

Certified Wireless USB or USB Over Wi-Fi – Which is Best?

Certified Wireless USB is the new emerging standard for wireless USB connectivity. But there is already an established method for connecting USB devices using the popular 802.11 wireless standard. This white paper examines applications for both technologies, and discusses the merits of each.

White paper by Silex Technology America, Inc.

January 8, 2008

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CERTIFIED WIRELESS USB VS. USB OVER WI-FI – WHICH IS BEST?

USB is probably the most popular peripheral connectivity standard in the world, with well over two billion USB devices installed in the world today. But USB has some significant limitations because it requires a cable, and because this cable is limited to about 16 feet in length. This is a problem for two reasons:

- Desktops are becoming cluttered with cables
- People want to move their laptops around their house without constantly unplugging and plugging their USB peripherals

Certified Wireless USB is a new wireless communications protocol that is designed to address the desktop clutter issue. It is basically a wireless extension of the USB standard, and therefore has the same advantages, including ease of use, high performance, and (soon) low cost. It also provides some degree of peripheral sharing capabilities, since a PC user can disconnect a Certified Wireless USB device to allow another user to connect to it. Certified Wireless USB products have now begun to appear on the market, and it is likely that many new Certified Wireless USB products will be introduced at CES this year.

But Certified Wireless USB is limited in distance to just 34 feet, and it is therefore not well suited for mobile laptop applications. For such applications, the best way to connect USB devices wirelessly is to use USB over Wi-Fi technology. This technology uses the laptop's built-in Wi-Fi networking to communicate wirelessly to a USB device server (a small box that connects to a USB device and converts the device's USB interface to Wi-Fi). The advantages of this approach include:

- Much larger distance capabilities (up to 300 feet). This allows you to move your laptop into your kitchen or patio or almost anywhere else in your home.
- No unplugging and plugging your USB devices. You can leave your USB devices in your computer room -- the USB device server lets you use the USB devices as if they were directly connected to your laptop.
- Virtually every laptop computer sold today has built-in Wi-Fi. Although Certified Wireless USB is likely to be commonplace on computers in the future, very few computers have it now.
- True networked peripheral sharing. For certain types of devices, such as intelligent laser printers, device servers can enable true peripheral sharing capabilities via networking protocols like lpr/lpd. That is, several users can access the USB device simultaneously, and there is no need for the users to manually connect and disconnect every time they use the USB device.

So what's the bottom line? If your primary objective is to reduce the cable clutter on your desktop, then Certified Wireless USB will be the clear choice when products with this technology become widely available. But if you need to move your laptop around your house and want to be able to use your USB peripherals, USB over Wi-Fi wireless networking is the best way to go – and it's available today!