Troubleshooting USB connection problems on the NetDCU14

Hardware:
- Check baseboard design for compliance with the High Speed USB Platform Design Guidelines. See http://www.usb.org/developers/docs/hs_usb_pdg_r1_0.pdf
- The USB data lines must be connected directly to the NetDCU. No capacitors and pull-up or pull-down resistors must be connected. Only USB 2.0 compliant EMC and ESD protection is allowed.
- The USB Detect signal for USB device must be connected (Pin 1 USB connector to pin 25 NetDCU14). Older NetDCUs did not require this signal.
- Check if NetDCU14 USB works on F&S NetDCU-Startintf14.

Software:
- Install latest NBoot, EBoot, and Kernel available on F&S website.
- Install latest NetDCUUSBLoader from F&S website.
- Install lastest Active Sync (WinXP) or Mobile Device Center (Win7)
- Check if NBoot USB connection is working
  You should see output like this:

```
Please select action
'd' -> Serial download of bootloader
'c' -> Load bootloader from SD card
'l' -> Load installed bootloader from flash
'E' -> Erase flash
'B' -> Show bad blocks
Use NetDCUUsbLoader for USB download

HighSpeed detected
HighSpeed detected
```

  If 'FullSpeed detected' is shown check speed of USB port on your PC.
  If nothing is detected check cable and PC USB port.
  USB status in NetDCUUSBLoader should change from red to green

- Check if EBoot command 'DU' works.
  You should see output like this:

```
HW-Watchdog: OFF
Waiting for USB download
Initialize IRQ Vector Tables
EOTG: USB DeInit 0xE59FF3D8
HighSpeed detected
HighSpeed detected
```

  If 'FullSpeed detected' is shown check speed of USB port on your PC.
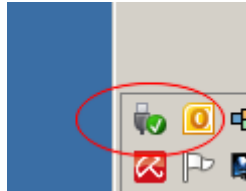 If nothing is detected check cable and PC USB port.
  USB status in NetDCUUSBLoader should change from red to green

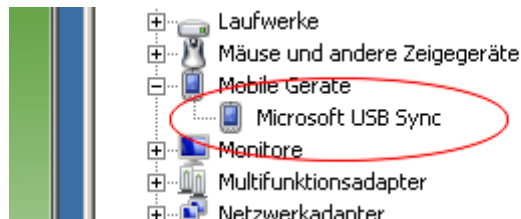- Check if Active Sync connection works in Kernel
  You should see output like this (debug messages enabled):

```
USBFN: Version 1.0, ActiveKey = Drivers\Active\58
USBFN: Serial Function Class Enabled
[UFNPDD] OTG Cable Attached
USBFN: SDE: USB_HIGH detected
[UFNPDD] RESET Again
USBFN: SDE: USB_HIGH detected
[UFNPDD] RESET Again
USBFN: SDE: USB_HIGH detected
```

- Check if Taskbar icon is shown (Win7)

- Check if Microsoft USB Sync is shown in Device Manager (Win7)

- If Microsoft USB Sync is shown but there is no connection in the Mobile Device Center then delete the Microsoft USB Sync device in the Device Manager and restart the NetDCU14. Now it should work.