

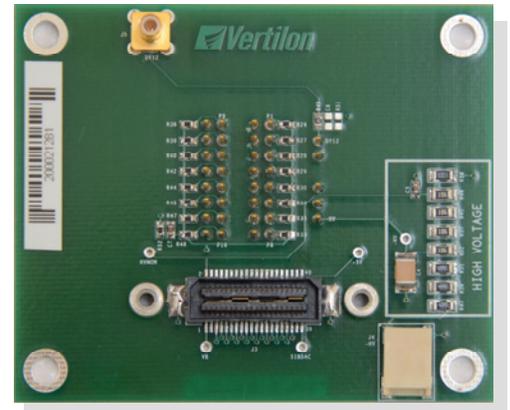


SIB116A PMT Sensor Interface Board H8711 Series

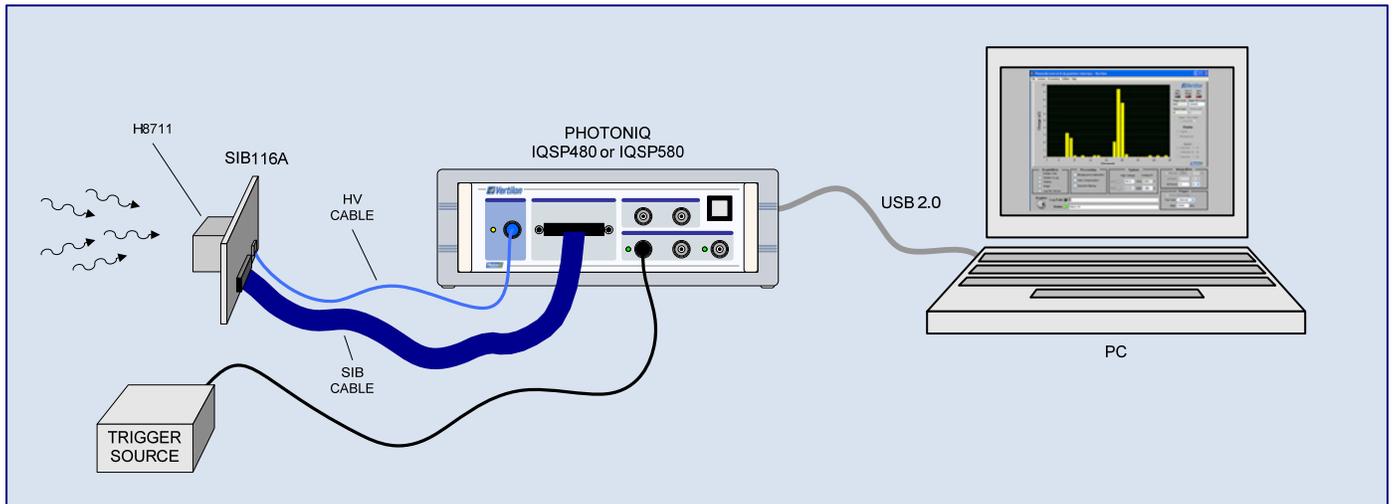
Product Sheet

Description

The SIB116A PMT Sensor Interface Board (SIB) provides the electrical and mechanical connectivity between a Hamamatsu H8711 series 16 channel photomultiplier tube and a Vertilon PhotoniQ multi-channel PMT data acquisition system. The H8711 mounts directly to the bottom of the SIB116A through 37 socket pins and electrical connections to the 16 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 16 PMT outputs to the PhotoniQ. The high voltage connection to the H8711 is made through a separate dedicated connector where a high voltage cable connects between it and the high voltage output on the PhotoniQ. For timing applications, a direct connection to the last dynode output from the PMT is available on the SIB116A.

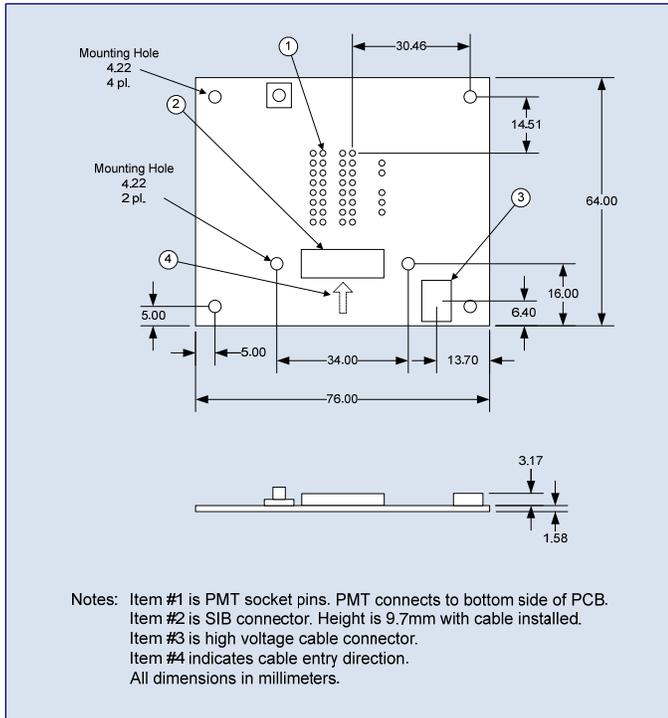


Typical Setup

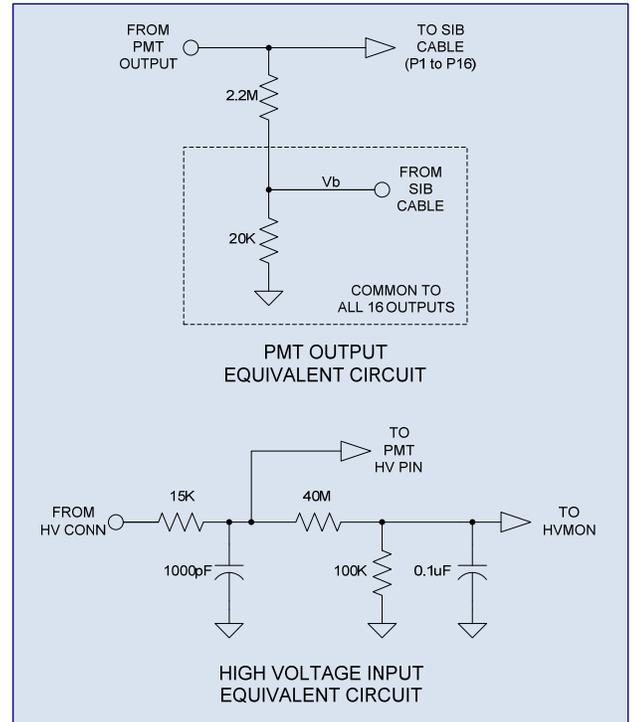


In a typical setup the Hamamatsu H8711 PMT is plugged into the SIB116A Sensor Interface Board which in turn connects to a Vertilon PhotoniQ IQSP480 or IQSP580 multichannel data acquisition system using a SIB cable. When triggered from an external source, the PhotoniQ integrates and digitizes the 16 charge signals from the H8711 and outputs a data packet to the PC over a USB connection. The PhotoniQ also supplies the PMT high voltage bias through a specialized high voltage cable.

Mechanical Data



Electrical Data



General Safety Precautions

Warning: HIGH VOLTAGES – Voltages can exceed 2000V

Operate device within specified range

Electrostatic discharge sensitive

Do not operate in wet, damp or explosive atmosphere

See Hamamatsu H8711 data sheet for specific handling information

SIB Connector Pinout

| # | NAME | # | NAME |
|----|----------|----|---------|
| 1 | VB | 2 | HVMON |
| 3 | SIB_DIN | 4 | SIB_CLK |
| 5 | P16 | 6 | N/C |
| 7 | P15 | 8 | N/C |
| 9 | P14 | 10 | N/C |
| 11 | P13 | 12 | N/C |
| 13 | P12 | 14 | N/C |
| 15 | P11 | 16 | N/C |
| 17 | P10 | 18 | N/C |
| 19 | P9 | 20 | N/C |
| 21 | P8 | 22 | N/C |
| 23 | P7 | 24 | N/C |
| 25 | P6 | 26 | N/C |
| 27 | P5 | 28 | N/C |
| 29 | P4 | 30 | N/C |
| 31 | P3 | 32 | N/C |
| 33 | P2 | 34 | N/C |
| 35 | P1 | 36 | N/C |
| 37 | SIB_DOUT | 38 | SIB_NCS |
| 39 | SIBDAC | 40 | +5V |

Pins 2, 3, 4, 37, 38, 39 and 40 reserved for PhotoniQ and should be left unconnected if PhotoniQ is not used

Pin 1 grounded when not connected to a PhotoniQ

Ground supplied through SIB cable shielding



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