

Platform Builder / Desktop Connection Setup

The SMDK6410 BSP provides a choice of three options for Platform Builder connectivity for image download and KITL. These are Ethernet, USB_Serial and USB_RNDIS. These options work whether you have Vista or XP as the desktop. Ethernet is the easiest to use since it requires no setup on the desktop. However, it is a slower transport compared to the other two. USB serial requires some desktop setup, but is easier to get going compared to USB_Rndis and is the fastest of the protocols. These options can be selected from the bootloader menu by pressing the 'S' key to change the boot device. The options list USB_DNW as well, which can be used to download an image using the DNW tool from Samsung.

The following table summarizes the three transports and their capabilities/limitations.

Debug Transport	D/L Speed	Desktop Setup	VMINI	Notes
Ethernet	0.640 MB/s	None	Yes	
USB_Rndis	1.1 MB/s	Yes	Yes	
USB_Serial	3.0 MB/s	Yes	No	Can connect only one device to a desktop at a time

Setup Instructions

Ethernet

- **Desktop Setup:** None
- **Platform Builder setup:** In PB target connectivity options choose Ethernet for both download and transport protocols, click on the settings button next to download and select the device when it shows up in the "Active Target Devices" window.

USB Serial

- **Desktop Setup:**
 - Vista: Install Windows Mobile Device Center 6.1
 - XP: Install Activesync 4.5
 - Note 1: Both the above tools can be downloaded from www.microsoft.com (Search for these tools from the main page and it will take you to the download page for these tools)
 - Note 2: On both XP and Vista, ensure that "Enable USB Connections" is **disabled** in the connections setup menu for Activesync / WMDC. If you are having

connectivity issues on XP, please try again after stopping the Activesync process (wcescomm.exe and rapimgr.exe from the task manager)

- **Platform Builder setup:** In PB target connectivity options choose USB for both download and transport protocols

USB RNDIS

- **Desktop setup:**
 - XP: Install Activesync 4.5 to get updated RNDIS drivers.
 - Vista: None (Updated RNDIS drivers already in Vista)
 - First Time Connection:
 - Driver Install: Though the drivers are already present in the desktop (either by default in Vista or by installing AS 4.5 in XP), it will ask for a driver when the device is connected for the first time with USB_RNDIS selected as the boot device. All you need is an appropriate INF file that connects the device with the already installed drivers. The INF file needed for this step is located in the BSP source tree itself, at %_WINCEROOT%\platform\SMDK6410\SRC\COMMON\kitldrv\usbdbg\usbdb\grndismdd\host. Point the desktop driver install wizard at this location and it will take care of the rest.
 - IP Address Setup: You could use Static IP or DHCP for the RNDIS end-point to get an IP Address. For static IP, assign an address in the range 169.254.x.x to the network connection when it shows up. It should be different from the IP address used by the bootloader, which by default is 169.254.1.101. For DHCP, you would have to either bridge network connections or use Internet Connection Sharing (so that the RNDIS end-point can talk to an external DHCP server)
- **Platform Builder setup:** In PB target connectivity options choose Ethernet for both download and transport protocols, click on the settings button next to download and select the device when it shows up in the “Active Target Devices” window.