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ezLCD-405 Quick Start Guide

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IMPORTANT NOTE: The ezLCD-405 ships with a test program that automatically runs from the SD card. To disable it, you must remove the microSD card from the ezLCD-405 and put it in a PC and edit the config.txt file as follows:

    A. Change the line "TestMode = True" to "TestMode = False"

    B. Save the file, put it back in the ezLCD-405 and then reset it by pressing the reset button.

STEP 1 - INSTALL DRIVER

1. Download all ezLCD-405 files from http://store.earthlcd.com/ezLCD-405 and save to Desktop for easy reference.
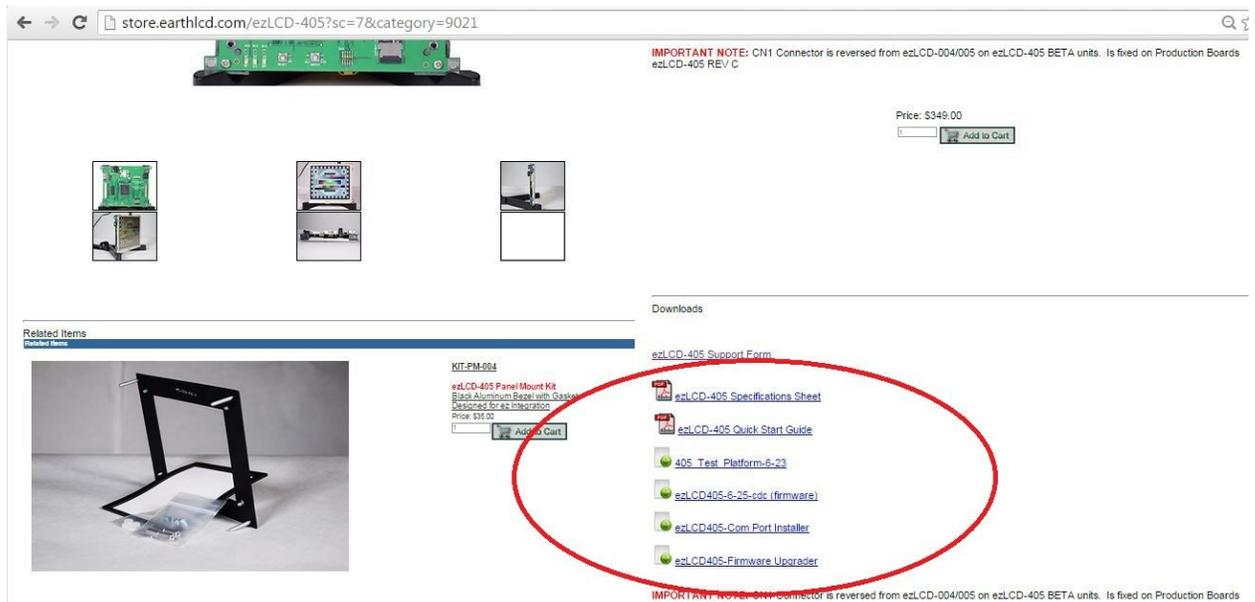
2. Unzip all the files
3. Click on the ezLCD-405 Comport Installer folder
4. run STM32 Virtualport driver ("VCP_V1.3.1_Setup.exe")
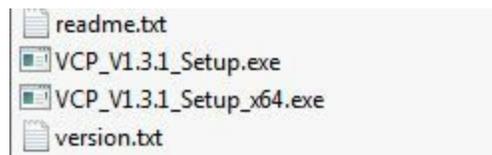
5. Plug 5V power supply into the power jack
6. Plug in Micro USB cable from the PC to the ezLCD-405.

STEP 2 - UPGRADE FIRMWARE

New firmware will be added to the website to update your device. These updates help fix bugs and problems that may occur with the device.

1. Install/Unzip the "Test Platform" and run it
2. Go to "Update Firmware" tab and click the "Open" button on the left side
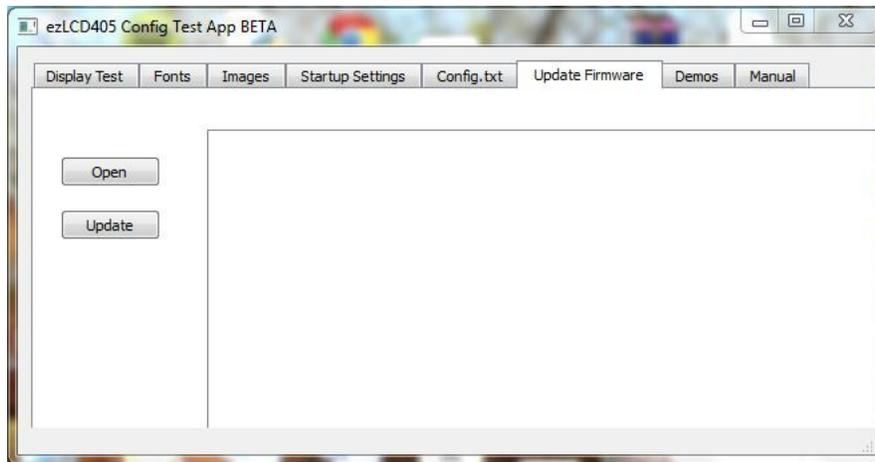
3. To "Open", select the latest firmware (ex. "ezLCD405-Firmware-x-xx.dfu")

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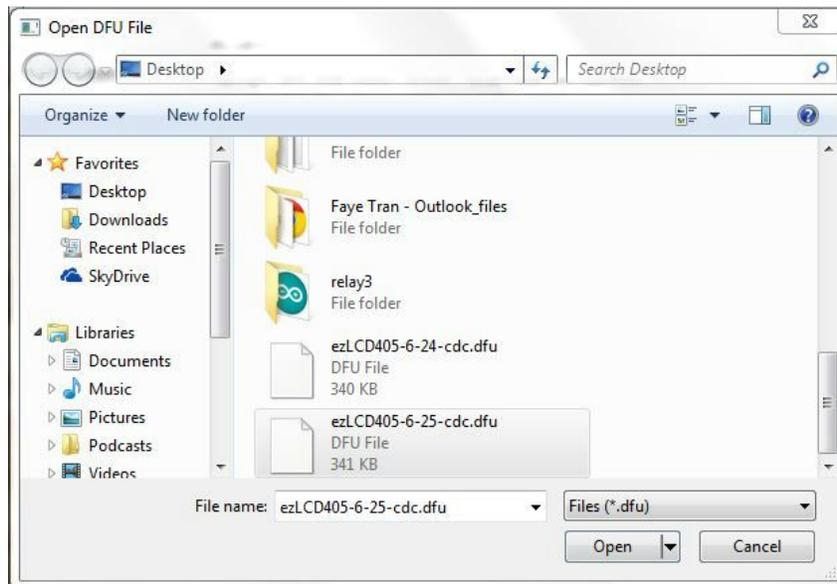
4. Before Updating, set the ezLCD-405 to DFU Mode (firmware upgrade mode) by first holding the BOOT0 and then press and release the RESET button.

RESET   BOOT0
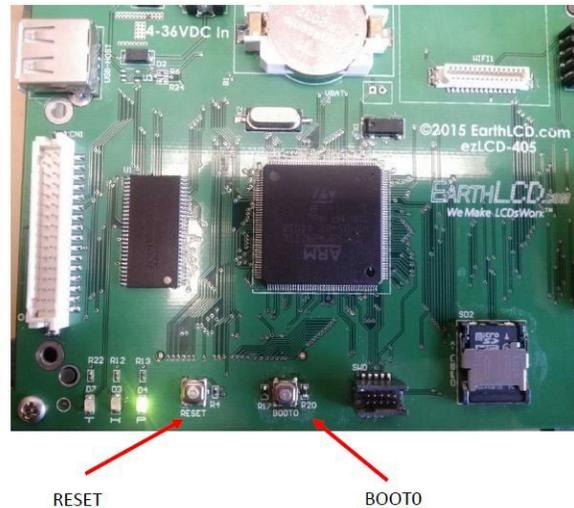
5. Now click "Update" and it will say "done parsing DfuSe file" when finished
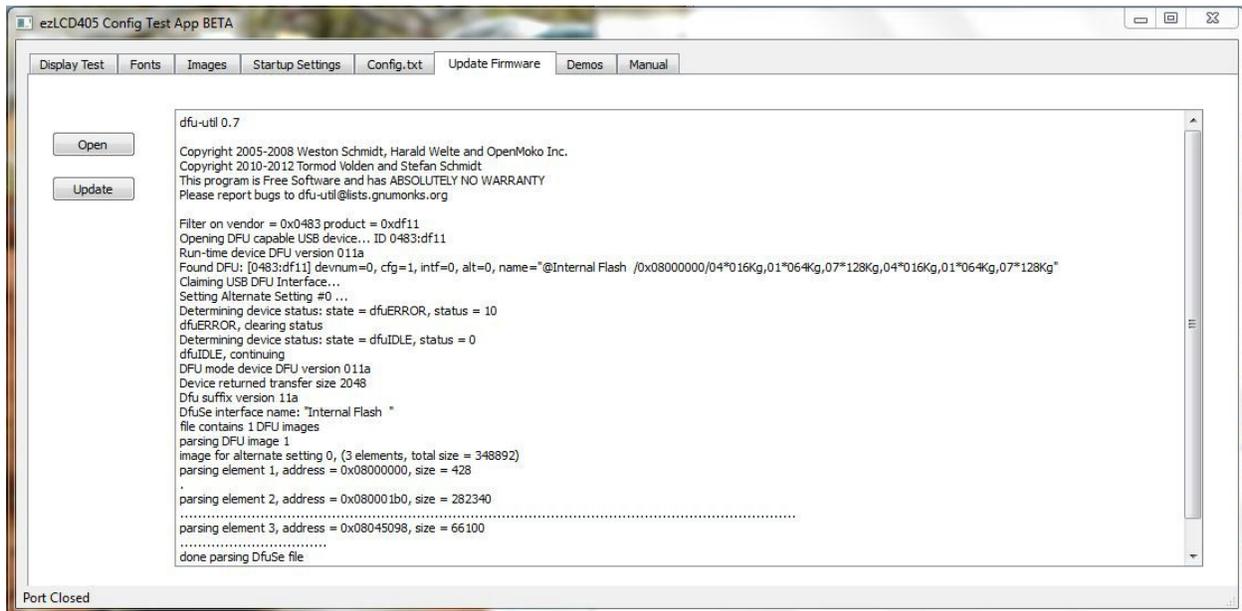
6. Now you are done with updating firmware and can start displaying stuff with the Test Platform

STEP 3 - USING THE TEST PLATFORM

An easy way to test the ezLCD-405 is by using the 405_Test_Platform. With this, you can quickly test out some of its different commands and capabilities.

1. GET CONNECTED

    a. Under the "Serial Port", select the "COM__" (port) the ezLCD-405 is connected at. You can check this by looking at "Device Manager" > "Ports".

    b. Then click "Open". Make sure you have "Open" the device or it will not be connected to the platform.
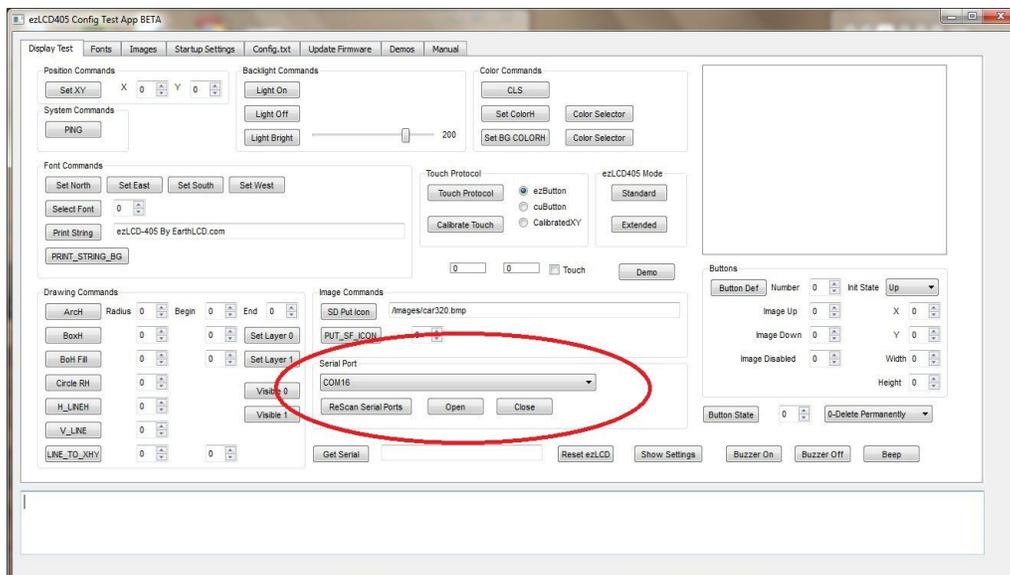
    c. If unable to connect, "ReScan" if you want to recheck all the Serial Ports, or re-plug the power supply.

    d. If it has successfully connected, it will be stated on the bottom left of the window.

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2. COLORS

There is a "Color Commands" section on the Test Platform where you can specify the colors you want to use.

  a. Click "Color Selector" and choose a color

  b. When you choose a color, specify the intensity of the color on the right side by dragging the cursor (the intensity is defaulted on the darkest/black)
  c. Then click "OK"
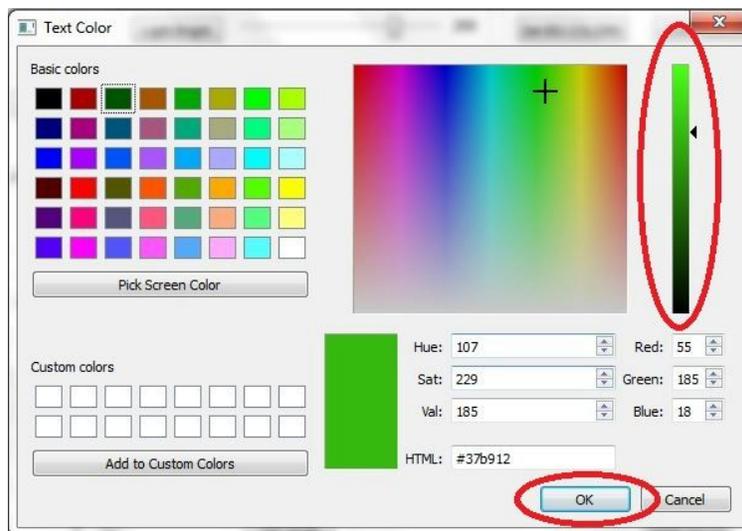
  d. Press the "Set" button adjacent to the Color Selector you chose

3. FONTS

If you want to have a specific font printed to the screen, you must upload it to the microSD card.

a. If you are not using a font already on the computer, download and install one.
b. Open the Font Editor and Select the font you want to use
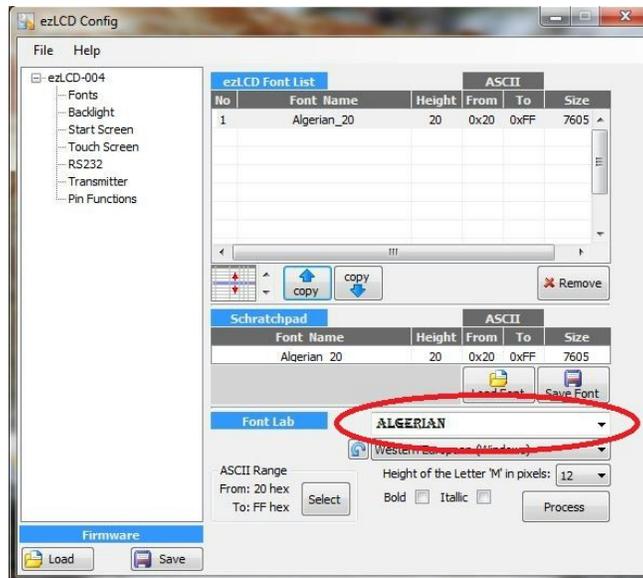
c. Click "Process", then "copy" to the ezLCD Font List
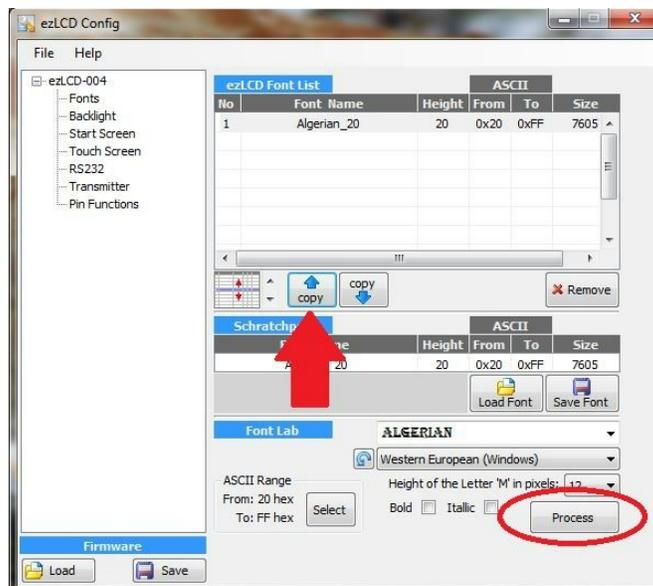
d. You can select and "Remove" any fonts you don't want to use
e. Insert your microSD card from the ezLCD-405
f. Then "Save Font" in the "FONTS" file on **your microSD card** (make sure the file extension is ".ezf") as well as one for reference
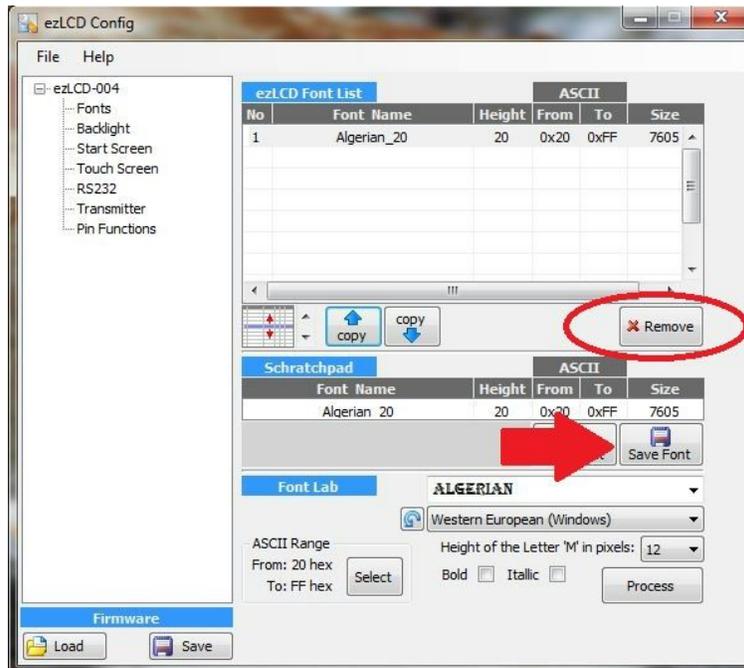
g. In the Test Platform, go to the "Fonts" tab and "Add" the font (the font ID will be displayed on the left side)

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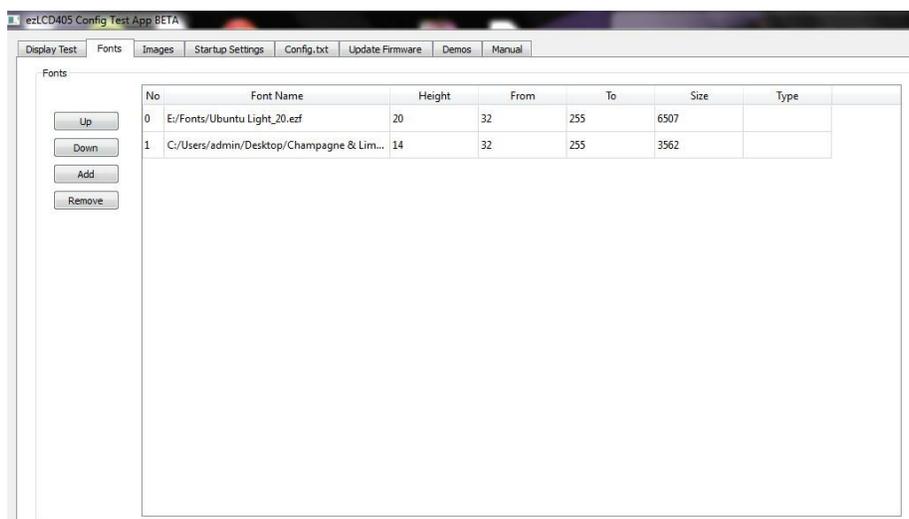
h. Now you will need to generate the Config.txt following these steps.
i. You do not need to close the Test Platform window. If you keep it open, then you would be able to see which ID numbers the fonts are specified as
j. Go back to the "Display Test" tab
k. Set up your colors and position as shown here (make sure the color you use is not the same as the background color)
l. In the "Font Commands" section, specify the ID number of the font you want to use and then PRESS "Select Font"
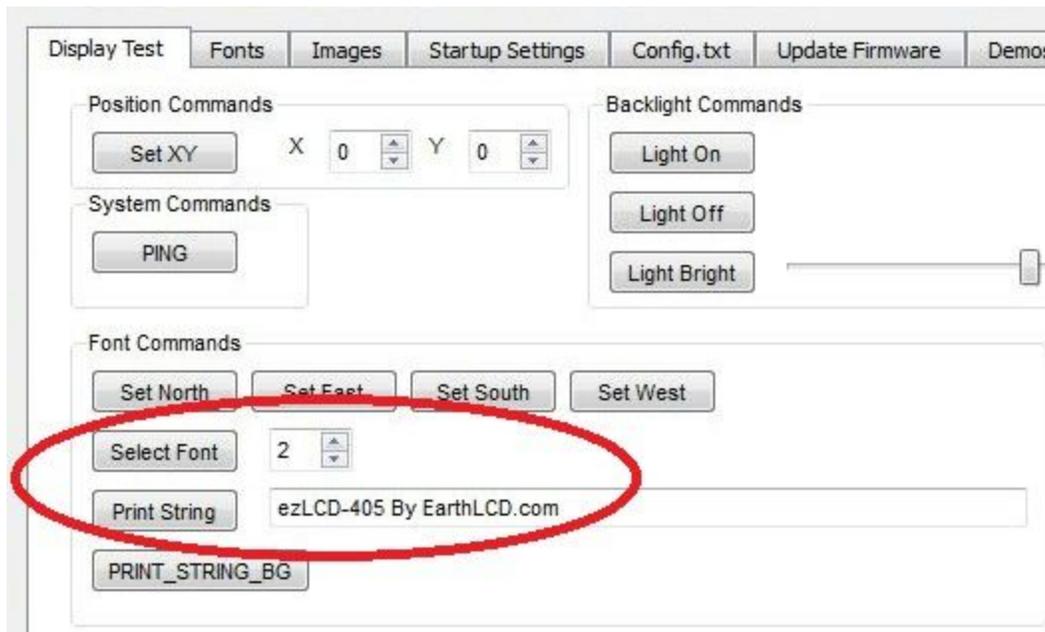
m. Type the string you want to print and then click "Print String"

4. IMAGES

    a. convert a 320x240 pixel image to a bitmap with extension .bmp

    b. Connect your microSD card and load the image into the "Images" folder
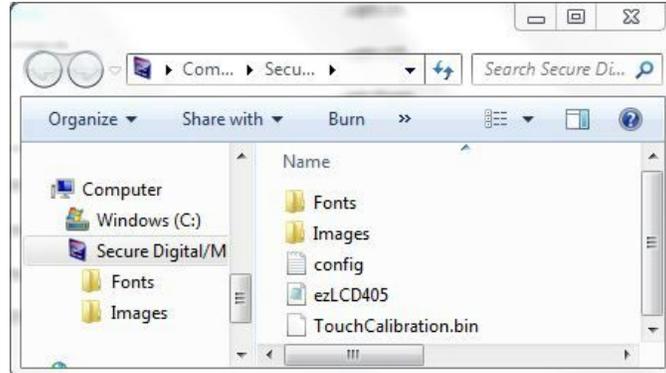
    c. Open the Test Platform (if not already open) and go to the "Images" tab

    d. Click "Add" button on the left and select the image you want to use

    e. The ID number will appear on the left, the file name and other information as follows after. A sample image should appear on the right side of the window.

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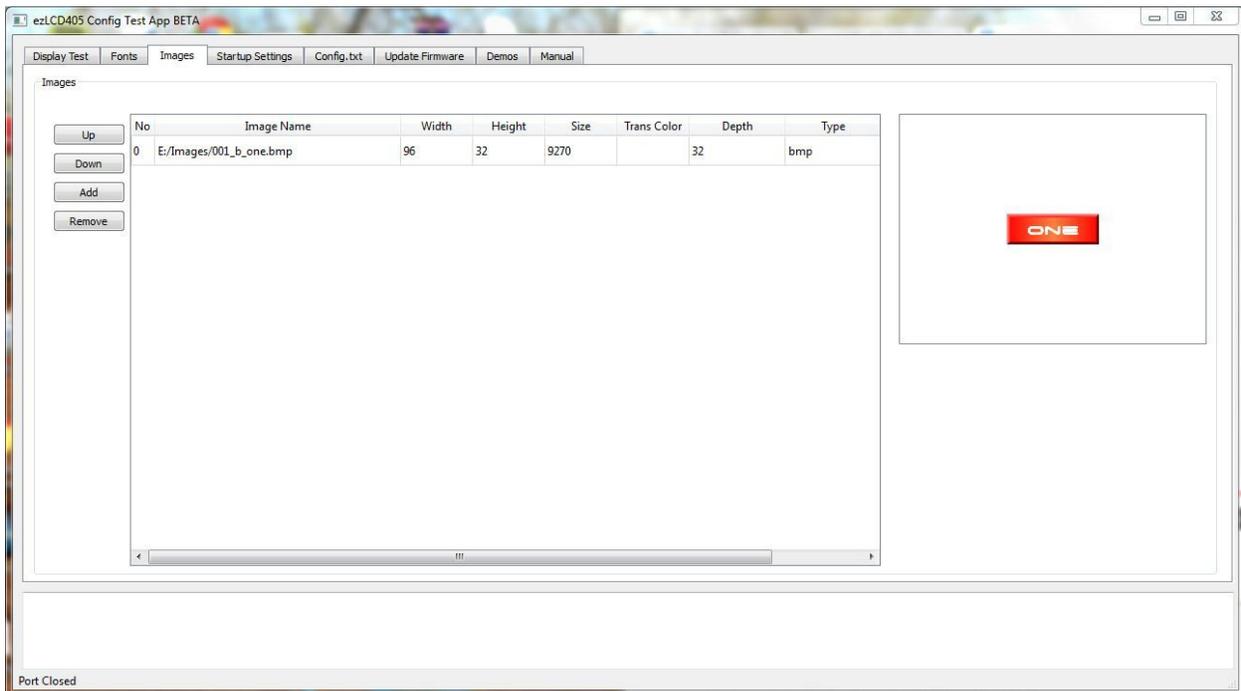
f.   You will need to generate a new config file as shown here and save it onto your microSD card

g.   Once that is done, put the microSD card back into your ezLCD-405

h.   Make sure the serial port is open as shown here

i.   Go to "Position Commands" on the top left and type in the "X" and "Y" coordinates you want the image to start displaying at

j.   Then click "Set XY"

k.   Now go the "Image Commands" towards the center of the window and type in the name of the file (starting with " /Images/ ")

l.   Then click " SD Put Icon " to the left of it

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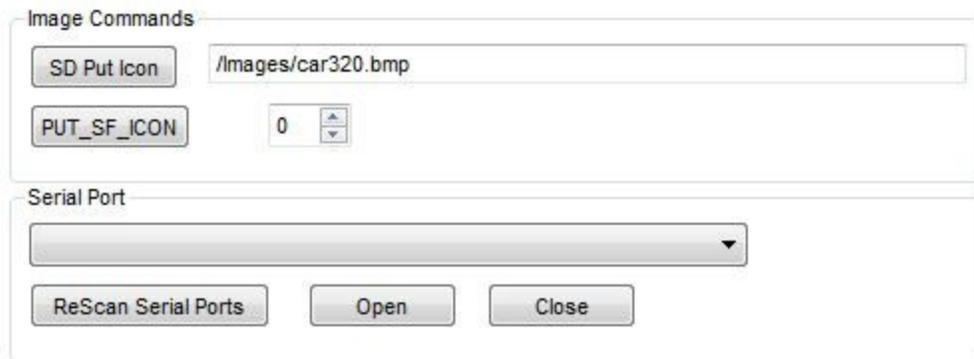
5. STARTUP SETTINGS

The startup settings is automatically set to "ezLCD Default" but you can change the settings so that whenever the ezLCD-405 turns on or resets then it will display the things you want.

a. Default Transmitter - by default it is set to Serial which is used when the device is connected via USB
b. Backlight - you can control the brightness of the screen or you can just turn off the light which makes the screen black.
c. Start Screen - You can either have the Default, Image or Solid Color start screen.
    i. Image - See Images (steps a-g) and you can select the ID number of the image in the "Image Number" section and plot the x and y position
    ii. Color - select "Solid Color" and click the " … " button to choose a color
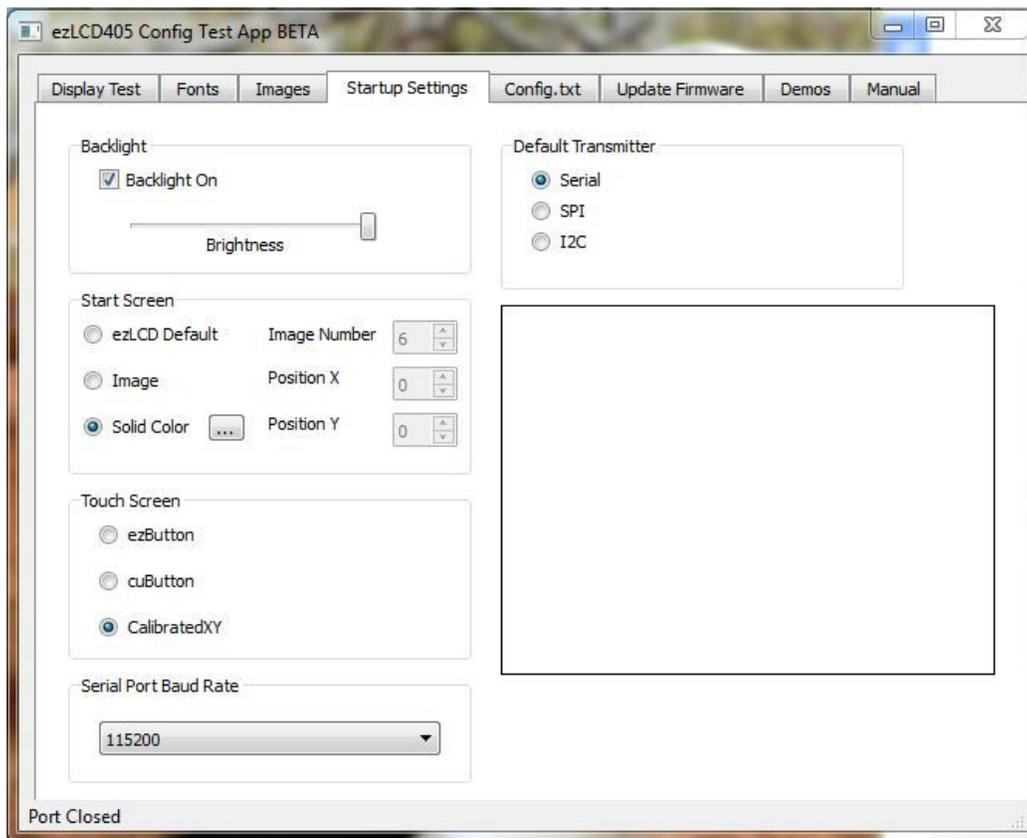
6. GENERATING THE CONFIG FILE

    a. Make sure to have the microSD card inserted into your computer

    b. Go to "Config.txt" tab

    c. Click "Generate Config.txt"

    d. Click "Generate Flash Image"
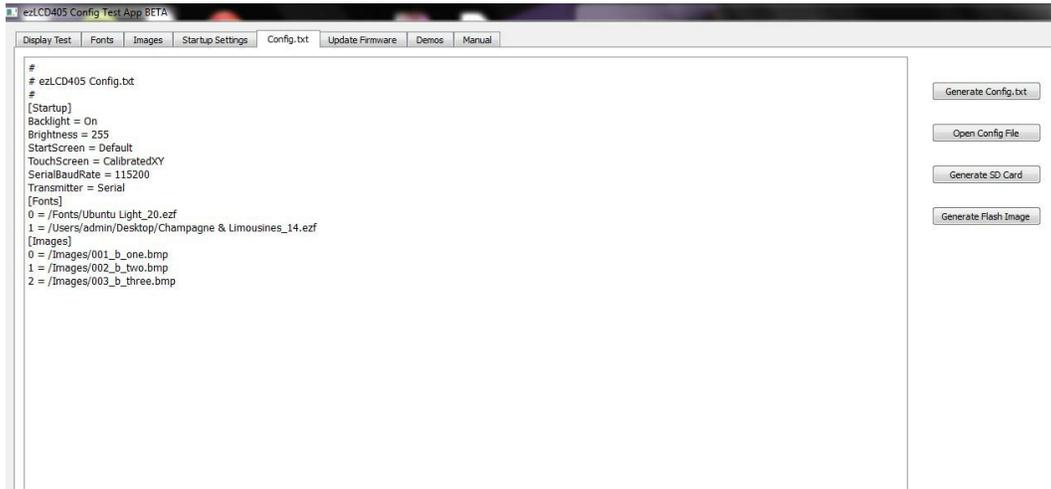
    e. Save it as "ezLCD405.ezs" (make sure to have the name typed out exactly the same)
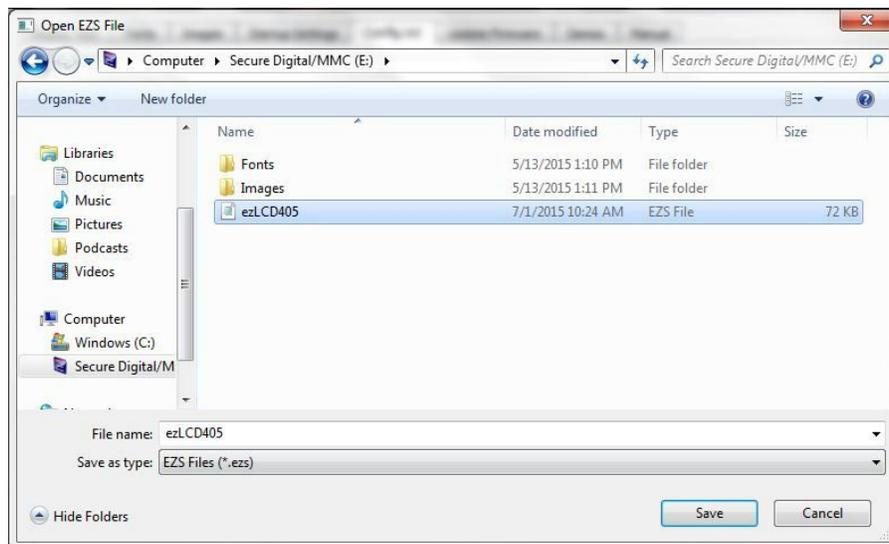
    f. Eject the microSD card and put it back into the ezLCD-405

    g. Then RESET the device

FOR UNEXPECTED PROBLEMS

Before continuing, make sure you have properly downloaded and installed the correct files. Make sure to install the appropriate programs according to the type of computer you are using.

1. If your computer is not recognizing the device and showing error in the "Device Manager", manually Update the driver.
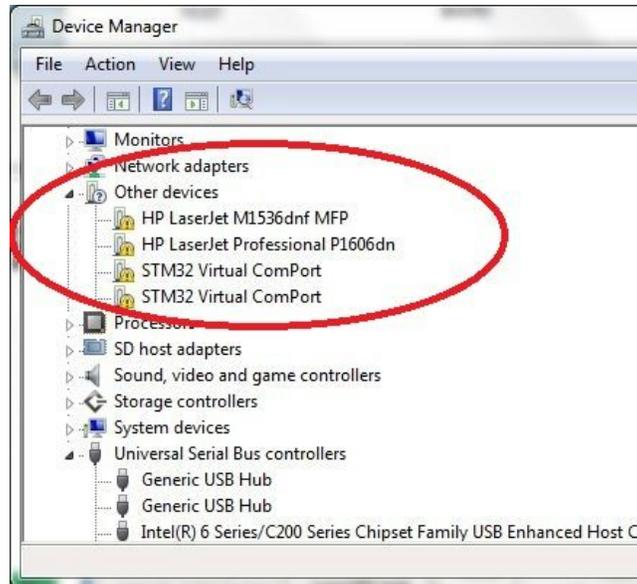
     a. Right - click and select "Update Driver Software…"

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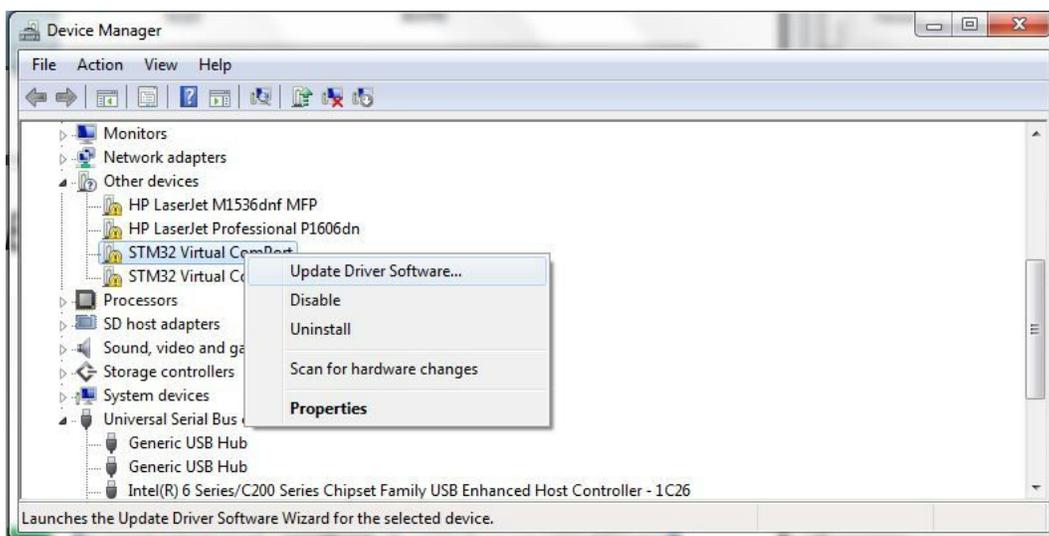
b. Then click "Search automatically for updated driver software"