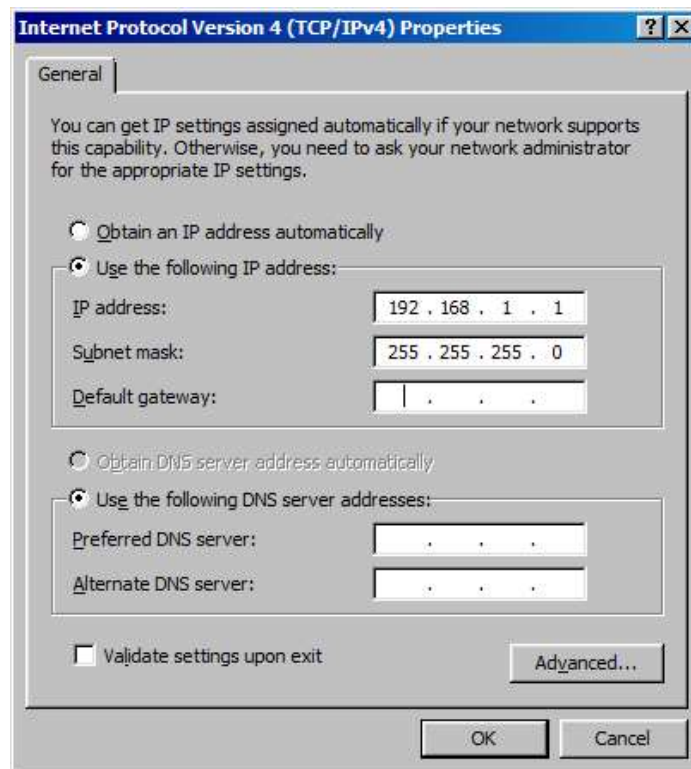


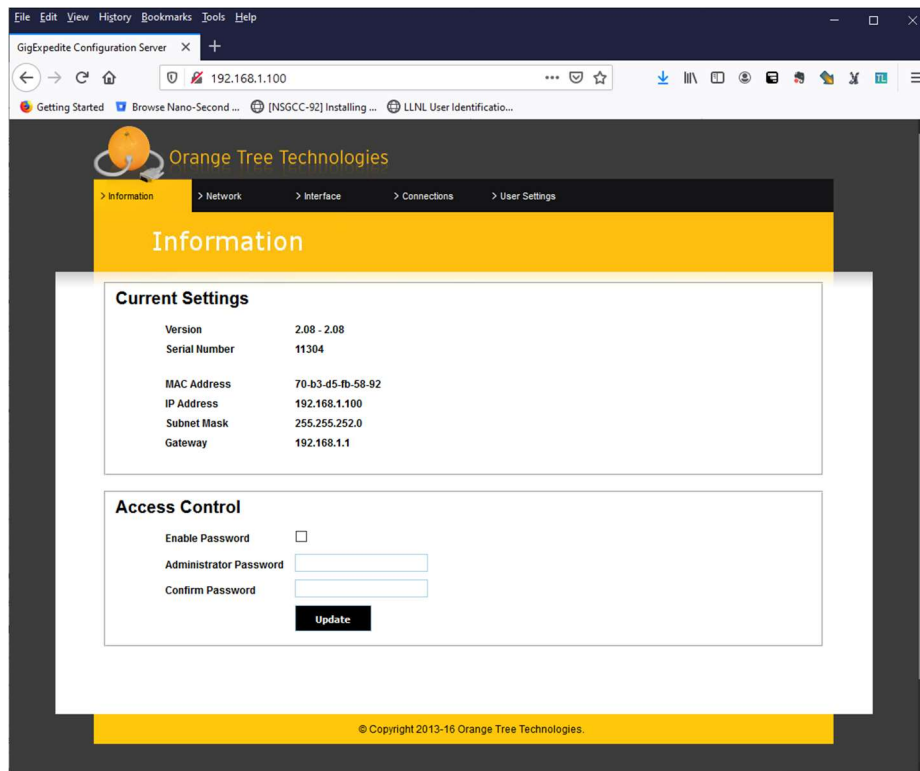
Orange Tree ZestETM1 Configuration

The Orange Tree card has numerous configuration parameters that can affect the operation of the board. This section describes how to configure the module for operation within NSGCC FPGA.

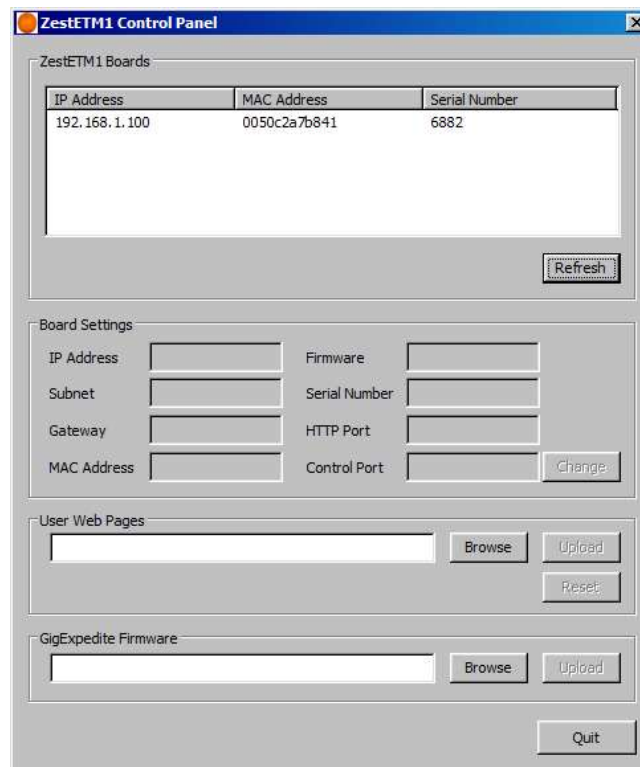
1. Configure a second Ethernet adapter for communications on the same subnet as the ZestETM1 default. (You can skip this step if your OT card is currently assigned an IP in your normal network range. If you intend to reprogram it to use an IP address outside of this range, you will need an adapter that works in that range.
 - a. Open Settings/Network & Internet and click 'change adapter options. Double click the icon associated with the interface you intend to use and click 'Properties', then double-click 'Internet Protocol Version 4'
 - b. Assign your PC an IP address on the same network as the OT card, but be sure not to use the same address as the card itself. If you do not know the address of the card, assume it is the default address (192.168.1.100) and assign a relevant address, say, 192.168.1.1. Unless there is a reason to do otherwise, use a subnet mask of 255.255.255.0.



2. Power on the ZestETM1. Note that it must be plugged into an adapter board. The OrangeTree breakout board can be used (it requires a 3.3V power supply).
3. Open a web browser and enter the IP address of the OT card. If you do know it, try 192.168.1.100. If you are fortunate, you will see something like the image at the top of the following page. If so, skip to step 5



4. If you get a time-out or a connection-not-found error, you will need to install the OrangeTree ZestETM1 Control Panel application on your PC
 - a. Install the software, then run the ZestETM1 Control Panel application
 - b. If nothing appears in the window, click the 'refresh' button, and the IP address of the OT card should appear. Enter this address into a web browser and you should see the page shown above.



- Click on the 'network' tab. This page lets you set the IP address and subnet used by the OT card. Note: if you change these values, you will have to reconnect with the card using the new IP, and if you have moved the card to a different network space, you will have to repeat step 1 for the new network. Record the address setting for future reference.
- Click on the 'interface' tab. Replicate the settings from the following image and click update:

The screenshot shows a web browser window with the address bar displaying '192.168.1.100/interface.html'. The page title is 'GigExpedite Configuration Server'. The navigation bar includes tabs: Information, Network, Interface (selected), Connections, and User Settings. The main heading is 'User Interface'. Below this is a 'User Interface Settings' form with the following fields:

- Interface Clock Direction: ☐ Output to user, ☒ Input from user
- Interface Mode: ☒ 16 Bit Reg, ☐ 8 Bit Reg, ☐ FIFO, ☐ Direct
- Receive From Net Width: 2 bytes
- Transmit To Net Width: 2 bytes
- Serial Interface: ☐ RS232, ☒ SPI Slave
- UART Settings: 115200 baud, 8 Bits, No Parity, 1 Stop
- UART Flow Control: None
- UART Echo: On
- Trigger Direction: ☒ Trigger to user, ☐ Event from user
- Trigger Type: ☒ Single, ☐ 1 PPS
- Trigger Pulse Width: 10 *100 ns

An 'Update' button is located at the bottom right of the settings form. The footer of the page reads '© Copyright 2013-16 Orange Tree Technologies.'

Your OT card is now ready for use!