ASI PLogic Control

ASI PLogic Control is a Micro-Manager plugin to control the Tiger Programmable Logic Card.

ASI PLogic Control comes with the latest nightly build of Micro-Manager 2.0.

Requirements

- Micro-Manager 2.0
- Tiger Controller
- PLogic card

Device Adapter

The ASITiger device adapter has several modes for the PLogicMode pre-init property, this mode is selected when you create or edit the hardware configuration.

PLogic Mode Table			
diSPIM	**4 Channel**	**7 Channel**	**Mode**
false	false	false	None
true	true	false	diSPIM Shutter
false	true	false	Four-channel shutter
false	false	true	Seven-channel shutter
true	false	true	Seven-channel TTL shutter

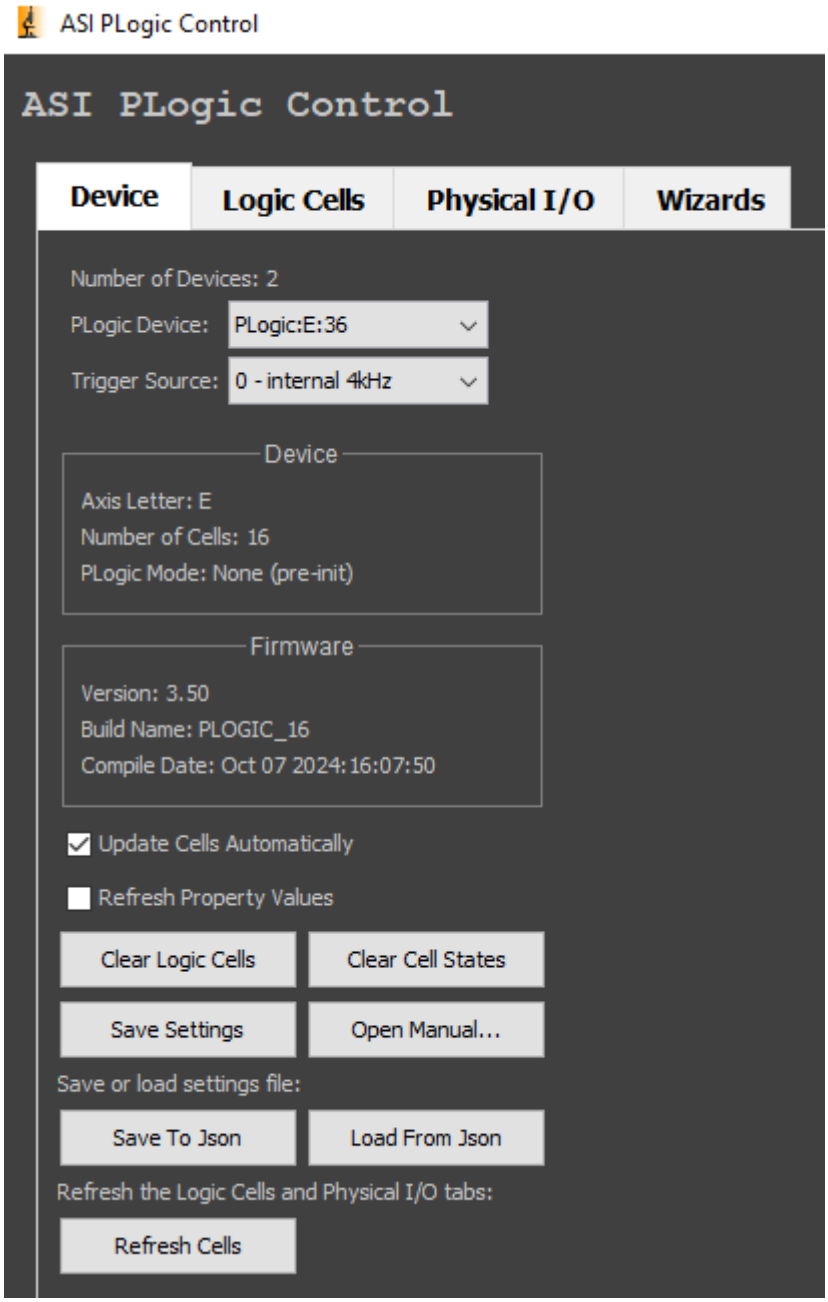
When the hardware configuration is loaded in Micro-Manager, the PLogicMode property determines what happens during initialization.

Pseudocode Initialization

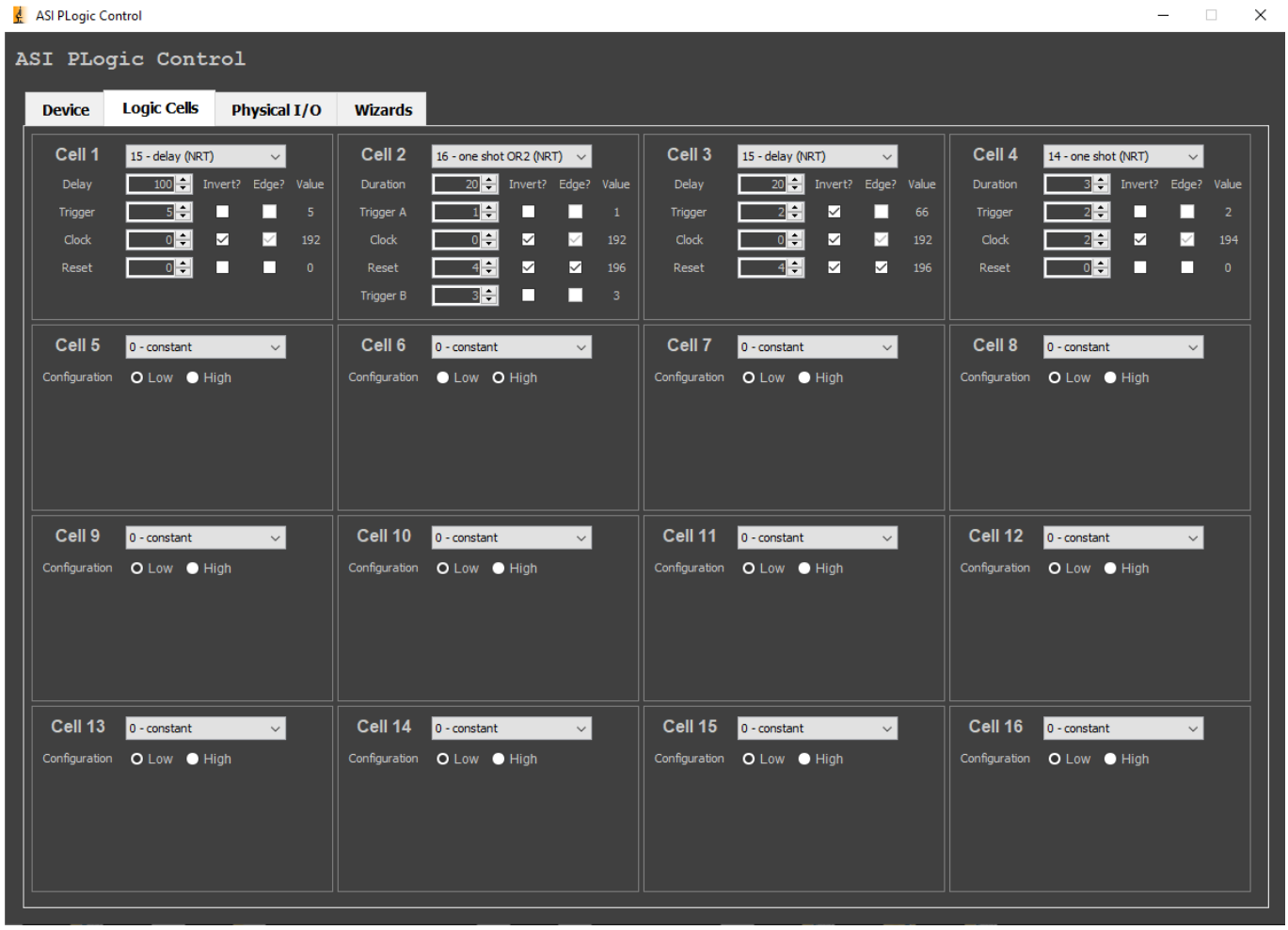
```
if diSPIM true:
    set property "TriggerSource" to "1 - Micro-mirror card"
    if 4 Channel true:
        set preset 14
    if 7 Channel true:
        set preset 12
        output #8 is Camera0 trigger
else:
    if 4 Channel or 7 Channel are true:
        set preset 36
```

Plugin Interface

Device Tab

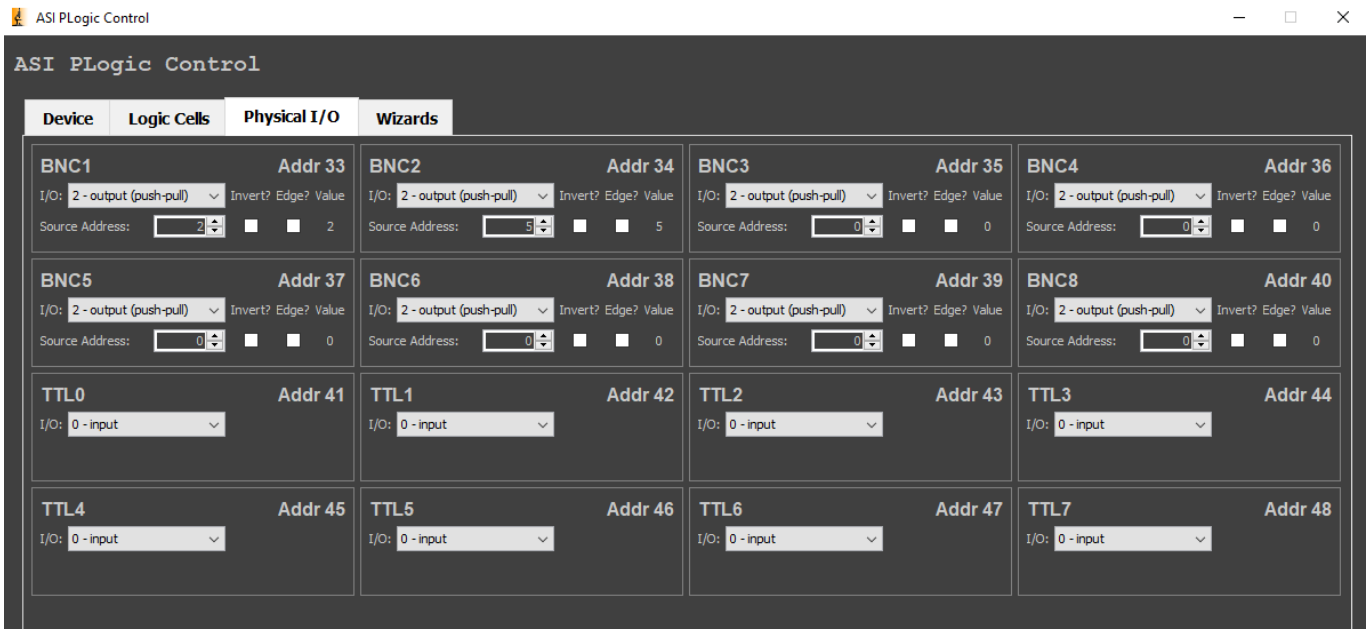


Logic Cells Tab



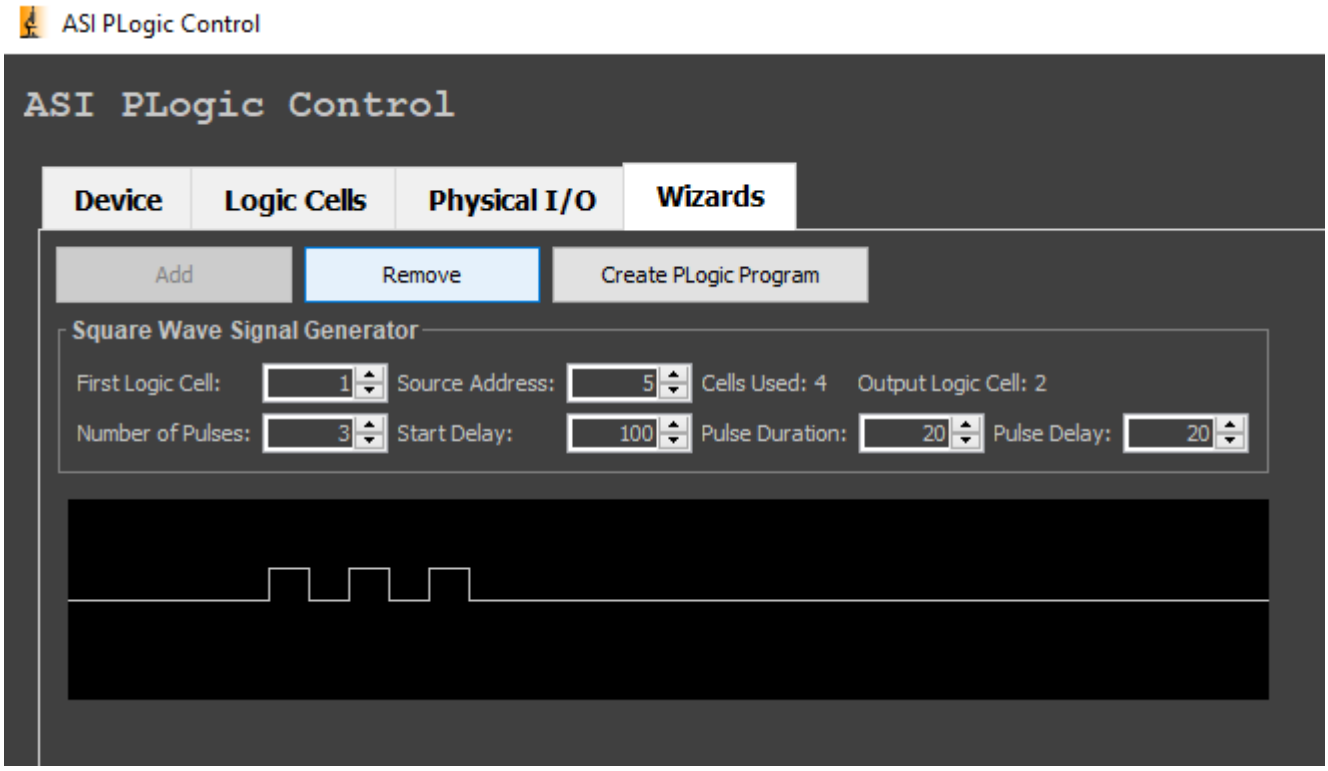
This tabs lets you configure the logic cells.

Physical I/O Tab



BNC1-8 on the front panel and Tiger backplane TTL0-7.

Wizards Tab



Buttons

Add/Remove: Create a new square wave pattern or remove the current one.

Create PLogic Program: Create the PLogic program for this square wave pattern.

Square Wave Signal Generator

First Logic Cell: The first logic cell that the PLogic program will be written to.

Source Address: The initial trigger source that will start the square wave pattern.

Cells Used: The number of logic cells required to create the square wave pattern. Depending on the complexity of the pattern, it uses 1-4 logic cells.

Output Logic Cell: The logic cell that will output the square wave pattern. You can connect one of the BNC outputs on the Physical I/O tab to this logic cell to see the pattern on an oscilloscope.

Square Wave Pattern

Start Delay, Pulse Duration, and Pulse Delay use quarter millisecond timing.
For example, setting the Start Delay to 100 means 25 milliseconds of delay.

Number of Pulses: The number of rising edges in the square wave pattern.

Start Delay: The time to wait before sending the first pulse.

Pulse Duration: The amount of time the pulse spends in logic high.

Pulse Delay: The amount of time spent in logic low between pulses.

Cell Complexity Cost	
Cells	**Description**
1	Single pulse, no start delay
2	Single pulse, with start delay
3	Multiple pulses, no start delay
4	Multiple pulses, with start delay

plogic, software, micromanager