

## Notes on the RoboCam RC-1 cameras:

1. Autoload is only triggered by a high to low transition on the autoload pin. The datasheet mentions a few other ways to trigger an autoload sequence, but none of them worked.
2. Autoload does not work when the config pins are connected to tristated Xilinx pins. So you either use the Config program which connects with the cameras through the Xilinx, or you use an AT24C01A serial sram
3. The minimal config change was to write 4D (hex) to address 14 (hex). This enables the QCK (clock) and FST (frame start) signals.

## Notes on setting up auto configuration:

The serial eeproms we have (AT24C01A - data sheet linked on the class web page) work great to configure the camera we have. The only gotcha is that the SDA & SCL pins cannot be connected to Xilinx pins (even if they are tri-stated).

Connect the serial eeprom exactly as shown on the third from the last page of the VV5300 datasheet (remember that the SDA pin is 18 and the SCL pin is 19). You will also need to wire up a debounced switch (normally high, low when the button is pushed) and connect it to pin 14 of the RoboCam.

The AT24C01A is easily programmed with the Pilot U84 programmer:

1. if there are any add-on modules plugged into the top the programmer, turn off the power and pull them out. Remember to turn power back on.
2. run advin.exe while in the C:\advin directory.
3. choose the spSPROM module.
4. configure your device (ATMEL 24C01A) (use cursor keys to navigate)
5. fill the programmers buffer with zeros (BUFFER->FILL)
6. edit the buffer to add you data (BUFFER->EDIT)

The data that the VV5300 expects to see, is address and data byte pairs that correspond to the configuration registers you want to alter. The address byte is first and the data byte is second. A zero byte in the address field will halt the configuration process. Here is an example that writes 0x4D to address 0x14 and then finishes:

```
EEPROM address Data
-----
0x00 0x14
0x01 0x4d
0x02 0x00
. .
. .
. .
0x7f 0x00
```

Now all you have to do to force a configuration is to press your button.