

DSP Card Diagnosis

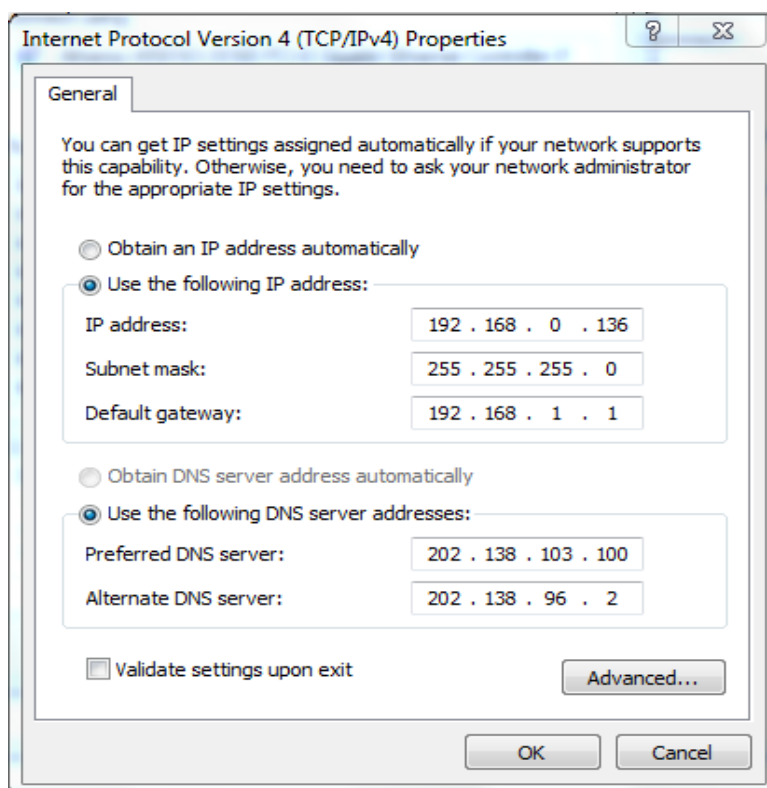
Release Date: 11/4/2021

SUMMARY: This document shows various steps to check if the DSP card (or something else) is causing a hookup failure.

1. Check the IP address setup in the MTL32 software. Depending on the version of software you have, it may ask you when you start the software do you want to communicate via USB which answer is 'no' and then ask do you want to connect to the IP address listed. Write down the IP address listed.

Newer version of the software will not ask this question and when you open the software and try to connect a message will come up and state the IP address it is trying to connect to, write in down.

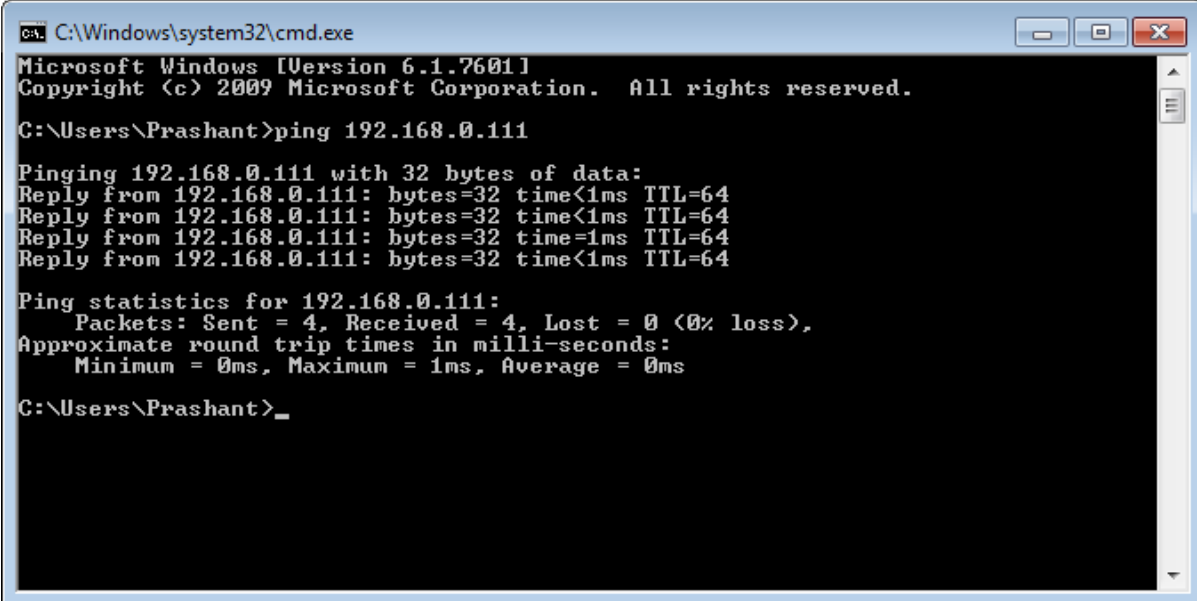
2. Check the IP address setup on the PC.
 - a. Go to Start => Network and Internet => Network and Sharing Center => Change adapter settings => right click on the Local Area Connection and select properties => Double click Internet Protocol Version (TCP/IPv4)
 - b. The IP address in the IPV4 should have the same domain as the controller.
 - i. Note: It should be set to a static IP and the first three sets of numbers should match the first three sets of numbers from the IP setting in MTL32.
 - ii. If it doesn't match, skip to section onto section for checking the controller IP address (step 4)



If you have the port settings correct, and still cannot connect, try to PING the controller (step 2) or check the controller IP address with Putty (step 3).

PING the controller from the command prompt.

- c. Power up the controller
- d. To open the command prompt window: Go to start => type run in the search program and files box => click on run => the run window appears. In the open box type cmd and press OK.
- e. Ping the IP address of the controller.



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C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Prashant>ping 192.168.0.111

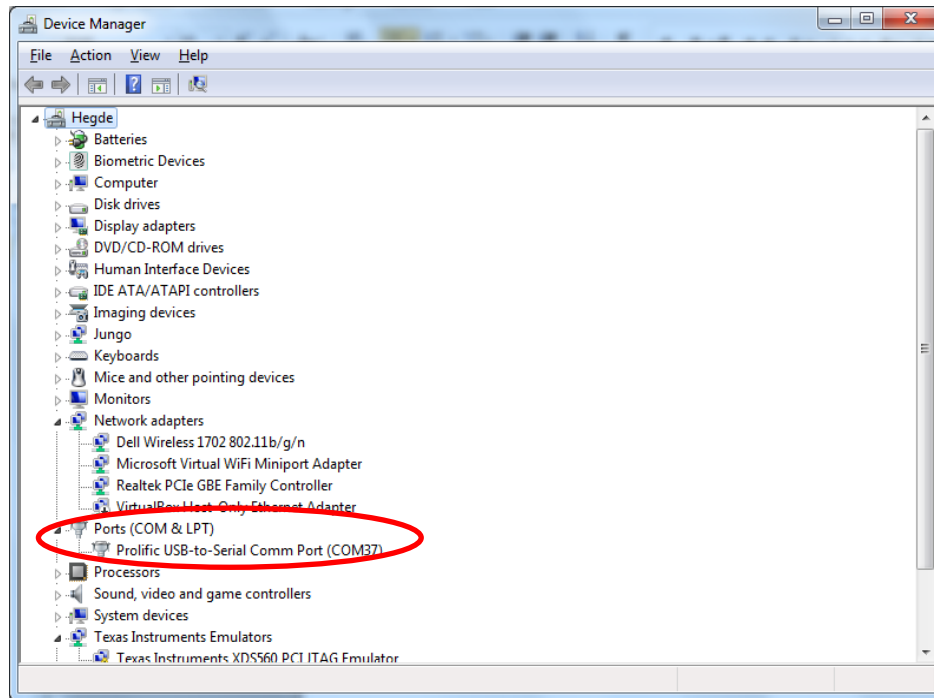
Pinging 192.168.0.111 with 32 bytes of data:
Reply from 192.168.0.111: bytes=32 time<1ms TTL=64
Reply from 192.168.0.111: bytes=32 time<1ms TTL=64
Reply from 192.168.0.111: bytes=32 time=1ms TTL=64
Reply from 192.168.0.111: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.0.111:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

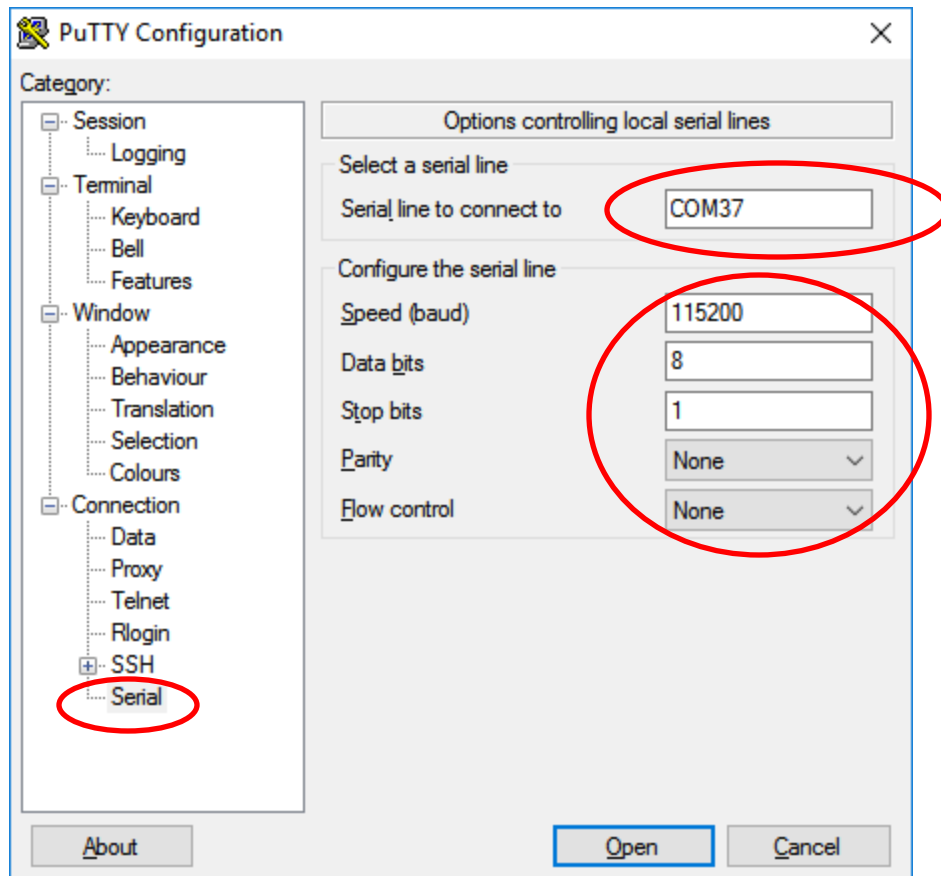
C:\Users\Prashant>_
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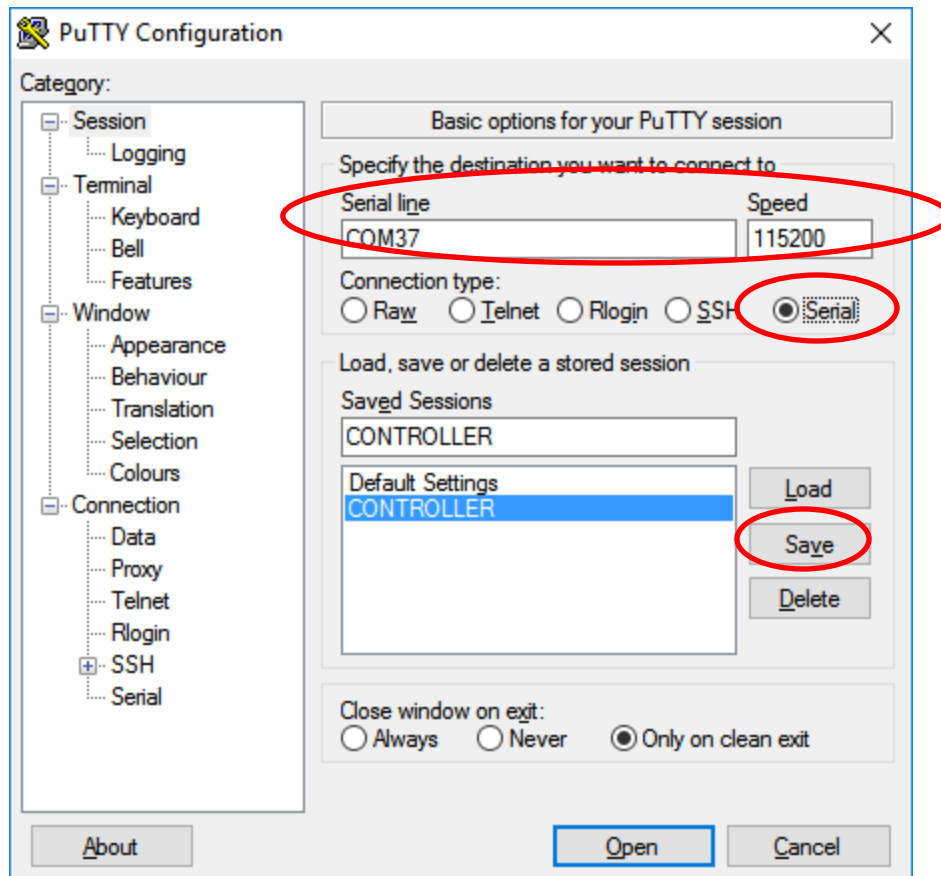
If you can ping the controller, the communication issue is likely due to PC Ethernet port settings. If you are not able to PING the controller, it may be due to 1) the wrong IP address is being ping'ed, 2) the DSP card has failed, and 3) other hardware issue.

3. Check with Putty
 - a. Connect serial connection to controller, and power on controller.
 - b. Go to DEVICE MANAGER, and check the port that the USB to serial adapter is connected to. In this example, it would be COM37

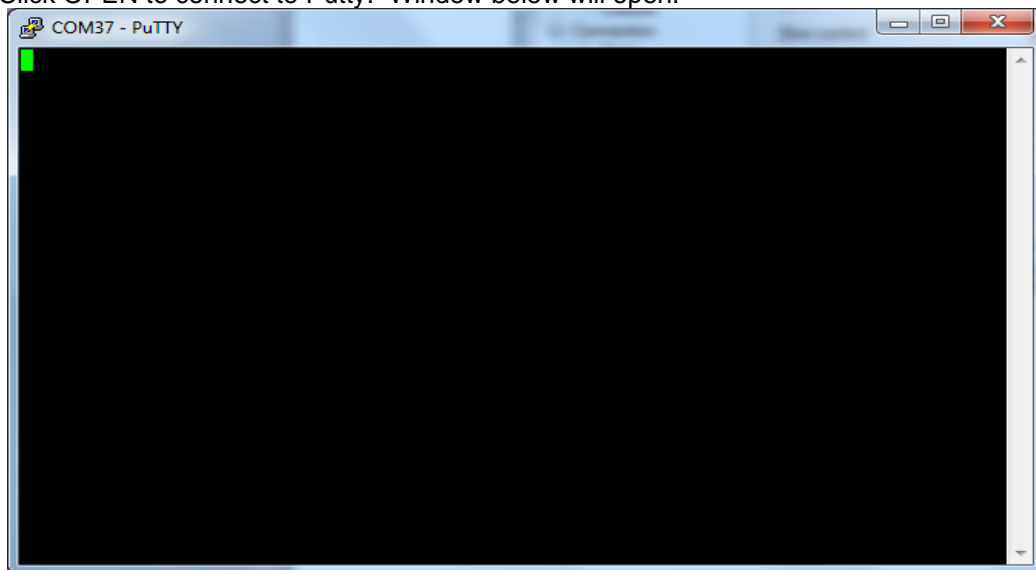


- c. Open putty. C:\MTL32_2020\putty.exe. Be sure to right click and Run as Administrator.
- d. Ensure Putty serial port settings match Device Manager port settings for serial adapter.





- e. Save the settings.
- f. Click OPEN to connect to Putty. Window below will open.



- g. Power up controller (or restart power)
- h. A bootup process should follow....

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The REVISION ID WITHOUT SHIFT is 2191 at c5020000....

ID is 2191 at c8080000....

1024 MEMMOVE IMPLEMENTED-----

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We got 272 at CONFIGURATION_REGISTER ..
The PINMUX12 is a at fec1417c
Inside open
Inside open
eth0: attached PHY driver [Generic PHY] (mii_bus:phy_addr=1:07, id=7c0f1)
PHY: 1:07 - Link is Up - 100/Full
Inside close

login[385]: root login on 'ttyS2'
[root@biss:~]

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- i. Once boot up is complete, press enter on keyboard. It should display [root@biss:~]. If not, then the DSP card needs to be reset. View the 'reset dsp' document.
- j. With the [root@biss:~] type in 'ifconfig' and press enter to show the IP settings on the controller. The inet setting should match the first three digits of the IP settings for the PC, the last number should match the full number on the software.
- k. Based on the IP settings of the PC, controller and software, it is easier to adjust the PC and or software rather than controller.

For the PC:

Update the Static IP address as shown in previous section with the first three numbers matching the controller and software IP settings. Last number should be different.

For the software:

When prompted during startup you can click on change IP setting to match the IP setting on the controller, should match exactly.

If not prompted, upon startup. Open MTL32_2020 in offline mode by deleting the '1' at the end of the 'target' setting under the properties when you right click on the MTL32 shortcut on the desk top. Then apply and click ok and open MTL32. You won't see the error message because we aren't trying to connect.

Click on 'user' and then 'administrator' to show all panels of MTL32 software. In the upper left portion there may be a setting to set the IP address, if so set to the IP address on the controller matching all 4 sets of numbers.

If there is no spot to change the IP address, click on 'show' and 'big screen'. Then click on 'System settings' button. Then change the IP address setting to match

controller IP setting. Once set click 'close' and then click 'show' and select 'small screen' and then click file and save. Close out of MTL32 and add back the '1' at the end of the target setting in the properties of the shortcut. There is a space between the end of the target setting and '1', click apply and ok then open up the software as normal.