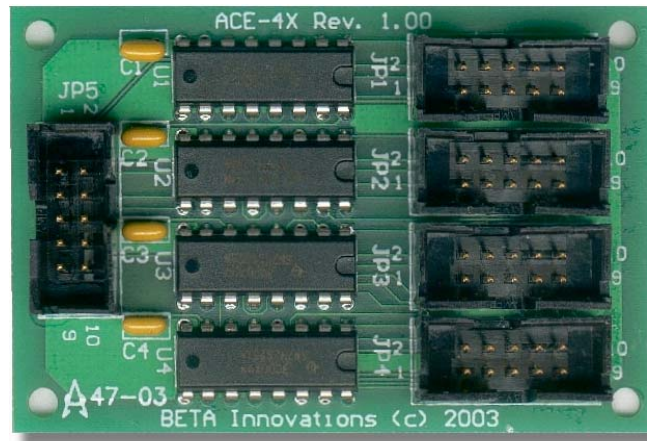


# ACE-4X Expansion Card



**Product ID.** : ACE-4X  
**Rev.** : 1.00  
**Date** : July 18, 2006  
**Firmware Rev.** : N/A

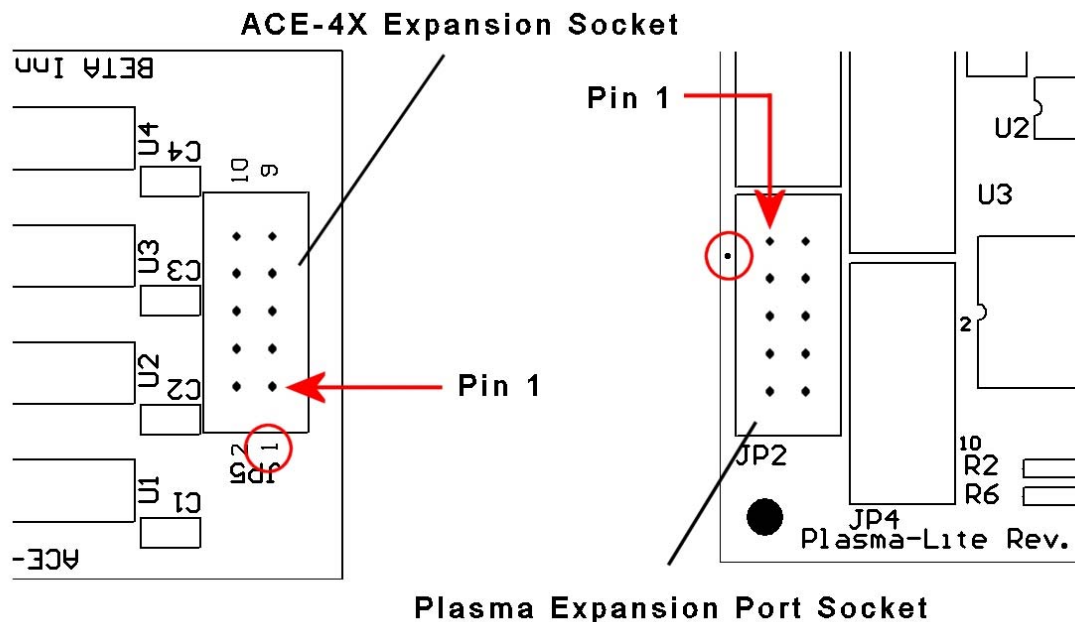
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## Connecting the ACE-4X Card

**IMPORTANT: DO NOT PLUG** the ACE-4X module into the Plasma expansion port while it is plugged into a USB port. Disconnect the Plasma module from the USB port before installing the ACE-4X card.

With the Plasma module disconnected from the USB bus, connect the ACE-4X card to the expansion port using the keyed ribbon cable supplied with your card. If using your own cable, care must be taken to ensure that the orientations of pin 1 on the cable connectors are matched to pin 1 of the Plasma and ACE-4X expansion sockets.

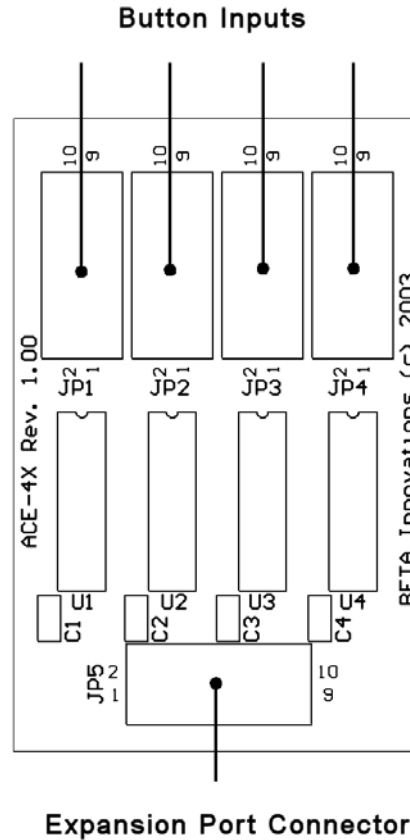


The ACE-4X card is a passive device and will not be automatically detected by your Plasma module. You will need to activate the expansion port of your Plasma in order to use the ACE-4X inputs.

See the Device Manager utility help file for details on activating expansion port features on your Plasma module.

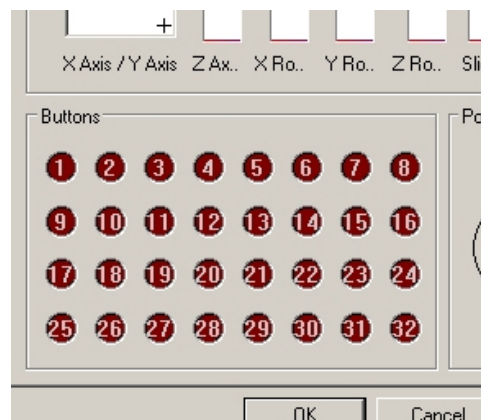
## ACE-4X Pin-Out

### ACE Expansion Module (Button Inputs Mode)

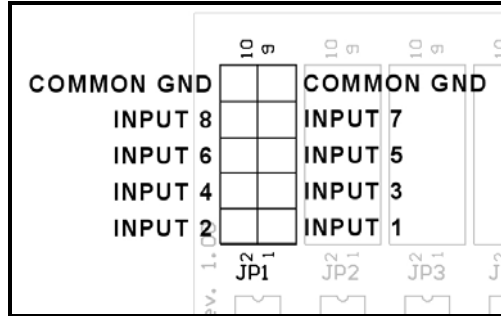


The ACE-4X expansion card is compatible with all Plasma ACE expansion ports. This card adds an additional 32 button inputs and requires no configuration. These additional button inputs will appear following Plasma's standard compliment of button inputs. For example, Plasma-Lite V2 standard buttons consist of 1 through 24. ACE-4X inputs will register as buttons 25 through 56.

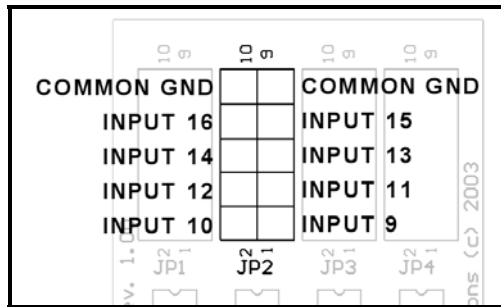
**NOTE: Button inputs 33 through 56 will not be visible in the Windows Games Controller applet.** These additional buttons are only available to applications that support DirectX Direct Input. If your application does not support these additional inputs, you can assign keyboard key macros by using *Keyboard Studio* for a complete keyboard emulation solution.



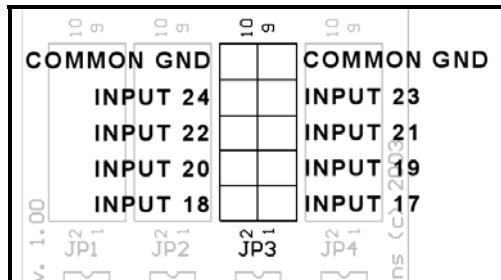
## JP1 – Inputs



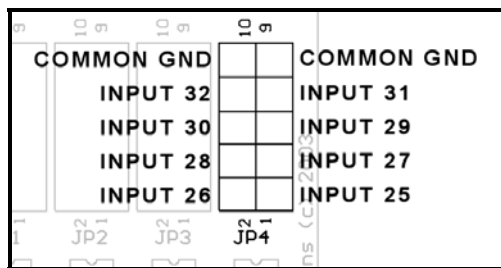
## JP2 – Inputs



## JP3 – Inputs



## JP4 – Inputs



## Hardware Specifications

All inputs on the ACE-4X are active low, which means you must ground an input in order to register a high "ON" signal at the output.

Maximum power consumption is 30mW (6mA) and is powered by the Plasma expansion port. You do not need to use an external power supply for this device.

**NOTE: DO NOT CONNECT any of the ACE-4X pins to external power supplies or voltage sources.** Although common grounds can be safely connected to external grounds, it is not recommended and should be avoided whenever possible. Doing so may adversely affect performance, possibly causing strange or erratic behavior under certain conditions.

Visit [www.betainnovations.com](http://www.betainnovations.com) for the availability of expansion modules and accessories.