



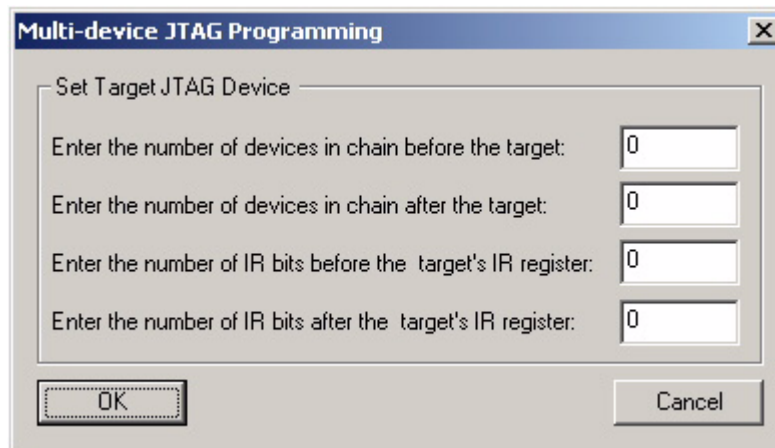
## Multiple-Device JTAG Configuration in the Cygnal IDE

### JTAG Chain Configuration

To configure the Multiple-Device JTAG Chain feature of the Cygnal IDE you need to provide the following information:

- The number of devices before and after the target.
- The number of bits in the IR registers of the devices before and after the target.

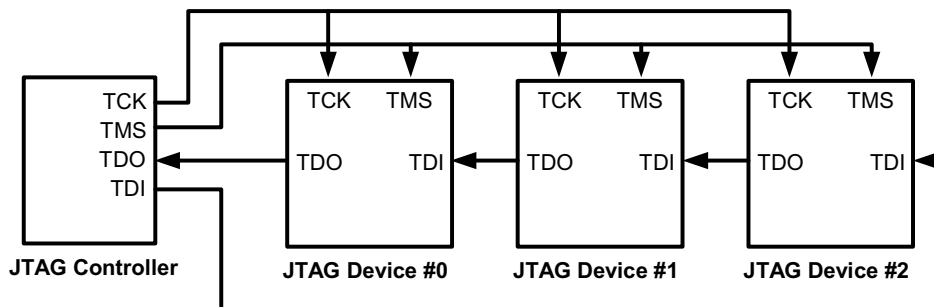
In the Cygnal IDE, press the following key combination, **ctrl+shift+m**, to open the Multi-device JTAG Programming dialogue box shown below. This feature is included in v1.7 and later of the IDE.



### Order of Devices

Refer to the following diagram to determine the order of the devices in the chain.

- Device #0 is before Device #1 and Device #2
- Device #1 is before Device #2 and after Device #0.
- Device #2 is after Device #1 and Device #0.



Typical JTAG Chain Connection



### Example

This example uses three devices placed in the order shown on the previous page with the following configuration:

Device #0 has a 16 bit IR register.

Device #1 has an 8 bit IR register.

Device #2 has a 16 bit IR register.

If the Cygnal device that you want to program is Device #0, enter the following configuration information into the Multi-device JTAG Programming window, as shown below:

- There are 0 devices before the target.
- There are 2 devices after the target.
- There are 0 IR bits before the target's IR register.
- There are 24 IR bits after the target's IR register.

