



# HCA Tech Note

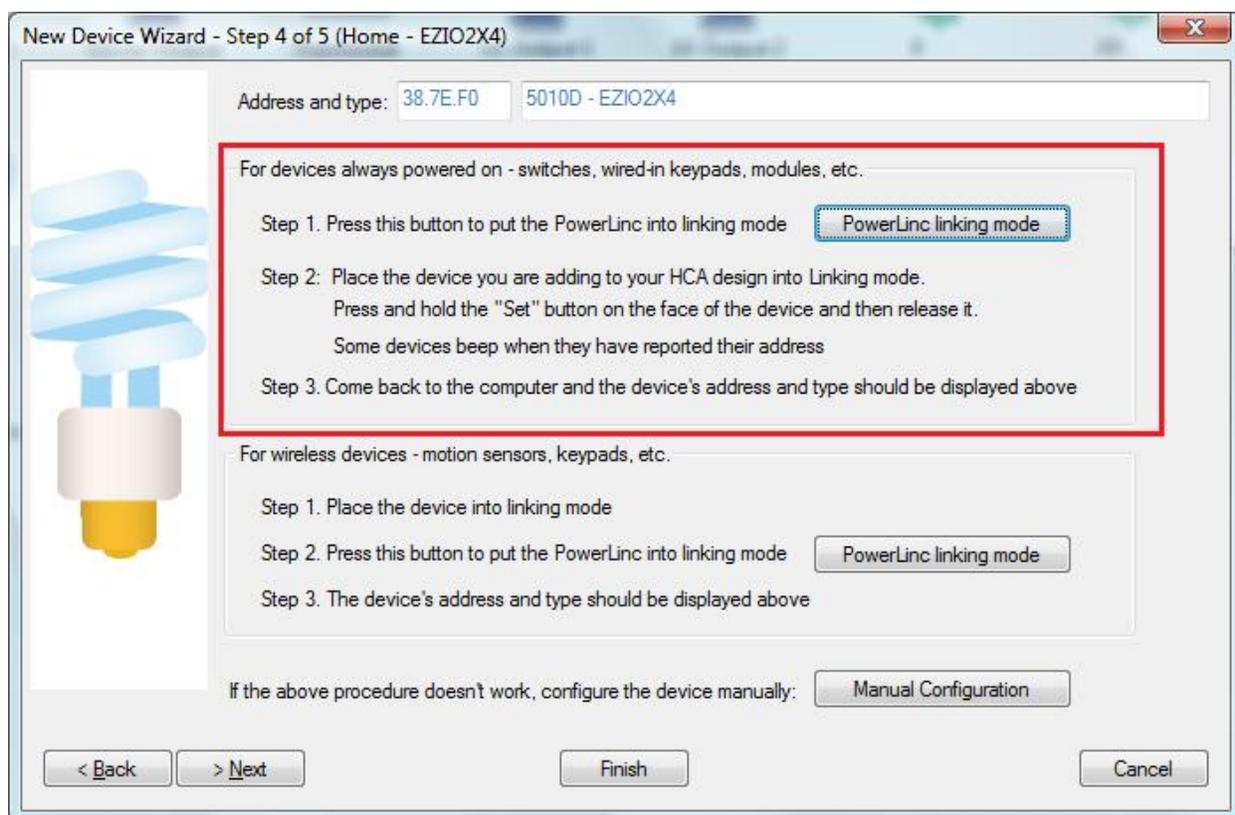
## Working with the Insteon EZIO2X4 – 4 input and 2 output

<http://www.smarthome.com/smartenit-ezio2x4-2-output-4-input-relay-controller.html>

The complexity of using the EZIO2X4 in HCA is that there are two relays and four sensors in the package. In HCA each device represents a single controllable unit. Because of this, when this type of device is added to your design, six HCA devices are added – one for each input and output.

Using the EZIO2X4 with HCA starts by adding it to your design. You need to be able to access the "Set" button on it to establish a link to it. The set button is located on the side of the module next to the status LED.

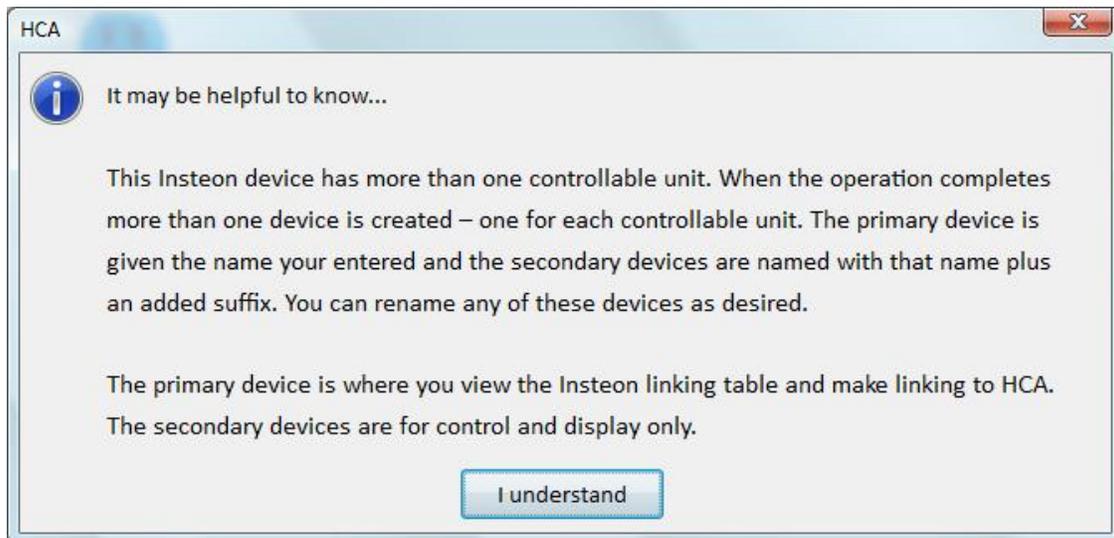
In the Add Wizard on step 3, choose "Insteon" as the manufacturer and then press the Next button. In step 4 press the dialog button to put the PowerLinc into linking mode and then press, hold, and release the set button on the EZIO2X4 to complete the link.





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After you complete the Add Wizard, this popup messages appears:

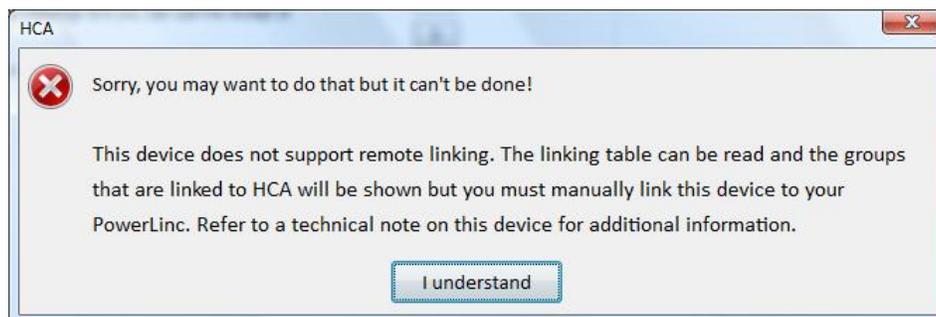


As explained above, six devices are created. The device for first sensor input is the "primary" device and the others are "secondary" devices. The sensor inputs can be used to trigger HCA programs or can be tested in programs. The output devices can be used in schedules or programs to control the relay.

When you open the properties of the primary device the "Insteon" and "Linking" tabs are available. When you open the properties of the secondary devices the Insteon tab directs you to the primary device and the linking tab is not seen.

Before the input can be used to trigger programs it must be linked to HCA. **Unfortunately this device can't be remotely linked to the PowerLinc (regardless of what the documentation says – the commands to place the device into linking mode do not work).**

If you try and link the inputs in the usual manner, this popup appears:



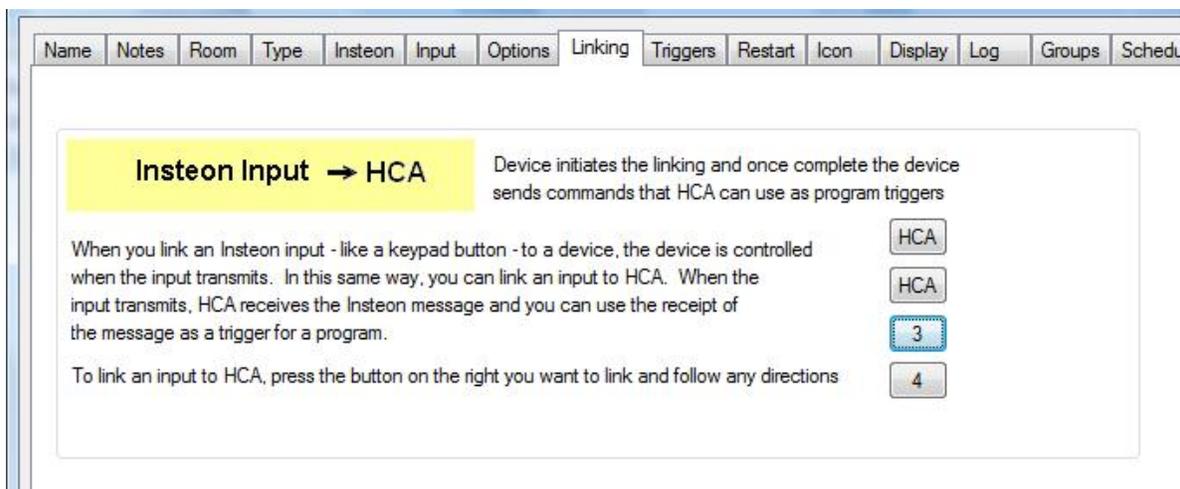


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The procedure for manual linking is documented in the EZIO sheet included in the box or can be downloaded from the SmartHome web site. Here is an abbreviated version.

1. Place the EZIO into linking mode by pressing and holding the set button for 10-12 seconds and then release. The LED will go off indicating it is waiting to be told which input is to be linked.
2. Tap the button a number of times equal to the input you are linking. Tap once for input 1, tap twice for input 2, etc. After the last tap, press and hold the set button for 3-4 seconds and then release. The LED will begin to flash about once per second indicating it is ready to link.
3. Go to the PowerLinc and press and hold its set button until it beeps and then release. This completes the link.
4. Go back to the EZIO and the LED will still be blinking. Press and hold the set button 3-4 seconds and release to get it out of linking mode.
5. Repeat this procedure for each input you want to link. (Pause a minute to reflect upon programming standards that are really nice when everyone implements to that standard).

After you have linked the inputs you need, back in HCA open the properties of the primary device, choose the Insteon tab and use the button to read in the linking table of the EZIO. Next, choose the linking tab. The linked inputs should now show with the button text as "HCA".



To create a trigger for an input, open the "Triggers" tab of the program and press "Add Trigger". This trigger will cause the program to start when input 2 detects an "ON" condition:



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The screenshot shows a 'Trigger' configuration window. At the top, 'Trigger Type' is set to 'Insteon Message'. Below this, the text 'Start the program on this trigger:' is followed by a text box containing 'When Home - EZIO2X4 Input 2 sends On'. Underneath is a section for 'Device sending command' with a dropdown menu showing 'Dev: Home - EZIO2X4 Input 2'. The 'Command' section contains a list of radio button options: 'On' (selected), 'Off', 'Dim', 'Bright', 'Fade Start', 'Fade Stop', 'All On', 'All Off', 'Fast On', and 'Fast Off'.

The icon on a HCA display can show the state of the input. It is best to use an icon that has two representations – one for ON and one for OFF. For example, the Door, Garage Door, or Window icons have two representations.

Depending upon how the sensor works in your application, ON may be open or closed with OFF being the opposite. HCA supplies different sets of icons for each of these – one where ON shows a closed icon and one where it shows an open icon. Choose the set that works best for your application.

Messages from controllers that are linked to the outputs are received and cause HCA to keep its state up to date as long as HCA has the most recent copies of the EZIO and the controller linking tables.

Unfortunately you can't use the HCA Visual Scene Editor (VSE) with this device since HCA is unable to create functional links in its linking table. This is due to the same problem that requires you to manually link the



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inputs as described above. You can still control the outputs from HCA in schedules and programs. The inputs, once manually linked, can be used to trigger programs.