Updating FEC Firmware and Changing Its IP Address – on Windows System

1. Preparation:

 (1) Enable jumbo frames for the Ethernet card.
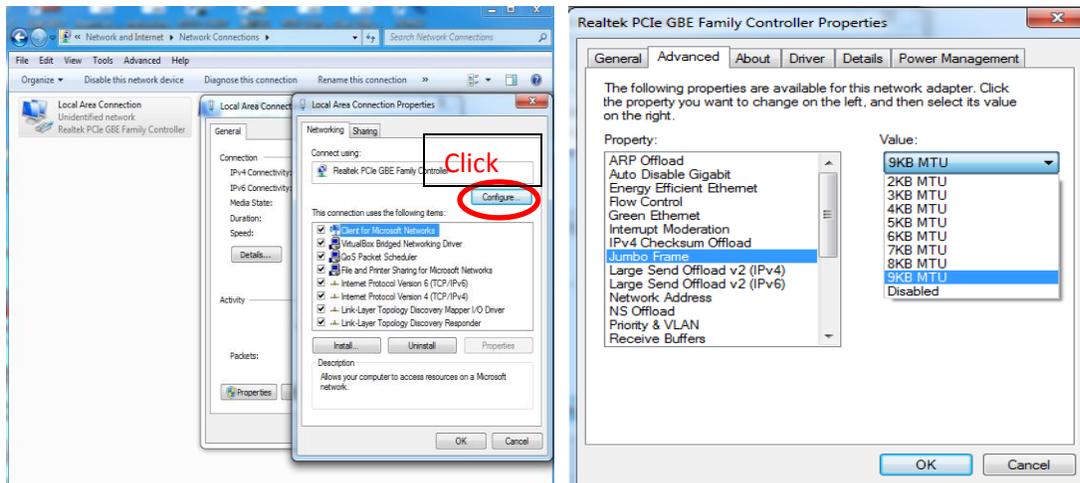
(2) Stop windows firewall.
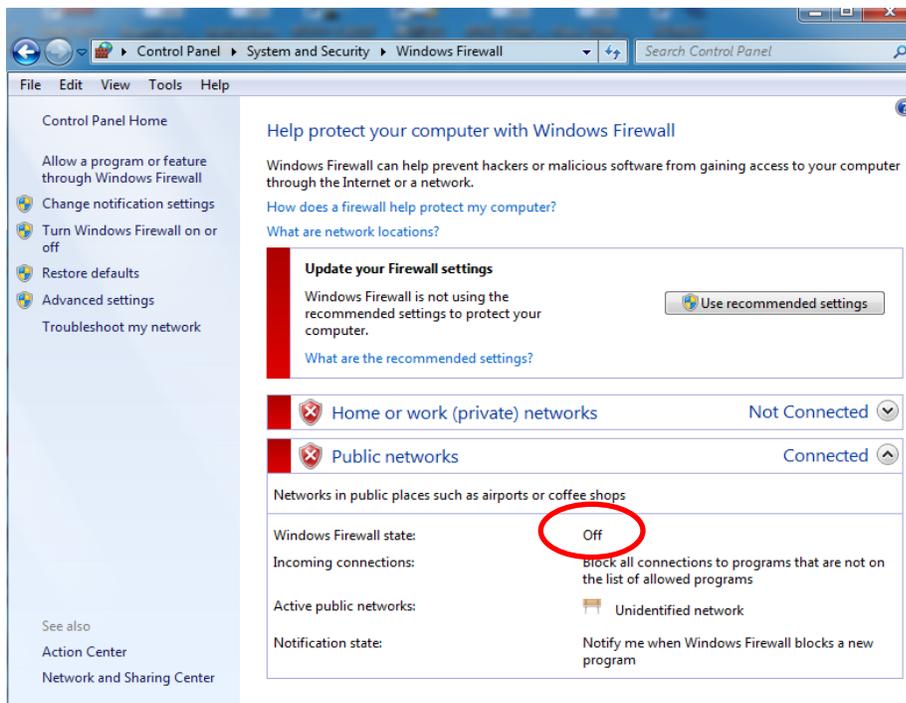
(3) Install Xilinx WebPack software. Go to www.xilinx.com, find Products -> design tools -> ISE Design Tools -> Lab Tools. (Only Lab Tools is needed. To download, you may need to create an account.)
 (4) Install LabVIEW.

2. Connecting Xilinx programming dongle to the FEC card.
(1) Connect Xilinx programming dongle to the computer, wait until driver is installed. Then the orange "status" led should be on.
(2) Make sure FEC card is off. Then connect the flat cable of the programmer to the FEC connector (U15).
(3) Power on the FEC, then the "status" led would go green if everything OK.

3. Update firmware.
(1) Run iMPACT(64 bit), follow **exactly** the pages 3-5 in "FEC Firmware Upgrade Tutorial _ V0.pdf".
(2) I suggest using permanent programming. Follow the pages 9-11 in the same pdf file. If no error comes out, that means firmware is successfully updated.
(3) I used the version v207.

4. Change IP address.
(1) A little tricky: should know IP before you change it.
(2) A LabVIEW program is used: srsSC2.vi
(a) start the LabVIEW program if it is not started when opened.
(b) choose "Expert" mode, you'll see "B_I2C" tab.
(c) set Local IP and Destination IP correctly (remember we know FEC IP right now).
(d) Clike "READ", the current configurations can be seen. The first 4 lines are important: version number (207), MAC address (A35+3: 00-0A-35-00-00-03) and FEC IP (10.0.0.2).
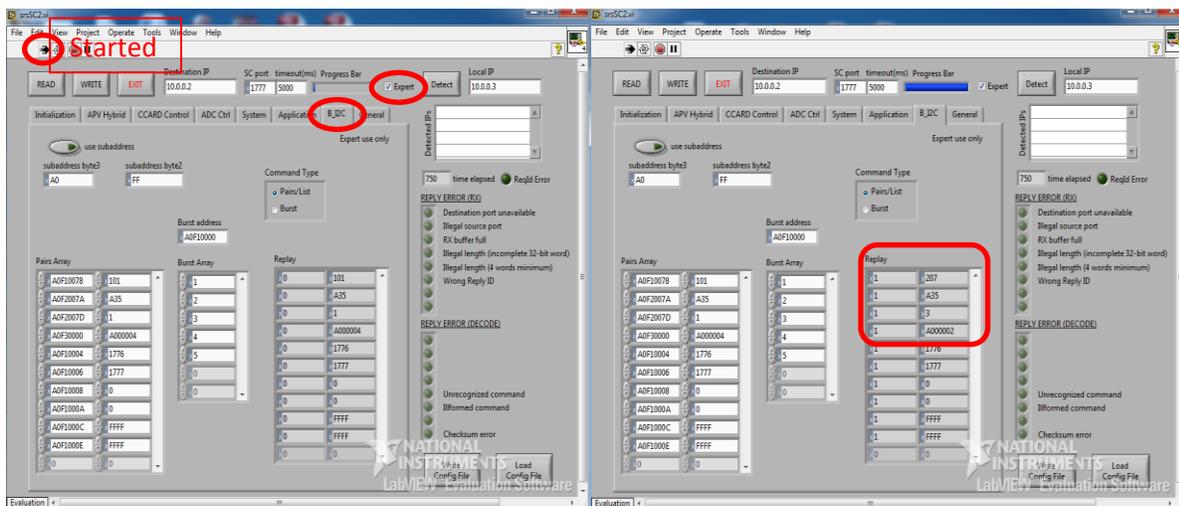
(e) Change IP: fill in the numbers and click "WRITE", if no errors that means IP is changed. Restart the FEC and try to use new IP.

Notes: You Must Not Change Firmware Version number!!!. MAC address is not important, just give it a number. IP address rule is simple: A000302 = 10.00.03.02.