TECHNICAL SERVICE BULLETIN

Number: TSBUMTS-003A(EC28)

Description Summary: Installation Problem -- Error Code 28

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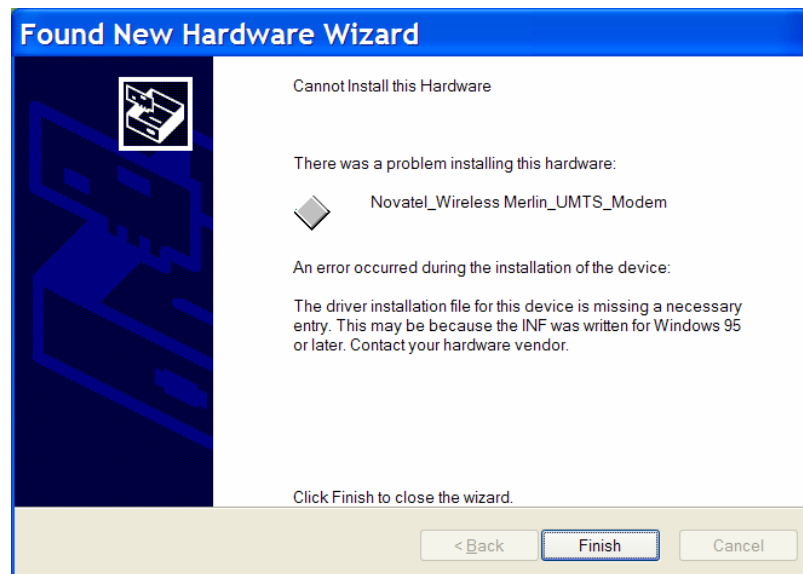## PRODUCT AFFECTED:

- Merlin U530 MULTIFUNCTION PC CARD
- Merlin U520 MULTIFUNCTION PC CARD
- Merlin U630 MULTIFUNCTION PC CARD

OPERATING SYSTEMS INVOLVED: WINDOWS XP

PROBLEM DESCRIPTION:

The Merlin is installed as a multifunction device. It occupies one device location on its bus, but has more than one function. Each function is associated with a driver that will service that operation. Installation of the Merlin will fail because the particular Windows O.S that the Merlin is being installed on is missing a file.

You will see the following Windows message.

Code 28 will appear in the properties of the Parent driver under the Multifunction adapter category in Device Manager. Also, you may get the following windows status message
The drivers for this device are not installed.

To view this code:

1. Start > Control Panel > System > Hardware > Device Manager.
2. Expand the Modems, the Multifunction adapters and the Ports category.
3. Select the *Novatel Wireless UMTS Modem Parent* under the Multifunction adapters' category.

4. Right click and choose *properties* from the available menu.

CAUSE:

This problem occurs because the Windows O.S is missing the multifunction inf file. Windows needs this file for a proper installation of the card's drivers.

SOLUTION:

The problem is resolved by obtaining a mf.inf file from a Windows 2000 or XP machine (I.e If the problem is on a XP machine get the file from a XP machine) and copying it into the Windows inf directory. OR See Instructions at the end of this document on obtaining the mf.inf file.

Follow these steps to verify that the mf.inf file is missing from the Windows inf directory;

1. Start > All Programs > Accessories > Windows Explorer

2. Go to Windows directory located under the local disk (C:) and expand it.

3. Select the inf directory.

Note: If you cannot see the inf directory go to Tools > Folder Options > View, then select show hidden files and folders, then click on Apply.

4. Right click on the inf directory and choose search from the available menu.

5. Within the Search Results window, in the box *All or part of the file name* type in mf.inf

6. Choose Search

7. Verify that the mf.inf file does not exist.

8. Close the Search Results window.

9. Copy the mf.inf file (Obtained from a Windows Machine or this document) into the Windows inf directory.

10. Verify that the mf.inf file does exist by repeating steps 1 through 6.

11. Close the Search Results window.

12. Close Windows Explorer.

13. Make sure the connection manager software is installed (i.e drivers have to be installed -- you should have the icon on your desktop)

14. Remove the Merlin.

15. Insert the Merlin.

16. Go to Device Manager and expand the Multifunction adapters' category.

17. Select the *Novatel Wireless UMTS Modem Parent*

18. Right click and choose update driver from the available menu.

19. Choose Install the software automatically (Recommended) and click Next.

20. Choose Finish at the last screen.

To obtain the mf.inf file follow these instructions:

1. For Windows XP; Right click on this icon mf.inf and select "Save Embedded File to Disk" if using Acrobat 6 or "Extract file" if using Acrobat 4

2. For Windows 2000; Right click on this icon mf.inf and select "Save Embedded File to Disk" if using Acrobat 6 or "Extract file" if using Acrobat 4

3. Save the file in the C:\WINDOWS\inf directory (SEE step 9 above)

OR

If you are unable to save the files and receive an error message from Acrobat similar to, "Acrobat cannot open (save) the file attachment "mf.inf" because your security settings do not allow this file type to be opened (saved)". Proceed to 4 or 5 to get the files. Once you have saved the fni file to your PC, rename the file extension to inf before saving it as instructed in step 3 above.

4. For Windows XP; Right click on this icon mf.fni and select "Save Embedded File to Disk" if using Acrobat 6 or "Extract file" if using Acrobat 4

5. For Windows 2000; Right click on this icon mf.fni and select "Save Embedded File to Disk" if using Acrobat 6 or "Extract file" if using Acrobat 4