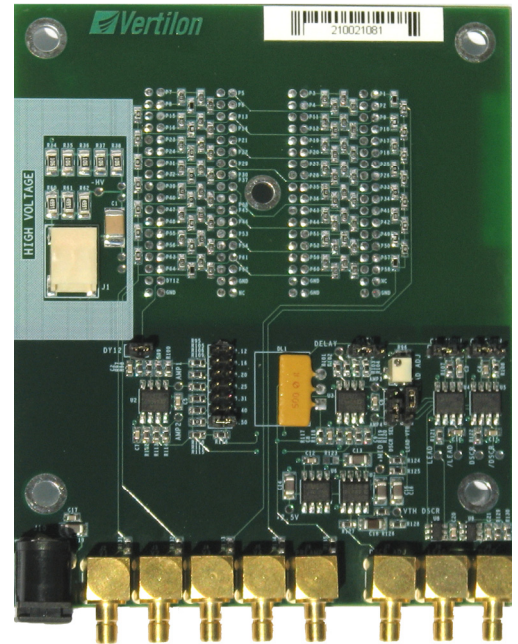
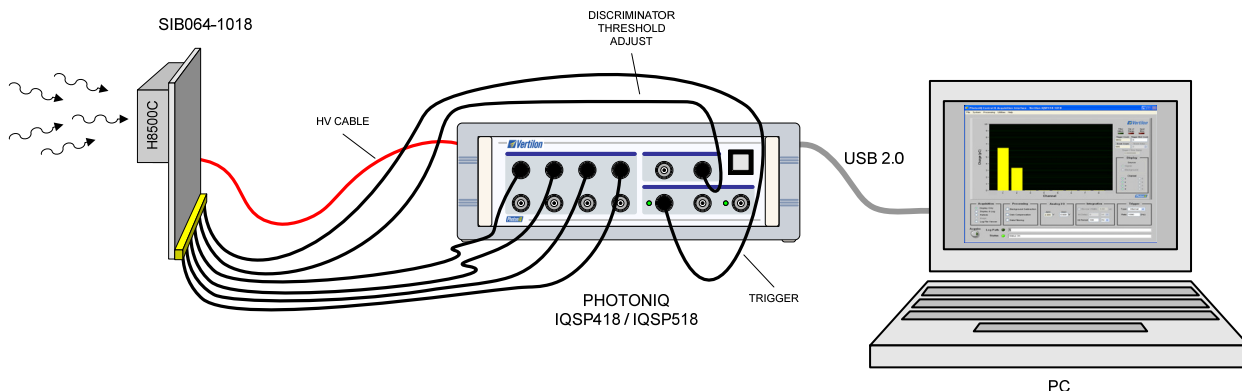


Description

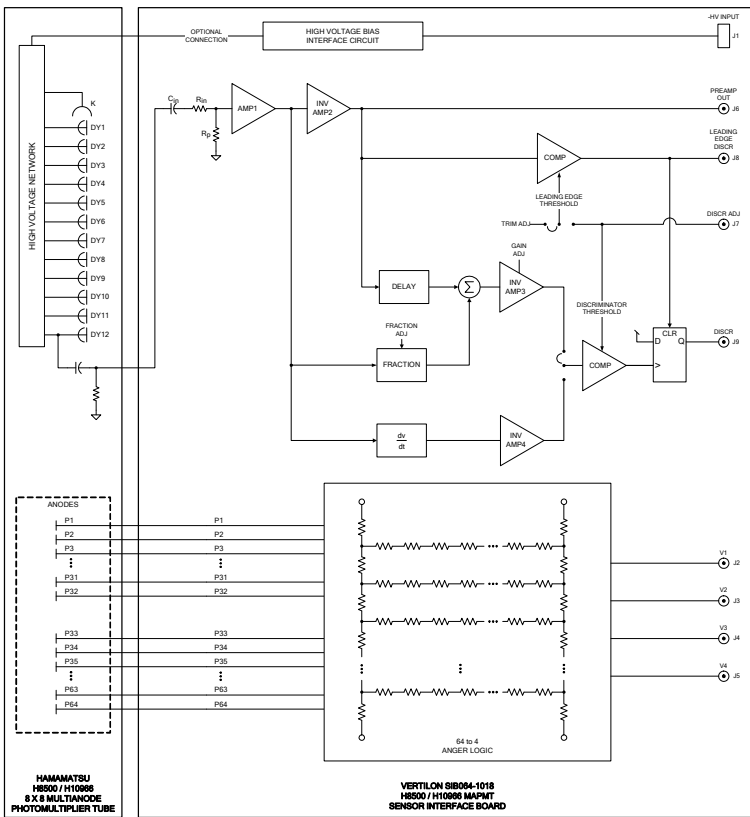
The SIB064-1018 multianode photomultiplier tube interface board provides the mechanical and electrical connectivity between the Hamamatsu H8500 or H10966 64 anode PMT and external signal processing electronics such as Vertilon's PhotoniQ multichannel data acquisition systems. The H8500 / H10966 is mounted to the bottom side of the SIB064.1018 through 144 socket pins that connect the PMT's 64 anode signals and last dynode output to the board. The anode signals are routed to an on-board resistive anger logic circuit that generates four anger signal outputs. These outputs connect using four coaxial cables to Vertilon's PhotoniQ IQSP418 or IQSP518 multichannel data acquisition system where the charge from each is separately integrated, digitized, and sent to a PC for display or further signal processing. For applications utilizing the last dynode output of the H8500 / H10966, the SIB064-1018 includes a two stage high speed preamplifier whose output is available on an SMB connector. One of three on-board discriminators can be used with the last dynode signal to generate a trigger to the data acquisition system or other external electronics. The outputs from a leading edge, constant fraction, and zero slope discriminator — which respectively generate trigger signals based on threshold, percentage of pulse height, and pulse peak — are available on SMB connectors. Several user adjustments are included for optimizing system gain and trigger thresholds for the discriminators. When using an H8500C or H10966A PMT, the negative high voltage bias to the PMT's cathode is supplied through their high voltage cables. This cable is compatible with the high voltage SHV output from the PhotoniQ. Alternatively, when using an H8500D or H10966B, four optional socket pins can be added to the board for direct connection of the PMTs high voltage input. In this case, the high voltage bias is supplied through the SIB064-1018 on a specialized cable from the PhotoniQ.



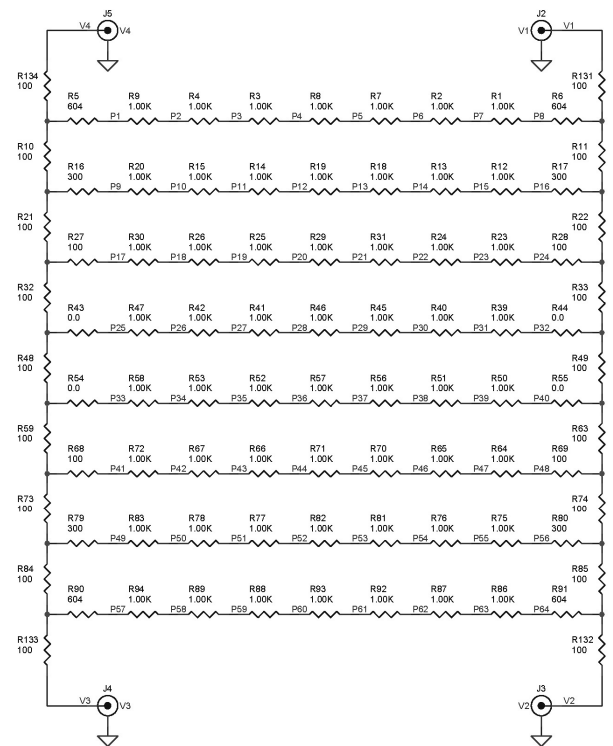
Typical Setup



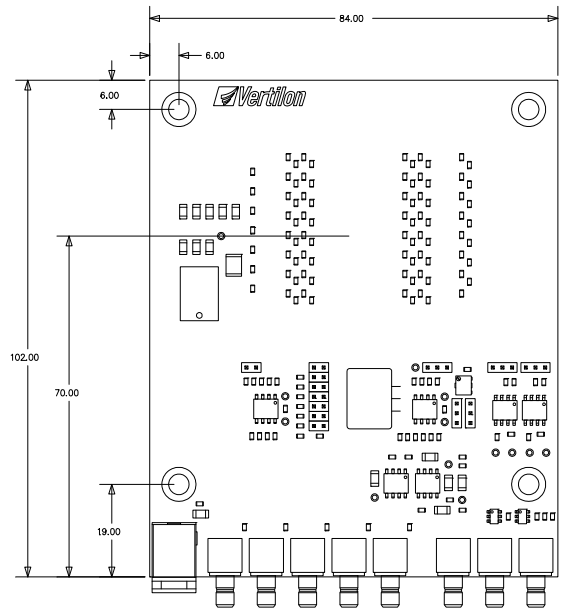
Functional Block Diagram



Anger Logic Circuit



Mechanical Data



ALL DIMENSIONS IN MILLIMETER

Ordering Information

SIB064-1018 is directly compatible with Vertilon PhotoniQ IQSP418 / IQSP518 expandable charge integrating data acquisition systems. PhotoniQ systems sold separately. See PhotoniQ User Manual for performance specifications.

SIB064-1018 includes power supply and six SMB120 coaxial cables, SMB plug to BNC plug, 120 cm.

See SIB064-1018 User Guide for complete specification.

See Hamamatsu H8500 / H10966 datasheet for specific device information



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