

Wireless Options – July 2010

Pricing is valid for orders received between 1st July 2010 and 31st July 2010



Hardware	Specifications	Buy (\$)	Lease 3 Years
Wireless Access Point ¹	EnGenius ECB-9500 Wireless 802.11b/g/n AP/Bridge/WDS	\$275.00 +GST	\$9.63 +GST per/mth
PoE Injector ²	Pacific Wireless 48V PoE Injector <i>(recommended for use with EnGenius A/P's)</i>	\$75.00 +GST	\$2.63 +GST per/mth
PC Wireless Adaptor	D-Link DWA-610 Wireless G PCMCIA Adapter	\$65.00 +GST	\$2.28 +GST per/mth
Laptop Wireless Adaptor	D-Link DWA-510 Wireless G PCI Adapter	\$65.00 +GST	\$2.28 +GST per/mth
USB Wireless Adaptor	D-LINK DWA-110 Wireless G USB Adapter	\$65.00 +GST	\$2.28 +GST per/mth

Wireless Networking

A site audit may be required to ensure that your wireless coverage is maximised for roaming and integration with your existing IT infrastructure. It is not as fast or reliable as a direct connection via a UTP cable, but it is suitable for Internet surfing and small to medium file transfer to the Smart-Net server. Configuration of laptops and other computers may be completed onsite by you or one of our technicians can assist you, at our standard hourly rates.

As part of our responsibility to provide recommendations for wireless equipment, we want to make sure you understand the advantages and disadvantages of wireless networks. We therefore encourage you to read the summary of information about wireless networks on the following page.

¹ Works with Windows XP (Service Pack 3), Windows Vista and Mac OSX workstations.

² Power over Ethernet (PoE) injectors supply power through network cables to power network devices. PoE powered devices do not require separate power cables. Instead, they use a standard RJ-45 jack and can be positioned away from wall outlets.

Disclaimer: Prices are subject to change. Components may vary and are subject to availability. All prices quoted are exclusive of GST, freight and installation charges unless specified above.

Please tick the required options and enter all the required details.

I would like to:		<input type="checkbox"/> Purchase			<input type="checkbox"/> Lease				
A/P Qty:		POE Qty:		DWA-610 Qty:		DWA-510 Qty:		DWA-110 Qty:	

Date:				
Name:			Order #:	
Organisation:			Phone:	
Signed:				

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What is a Wireless Network?

A wireless network allows a user to access network resources, including the Web and e-mail, without requiring the user's computer to be physically connected to a network wall jack. The network signal is broadcast from an access point, which is hardwired to the network, and properly configured computers detect that signal and establish the network connection.

Wireless networks are a trade off of portability versus speed. Wired and wireless LAN technologies are complementary; wireless is not a replacement technology. The question is not about either/or; it's about how to use the strengths of the two technologies together to provide the best combination of performance and flexibility.

Advantages of Wireless

The ease of access to a wireless network encourages precisely what schools want to see: greater use of the laptops and greater integration of the technology into the curriculum.

Users can move their laptops freely within the wireless environment without logging off or needing to unplug cables. Wireless connections also improve productivity outside the classroom.

Wireless systems can be easier and less expensive to install than a wired network. While the costs vary, a wireless system can be less expensive to install in an existing facility because fewer wires must be run through walls and ceilings.

Disadvantages of Wireless

Wireless networks are slower. A wireless network can provide connection speeds up to 54 Mbps (megabits per second). However, the signal broadcast by an access point is a shared resource, and the number of users connected to an access point at any given time can affect the available bandwidth and stability of the access point. Wireless access points are also configured with encryption to ensure your wireless network is secure. This does however reduce the available bandwidth access points can provide to connecting clients.

Wireless technology is also poorly suited to applications that need either high-bandwidth or relatively stable bandwidth. Multimedia applications that work with image or audio material are good examples of applications that are poorly suited to wireless connections. As these applications become more commonplace, and quality expectations grow, it will be difficult to meet expectations via a shared wireless infrastructure.

The performance of a wireless network greatly depends on signal strength of the wireless access point. If a wireless client falls out of range of the access point signal, obviously that network connection will fail or "drop." Clients situated near the edge of the network range will likely experience intermittent dropped connections. But even when a wireless client stays within range consistently, its network performance can still be adversely affected by distance, obstructions, or interference.

There are other important issues to consider when a wireless network is installed. Any barriers along the "line of sight" between a client and access point will degrade a wireless signal. Plaster or brick walls tend to have the most negative impact, but really any obstruction including any source of water (e.g. fish tanks, people and rain), cabinets or furniture will weaken the signal significantly. Any reflective surfaces also lessen both network range and performance. In addition, appliances such as microwave ovens, cordless telephones, electrical equipment and power conduits can cause interference with the wireless signal.

During the lifetime of a wireless installation, user requirements and external interference may affect the wireless network. Requirements may include upgrading or extending the wireless network and reconfiguring the wireless infrastructure if conditions change.