



Instruments That Advance The Art

Pixie Hybrid Quick Start Guide

Pixie Viewer Version 5.02 and above

Introduction

Thank you for using our products. This document contains the most important information to get started with the Pixie Hybrid system. Please read the entire document and keep it nearby as you go through the installation of hardware and software and the initial setup of the detector system. Please also read at least the first 3 chapters of the Pixie Hybrid User Manual provided with the software distribution

System Requirements (Section 1.3 of the User Manual)

1. PXIe chassis with remote or embedded controller
2. Windows 7, 10 (32bit or 64 bit)
3. Igor Pro license 6.x or higher
4. About 100 MB of disk space for the program plus sufficient space for acquired data

Hardware Setup (Section 2.1 of the User Manual)

The Pixie Hybrid is a PXIe hybrid module, powered by a PXIe chassis. If using a remote controller, first install the PC hardware of the PCIe bridge in the host PC and make the appropriate connections to the PXIe chassis. If using an embedded controller, no external connections are required (besides mouse, keyboard and monitor).

Place the Pixie Hybrid modules into any PXIe/PXI hybrid slot with the chassis still powered down, then power up the chassis (Pixie Hybrid modules are not hot swappable). If using a remote controller, be sure to boot the host computer after powering up the chassis.

Connect the detector or preamplifier outputs to the SMB analog inputs of the Pixie Hybrid. SMB-BNC adapter cables are provided by XIA for each module. Make sure to set the input termination appropriately to 50 Ohm or High-Z using the small switches behind the Pixie Hybrid front panel before installing the module in the chassis.

Software Setup (Section 2.2 of the User Manual)

1. If you have a remote controller, install the driver software for the controller.
2. Install Igor Pro, version 6.2 or higher. This software can be downloaded from <https://www.wavemetrics.com/support/demos.htm> and activated with the license information purchased from XIA. A 30-day trial is available for free.
3. Install the Pixie Viewer, version 5.02 or higher. Go to <https://xiallc.atlassian.net/wiki/spaces/SUPPORT/pages/186286107/Pixie+Hybrid> to download the software installer Pixie_XXX_setup.exe for version XXX.
4. In case the Pixie software installer does not install PLX drivers properly, please download and install the PLX SDK **version 7.10** from <https://xiallc.atlassian.net/wiki/spaces/SUPPORT/pages/568557581/Broadcom+PCI+PCIe+SDK>

Getting Started (Section 2.3 of the User Manual)

To start the Pixie Viewer, double-click on the file “Pixie.pxp” in the installation folder. All panels have a [Help] button that opens a help window with description of the panel's controls. **When using Igor 7 or 8, make sure to use the 32bit version of Igor.**

After IGOR loaded the Pixie Viewer, the START UP panel should be prominently displayed in the middle of the desktop. In the panel, first specify the **number N** of Pixie modules in the system and the appropriate **chassis type**. Then specify the slot numbers of the modules – this allows addressing the modules from 0 to N-1 independent of the physical slot location in the chassis. Click on the [Start Up System] button to initialize the modules. If you want to try the software without a chassis or modules attached, click on [Offline Analysis].

From top menu **XIA**, select **Oscilloscope**. This opens a graph that shows the untriggered signal input from the detector. Click [Refresh] to update the display. The pulses should fall in the range 0-16K for modules with 14 bit ADCs, 0-64K for modules with 16 bit ADCs. If no pulses are visible or if they are cut off at the upper or lower range of the display, click [Adjust Offsets] to automatically set the DC offset. If the pulse amplitude is too large to fall in the display range, decrease the **Gain**. If the pulses have falling leading edges, toggle the **Invert** checkbox.

Specify the detector decay time tau and other parameters in various tabs of the PARAMETER SETUP panel as described in the User Manual.

Start a data acquisition from the **Run Control** tab and view the results in the MCA DISPLAY or LIST MODE TRACE display which can be opened via top menu XIA.

Further Information

Downloads:	http://support.xia.com
Support:	support@xia.com