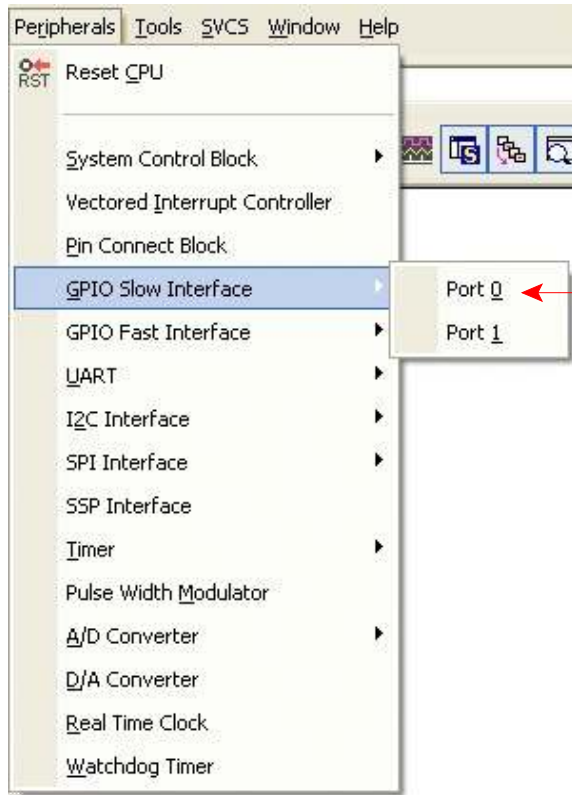
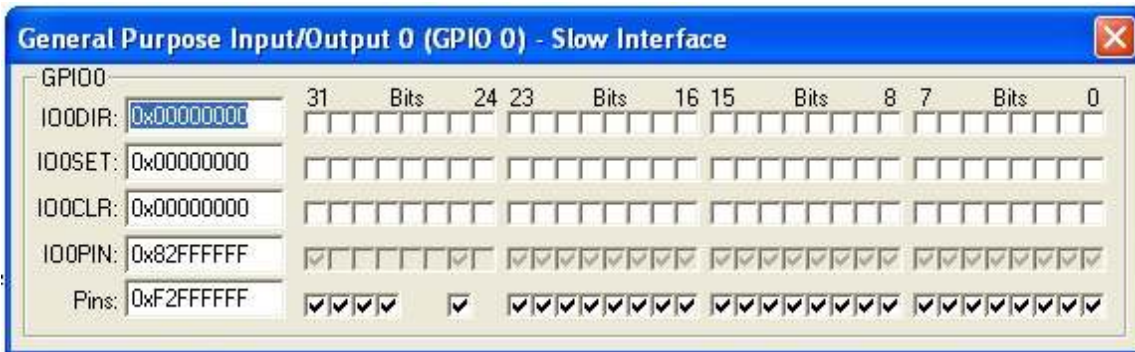


Viewing I/O Operation

When testing a program, in simulation or with hardware debugger, it is possible to observe data present on the general purpose I/O ports (GPIO) using the debugger. Start the debugger, click on the Peripherals tab on the tool bar, and select GPIO Slow Interface > Port 0.

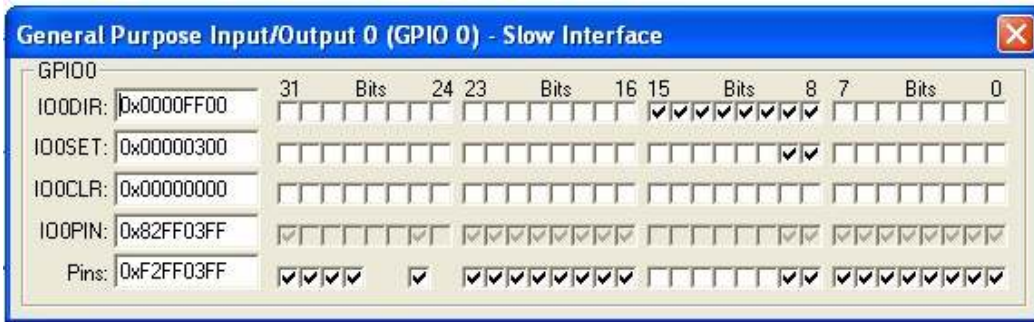


A pop-up box will open like this:



You can drag this box to a convenient location on the screen. Displayed are little squares that represent bits. A check mark in a square represents a 1 and no check a 0. When you single step a program that does a store to the memory addresses for IO0DIR and IO0SET you will see the bit pattern of the word you write displayed on the respective line and the affect it has on the bottom row labeled Pins which represents the actual logic level (and hence voltage) present on the physical pin of the microcontroller. You may not see check marks in the boxes on the IO0CLR line when you store to IO0CLR but you should see check marks on the Pins line change.

After writing 0x0200 to the IOOSET register. Note that pins 10 to 15 are not checked which means they are at a logic 0 or low voltage while pins 8 and 9 are checked and thus at a logic 1 or high voltage:



Then after writing 0x0100 to the IOOCLR register pin 8 is not checked meaning it has now been cleared to a logic zero state which is a low voltage:

