoming fluorescence signal such that each of the PMT's 32 outputs is sensitive to a particular ultraviolet band. Events are acquired by the PhotoniQ when triggered by either an external source such as a pulsed laser excitation, or by the SIB232's on-board discriminator connected to the PMT's last dynode output. Each trigger causes the PhotoniQ to integrate and digitize the 32 charge signals from the H7260 and output them in a data packet over a USB connection to the PC. The PhotoniQ also supplies the PMT with a negative high voltage bias of up to -925 volts through a specialized high voltage cable.

Mechanical Data



Electrical Data



Ordering Information

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

SIB232 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 SIB232. Included with high voltage power supply option HVPS001 or HVPS002 for IQSP480 / IQSP580.

See SIB232 User Guide for complete specification.

Order SIB232D for ultra-low current applications.

See Hamamatsu H7260 datasheet for specific device information

SIB Connector Pinout

#	NAME	#	NAME
1	VB	2	HVMON
3	SIB DIN	4	SIB CLK
5	P16	6	P32
7	P15	8	P31
9	P14	10	P30
11	P13	12	P29
13	P12	14	P28
15	P11	16	P27
17	P10	18	P26
19	P9	20	P25
21	P8	22	P24
23	P7	24	P23
25	P6	26	P22
27	P5	28	P21
29	P4	30	P20
31	P3	32	P19
33	P2	34	P18
35	P1	36	P17
37	SIB DOUT	38	SIB NCS
39	SIBDAC	40	+5V

Pins 2, 3, 4, 37, 38, 39, 40 used by PhotoniQ and should be left unconnected

Pins 1 should be grounded when PhotoniQ not used

Ground supplied through cable shielding



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