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Managing Problem of Stop Error 0x000000CA When Using Multiple USB2SER in Windows XP

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1 Problem description

A problem has been discovered when connecting two or more USB2SER with the exact same configuration parameters (Vendor ID, Product ID and Serial Number string) in Windows XP. This problem occurs because the ID generated should be unique, but is duplicated when the devices are connected into different USB hub controllers. This issue exists only in Windows XP.

When two devices with the same configuration parameters are connected into different host controllers (for example, one through an external hub and another connected directly to a USB port in the computer), the same ID is generated, causing Blue Screen with Stop Error 0x000000CA and parameter 1 value 0x00000001. The error description is “A specific instance of a driver has enumerated multiple PDOs with identical device ID and unique IDs.” Each computer can have a different number of hub controllers, so it is possible that the error also appears when connecting devices directly to a computer.

2 Workaround

There are two workarounds identified for this problem:

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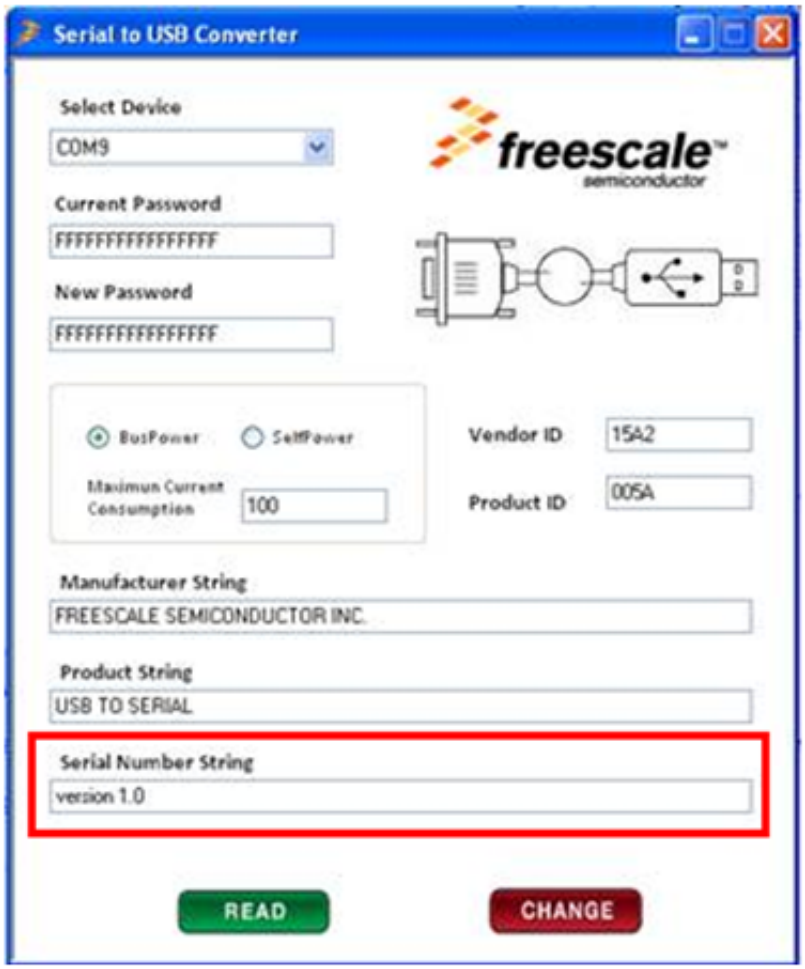
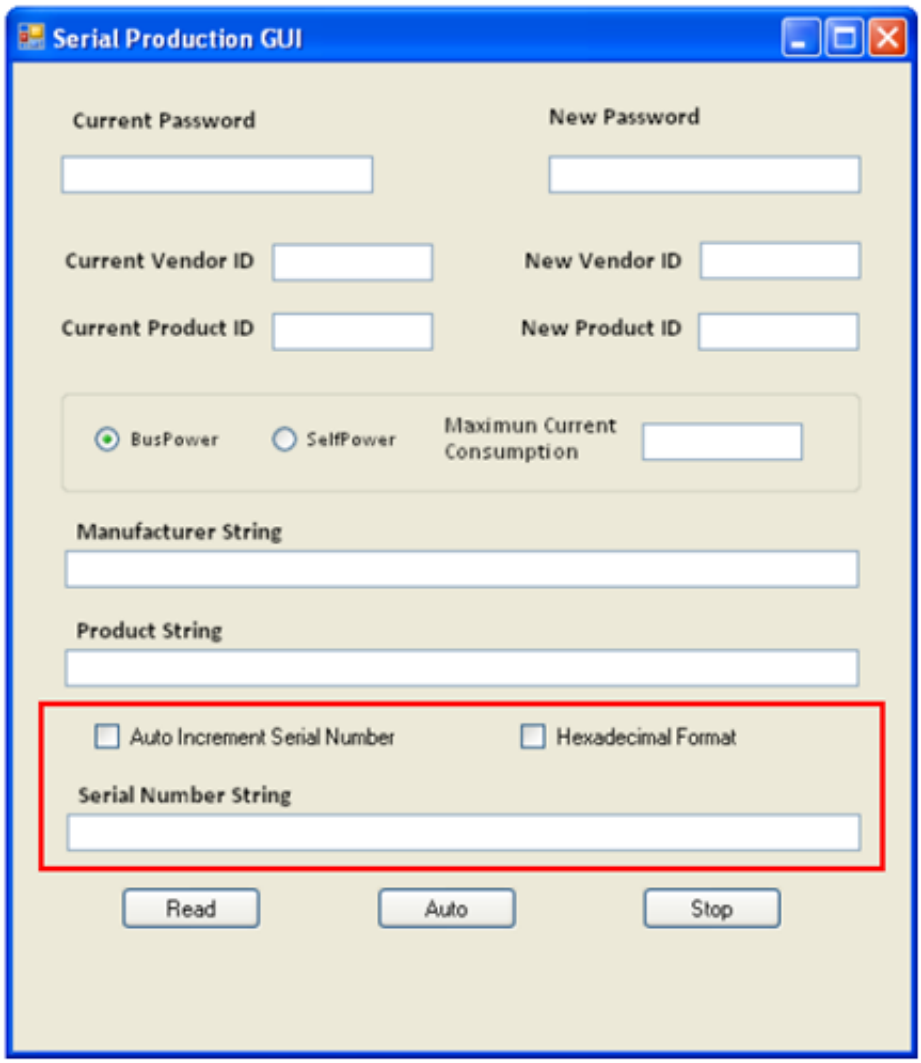
Workaround

a) **Changing the configuration parameters.** Using the configuration GUI provided with the driver installation for USB2SER, it is possible to change the configuration parameters to prevent this problem. The most practical way to prevent this issue is to modify the serial number string to a different value. This change will not require any modifications to the drivers provided.



An option to simplify the customization process is to use the example GUI that comes with Application Note 4314, available on Freescale.com.This example GUI is designed to customize all the product parameters as soon as they are connected to a host PC; the customer can select all the configuration values and enable a field to auto-increment the serial number string every time a device is connected. When having multiple USB2SER, this GUI can be used to automatically generate a new serial number for each device plugged in the host PC to prevent this problem.



It is recommended that you change only the Serial Number String and New Password fields to customize the product, and leave the rest of the fields with the default factory configuration so that the INF files keep working without any additional changes.

b) **Connecting the devices in the same host.** In the majority of the cases, connecting the USB2SER in the same host controller is sufficient to prevent this problem. This can be done by identifying which USB ports are part of the same host controller for a computer, or using an external hub connecting all the boards to this hub. There are sporadic cases with external hubs where this workaround has not worked, but it is applicable in the majority of the cases and does not require any additional customization.

3 Affected configurations

This problem has been identified to be an issue for Windows XP only. Windows Vista, Windows 7, and Linux do not exhibit this problem.

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