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APPLICATION NOTE 3601

Troubleshooting Windows Plug-and-Play and USB for Maxim Evaluation Kits

Sep 23, 2005

Abstract: This application note helps you install and troubleshoot the CMAXQUSB and CMODUSB evaluation-kit interface boards. Frequently asked questions are answered.

Installing the CMAXQUSB/CMODUSB Device Driver

Specifying Search Location—CD-ROM Installation

Specifying Search Location—Updated Software from Maxim Website

- Windows® XP Reports Driver Is not Digitally Signed
- Confirming Driver Selection
- Successful Installation
- Windows Was Unable to Locate a Driver
- Unknown Device (Installation Failure)

Problem: Software Unable to Connect to USB Interface Board

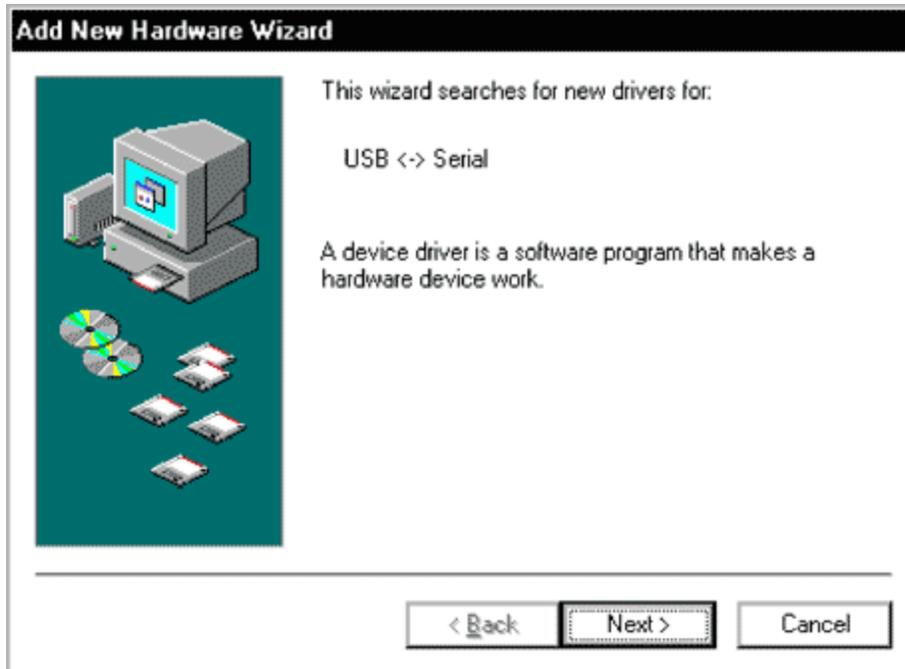
- Is the Operating System Supported?
- Is the USB cable Correct?
- Was the USB Device Driver Installed When the Board Was Plugged In?
- Remedy: Remove Failed Device Node

Question: Is a Power Supply Required?

Question: Is USB 2.0 Required?

Removing the CMAXQUSB/CMODUSB Device Driver

Installing the CMAXQUSB/CMODUSB Device Driver



When you plug in the CMODUSB or CMAXQUSB board for the first time, the windows plug-and-play system detects the new hardware and automatically runs the **Add New Hardware Wizard**. (Windows 98 is shown in the screen shot. Windows 2000 and XP differ slightly.)



Specifying Search Location—CD-ROM Installation



The **Add New Hardware Wizard** asks where to search for the device driver. Ensure that the CD-ROM that came with the evaluation kit is in the CD-ROM drive. *Be sure to check the CD-ROM drive box*—otherwise windows will not be able to use the hardware.

Specifying Search Location—Updated Software from Maxim Website

If the CD-ROM was lost, or if a newer version of the software was downloaded and installed from the Maxim website ([EVKit Software](#)), then check the **Specify a Location** box. Use the **Browse** button to navigate to the location where the updated software was installed. Maxim software designed for CMAXQUSB or CMODUSB includes a copy of the device driver in the installed software directory.

Windows XP Reports Driver Is not Digitally Signed

During device driver installation, Windows XP shows a warning message indicating that the device driver used by Maxim uses does not contain a digital signature. This is not an error condition. It is safe to proceed with the installation.

Confirming Driver Selection



This screen confirms that the system found the right device driver. Click **Next** to continue.



Successful Installation



After you click **Finish**, the device driver is installed and the software is ready to go.

Windows Was Unable to Locate a Driver



This is what you will see if plug-and-play cannot find the correct device driver. ***This is really an error message.*** It is very easy to click the **Next** button without noticing this. Clicking the **Next** button now would tell the windows plug-and-play system to stop searching for a device driver and *Ignore* the new hardware as you proceed.

Unknown Device (Installation Failure)



This screen is an error message. It confirms that windows did not find the device driver that it needed; it will *Ignore* that device as you proceed. The only way to recover is to remove the Unknown Device node, which you can only see by going into the device manager while the device is plugged into the USB port.

Problem: Software Unable to Connect to USB Interface Board

Is the Operating System Supported?

| Operating System | Supports USB? | Tested at Maxim? |
|---------------------------|---------------|------------------|
| Windows 95 | No | No |
| Windows NT | No | No |
| Windows 98 second edition | Yes | Yes (passed) |
| Windows ME | Yes | Not tested |
| Windows 2000 | Yes | Yes (passed) |
| Windows XP home edition | Yes | Yes (passed) |

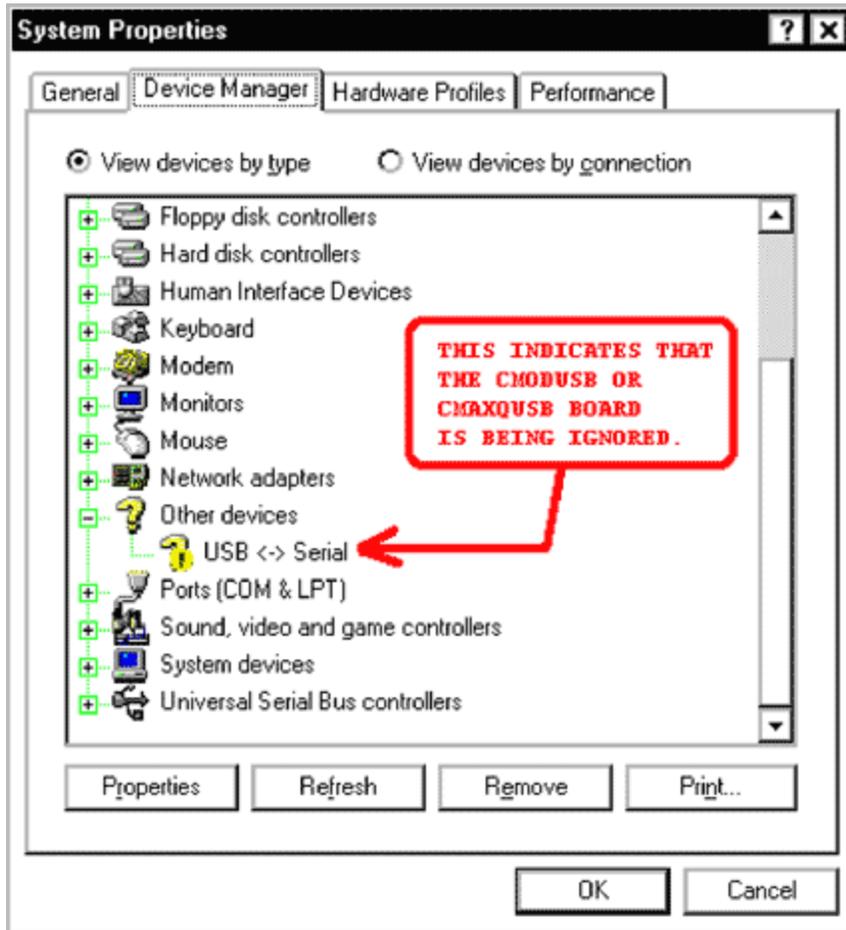
Is the USB Cable Correct?

The CMODUSB/CMAXQUSB boards use a standard USB A-B cable, which plugs into a standard Windows computer's USB port. To troubleshoot,

1. Try using another USB A-B cable.
2. Try plugging a known, good USB device into the computer's USB port.
3. If using a USB hub, check whether the hub requires external power.

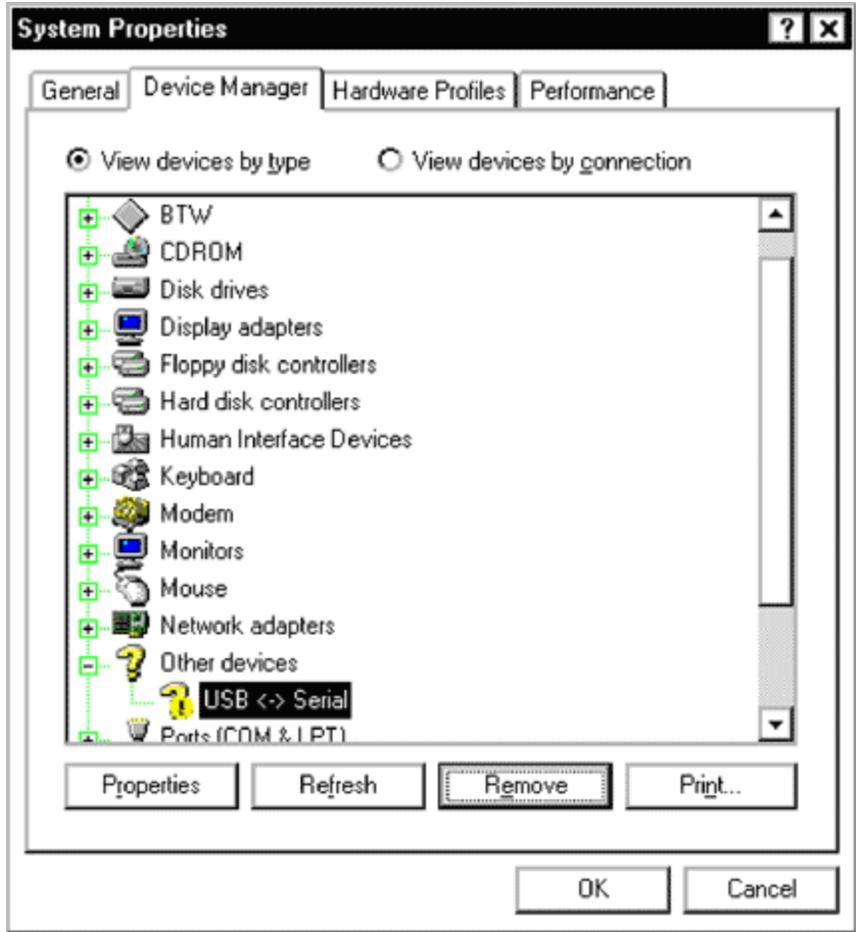
Was the USB Device Driver Installed When the Board Was Plugged In?

1. Make sure that the CMODUSB or CMAXQUSB board is plugged into the USB port. Start Menu → Control Panel → System → Hardware → Device



You may see the **USB Serial** or **Maxim CMODUSB Command Module** with a question mark icon next to it (see above). This indicates that Windows is ignoring the CMAXQUSB or CMODUSB hardware.

Remedy: Remove Failed Device Node



To remedy this problem, click the **USB <-> Serial** device node and click **Remove**. (This Unknown Device error node is only visible when the CMAXQUSB or CMODUSB board is plugged into the USB port.)



Click **OK** to confirm removal of the bad device node. Then close the device manager window, and unplug the CMODUSB or CMAXQUSB board from the USB port. The next time you plug the board into the USB port, the plug-and-play system will search for the device driver, as it should have done the first time.

If multiple USB ports were tried with no device driver, it may be necessary to plug the board into each of those other USB ports to remove each failed device-driver node.

Question: Is a Power Supply Required?

The CMAXQUSB and CMODUSB boards do not require an external power supply. The USB cable provides power as well as control. An optional external power jack was included in these designs to allow unregulated 6V to 12V power to be connected to daughter boards requiring a higher supply voltage. This power jack routes only to the daughter board connector; it is not used by any circuitry on the CMAXQUSB or CMODUSB board.

Question: Is USB 2.0 Required?

The CMAXQUSB and CMODUSB boards work with USB 1.0, USB 1.1, and USB 2.0 host ports. The device throughput is limited, so there is no speed increase from using an USB 2.0 port.

Removing the CMAXQUSB/CMODUSB Device Driver

1. Make sure that the CMAXQUSB or CMODUSB board is plugged into the USB port.
2. Start Menu → Control Panel → System → Hardware
3. In the **Device Manager** tab, navigate to the node for the CMAXQUSB or CMODUSB board.
4. Select the device and click the **Remove** button.
5. Click **OK** to confirm that you are going to remove the device from your system.
6. Unplug the CMAXQUSB or CMODUSB board from the USB cable.
7. Start Menu → Control Panel → Add or Remove Programs → Maxim CMODUSB Device Driver → **Remove**

The next time the CMAXQUSB or CMODUSB board is connected to USB, the plug-and-play system will think it is seeing this board for the first time.

Related Parts

| | |
|-------------------------------|---|
| CMAXQUSB | Evaluates: SPI and SMBus/I ² C-Compatible Parts |
| DS28DG02EVKIT | Evaluation Board/Evaluation System for the DS28DG02 |
| MAX6870EVKIT | Evaluation System/Evaluation Kit for the MAX6870, MAX6871, MAX6872, MAX6873, MAX6874, MAX6875 |
| MAX6889EVKIT | Evaluation Kit/Evaluation System for the MAX6889 |

More Information

For Technical Support: <http://www.maximintegrated.com/support>

For Samples: <http://www.maximintegrated.com/samples>

Other Questions and Comments: <http://www.maximintegrated.com/contact>

Application Note 3601: <http://www.maximintegrated.com/an3601>

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