

A quick guide to Wireless USB

What, why, who, how explained

by Rob Kerr published on 31 March 2009

What is it?

Wireless USB is the next generation of wireless technology for connecting various devices to a computer wirelessly, which could very well be a challenger to Bluetooth in its usefulness and abilities.

Often referred to as WUSB, it's a technology very similar on the outside to the way Bluetooth can be used today, only it has the possibilities of 480Mbps throughput as compared to 1-2Mbps on Bluetooth.

Its underlying technology is known as Ultra-WideBand or UWB, which in itself has picked up a lot of headlines of late as this alone is driving the possibilities of wireless HDMI, plus Dolby 5.1 audio possibilities over the airwaves.

What are the variations of the technology?

Since its creation over 3 years ago, there really hasn't been any variations in the technology. The connector for the external adaptors today is a USB port, which has the possibilities of connecting to 127 other Wireless USB devices.

There are two different terms used in Wireless USB, Device Wire Adapter (DWA) and Host Wire Adapter (HWA). The first is known as the device where multiple USB devices can physically connect to a product that looks and acts much like a hub, where the other term is used for the adaptor on a computer to connect to such a hub wirelessly.

Why should I care?

One of the reasons why you should care is that besides being the next generation of wireless technology and far better than Bluetooth, it can offer a neatness as compared to many stray USB leads hanging off a computer.

Wireless USB offers the facility for a hub to be



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placed, somewhere near or above the workstation area, where all the USB devices can then be attached and accessed in a far cleaner way without the many wires trailing to the computer.

There are fixed USB hubs for such a purpose, although these are still held back by wires leading to the computer and have limits in their very design - whereas Wireless USB is free from such drawbacks.

What's a good example in practice?

Despite the uptake of Wireless USB being rather slow at present, there are products around today and a distinct expectation for more very soon.

Peripheral manufacturers from the likes of Belkin and IOGEAR already have Wireless USB products, proving the technology is viable, useful and ready for the market today.

Belkin retails their own Wireless USB hub, which is accompanied by a wireless adaptor for connecting up a computer to the hub over the airwaves. The hub can be placed anywhere in a 10 metre radius although it's more effective within a 3 metre distance. Four USB devices can be connected up, which has a bandwidth throughput of 480Mbps at close range and up to 110Mbps at the greater limit.

IOGEAR has a wider range of products working on the Wireless USB specifications, besides just a hub similar to Belkin's. Their series of devices are tailored to deliver video from a computer to a screen and up to the resolution of 720p, along with audio too over a similar distance. They also retail their Wireless USB adaptors separately, in order to extend the overall usefulness of other equipment for other computers.

Is there a competing technology that I should be aware of?

The current leader for wireless data transfer is of course Bluetooth and that's the competing

technology, simply by the fact it is used so widely. Its adoption is quite rife, from laptops to mobile phones and even some personal media players have Bluetooth onboard.

That wireless technology is very limited in its transfer speed and subsequently the amount of data that can be transferred across. This is one of the reasons why it really hasn't been used for vast amounts of data transfer.

The alternative that's more widely used is just a USB cable, these are ever present and nearly always at hand, ready and easy to use.

What is in store for the future?

What's next on the roadmap of Wireless USB is the greater adoption of the technology, with more devices having it inherent within and computers supporting the standard.

Motherboard manufacturers and computer companies will need to start including Wireless USB as an optional technology or by default in their systems. It's a tricky scenario between peripheral companies and system manufactures, as one or the other needs to highlight and lead by example of how useful and ready the technology is.

There are also the benefits and use in the field of Wireless HDMI, which is something that's been written and spoken about by vendors but is still at an early stage of development. This is where a signal could be delivered from a computer or a laptop, to an HDMI socket on a supporting screen with a similar adaptor attached at a higher standard that's already on offer.

Of late, news has come from Samsung that its Wireless USB chips are almost ready for market, around Q2 of this year. These chipsets can be made available to the likes of digital cameras, speakers and similar devices.

With Wireless USB there could be a day when an entire desktop computer setup could very well be connected wirelessly, as mice can be wireless,

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just as keyboards can be, speakers and now monitors too.