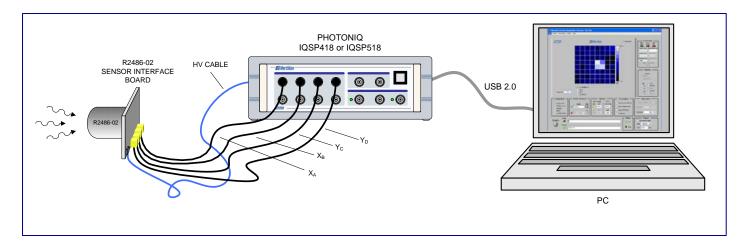


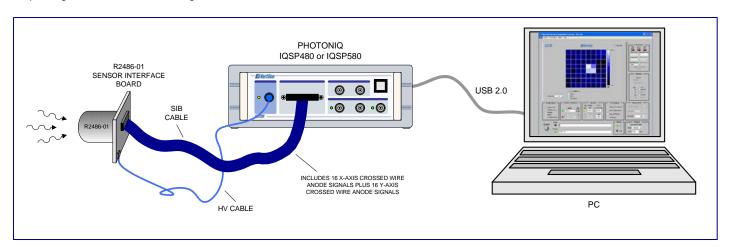
Hamamatsu R2486 PMT Readout

Application Note

The Hamamatsu R2486 series photomultiplier tube is a large area, high speed device designed for use in gamma cameras, PET, and radiation imaging. The 16 by 16 crossed wire anode configuration allows for high spatial resolution and position linearity with minimal readout electronics. Vertilon's PhotoniQ data acquisition systems represent an affordable off-the-shelf DAQ solution for systems utilizing these high performance PMTs. For the least complex solution, the PhotoniQ IQSP418 / IQSP518 PMT data acquisition systems are recommended. These expandable two to eight channel DAQs easily connect to a Hamamatsu R2486-02 at minimal cost and with little additional hardware and software. The "-02" configuration of the PMT is used because it includes the resistive weighting network that reduces the 32 crossed wire anode signals down to just four outputs. Shown below is a complete solution that includes the PhotoniQ high voltage power supply option to bias the R2486 PMT.



For higher performance applications that require better spatial resolution and linearity, the Hamamatsu model R2486-01 is recommended. With this device no resistor network is included so that all 32 crossed wire anode signals are brought out. Vertilon's PhotoniQ 32 channel IQSP480 / IQSP580 shown below is a natural fit for this configuration. Supplied with the high voltage power supply option, this solution includes all hardware and software to acquire signals from the PMT and log the results to a PC.





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