D-Lifestyle

Technology solutions & lifestyle magazine   FREE

TOP 5 SECRETS
to faster broadband
squeeze more speed from your home internet

BUILDING OR RENOVATING?
we show you the best options for home networking

INTERNET TELEPHONY EVERYWHERE
Make ultra-cheap calls from anywhere in the house

D-Link®
Building Networks for People

GET WIRELESS COVERAGE IN EVERY CORNER OF YOUR HOME

THE D-LINK WIRELESS | N ROUTER

The D-Link **DIR-655** wireless high speed router provides high performance on both the local wireless network and the connection to the internet, so you can stay connected throughout your entire home and make the most of sharing the internet with PC's, game consoles, VoIP and media players.

Internet

ADSL / Cable Modem

Desktop Computer

Network Attached Storage

XTREME N™

Hi-Fi   Media Player   HD TV   Laptop   Game Console

WIRELESS
by **D-Link**®

N

SPEED: Up to 300Mbps*

RANGE: Up to 300 metres*

* Wireless speed and range will be affected by environmental factors.

Works best with:
- ▸ DWA-140 Wireless N USB Card
- ▸ DWA-645 Wireless N Laptop Card
- ▸ DWA-547 Wireless N Desktop Card
- ▸ Intel Centrino Duo

D-Link®
Building Networks for People

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Issue 9

D-Link is a worldwide leader and award-winning designer, developer and manufacturer of networking, broadband, Wireless, digital electronics, and voice and data communications solutions for the digital home, Small Office/Home Office (SOHO), Small to Medium Business (SMB), and Workgroup to Enterprise environments.

With global manufacturing International Standards Organization ISO 9001, 9002, ISO 14001 Certifications and numerous National Technical Excellence awards earned for R&D and manufacturing, D-Link delivers product excellence, quality, reliability, compatibility, high-performance within standards, and easy installation software, educational materials, and manuals.

D-Link is a dominant market participant and price/performance leader in the network and communications market. D-Link has been profitable every year since its inception in 1986, and continues to grow at a rate that will allow the Company to experience continued prosperity. D-Link sets the standards for market affordability, while focusing on Building Networks for People.

CONTENTS

Features

Great to hear from you!

I was delighted to receive numerous reader letters after the last edition of D-Lifestyle – keep them coming!

As the marketing director for D-Link, I spend a lot of time thinking about and researching what's on customers' minds – after all, if we solve your problems and enhance your computing experience, we'll sell more stuff, and that keeps my boss happy!

But, while we talk to customers all the time about their needs, it's not often that people write us a letter out of the blue, which is exactly what happened after the last edition of D-Lifestyle.

The first few letters were small enquiries – one reader realised he didn't have issue 3, and wondered if we could mail it to him, and another reader had previously picked up a copy of D-Lifestyle in Harvey Norman, but couldn't get it easily where she lives in Tasmania. Of course, we were very happy to oblige by sending copies to both readers.

But then we received a letter from a reader suggesting that we should look at several topics in the mag – including one we've covered in this edition on how to plan a home network if you're building or renovating your house, and other good ones we'll look at next issue.

I can't tell you how pleased we are to hear from customers and their thoughts and suggestions for D-Lifestyle – it's helping to keep us focused on the most important thing: providing useful information that extends the support experience that D-Link is famous for.

Look forward to hearing from you.

From the Marketing Director
D-Link Australia

Maurice Famularo

News

▶DIR-655

▶DIR-615

D-Link energy-efficient switches combat global warming

If we don't dramatically cut power consumption in coming years, scientists say global warming will reach levels that literally threaten mankind. So, what does the tech industry have to do with this?

Small, domestic computer networking products may not drain large amounts of energy – for example, your home router is the least of your worries when it comes to cutting the power consumption of your household.

However, the sheer number of networking devices in use around the world, especially the thousands of high-powered devices crammed into the world's data centres and corporate IT rooms, do combine to use a fair bit of power.

International standards bodies are working on improving this with a new "energy efficient Ethernet" standard, but D-Link already has many elements of the technology in place in its switches.

The concept behind the technology is simple, though actually making it work has proven more challenging for the industry. Put simply, if network traffic is not using the full link speed of the port (which in the most powerful routers can be up to 10Gbit/s), the router can turn the speed of the port down automatically, which saves power.

The international standards body responsible has not yet finished designing the final standard, yet D-Link has been able to successfully create energy-efficient routers – likely to be years ahead of routers based on the final standard –enabling companies to start saving power right away.

Study shows D-Link 802.11n is fastest

With the first few generations of wireless networking technologies, the main benefit was the convenience of being able to move about freely with your PC. The latest generation – 802.11n – is all about speed and range.

octoScope, a US-based technology consulting firm, has completed independent testing which showed that D-Link's draft 802.11n products provide the fastest throughput when compared to a set of competitors' products, including selected models from Belkin, Linksys and Netgear.

"The DIR-655 will let you watch high-quality HDTV even at 150 feet since it maintains about 20 megabits (Mbps) of throughput at that distance," the company said.

At typical usage distances of 40 feet, the speed was a blistering 120Mbit/s, providing faster speed for a single user's download than typical home Ethernet.

According to octoScope, tests were designed to replicate an office environment, and were carried out in an untenanted office building with the number of walls increasing along with the distance – as you'd expect in a real usage environment. Tests were also repeated in a real home environment.

octoScope paid particular attention to the ability of different routers to consistently handle streaming high-definition video, as this is expected to be a key usage driver for 802.11n. The results? D-Link's proprietary Wireless Internet Stream Handling (WISH) meant only the DIR-655 was capable of handling a high definition MPEG-2 video stream at 110 feet, through five walls.

WIRELESS N
by D-Link

▶DWA-645

▶DSL-2740B

Are you ready for high-definition home networking?

With high-definition flat-screen TVs dropping to below $2,000, there's sure to be increased demand for streaming high-definition video around the home network. And the key to making it happen is the latest wireless networking standard, 802.11n.

You'll hear a lot of numbers being thrown around in relation to wireless networking: 11Mbit/s, 54Mbit/s, 300Mbit/s... but you'll probably also have heard that real-life throughput speeds of wireless networks is lower – and that's true. For example, most wireless networking equipment released until recently uses the 802.11g standard, which provides up to "54Mbit/s". On face value, that should be more than enough for streaming high-definition video over a network, as that only requires a throughput speed of around 20Mbit/s.

The truth is that 802.11g only provides about 20Mbit/s throughput in the best real-life circumstances, and speed drops away quickly as you move away from the base station. It's not uncommon to get just 5Mbit/s in an upstairs room, for example.

The designers of the latest 802.11n standard have focused on improving both throughput speed and range/penetration dramatically. The result is that in ideal conditions, you'll get around 100Mbit/s from an 802.11n wireless router, and as you move away from the router, the speed will typically be between 20 and 40 Mbit/s – certainly enough for glitch-free wireless high-definition streaming (assuming there is no severe radio interference).

Tips for getting best results with 802.11n

Don't mix in G or B
The older forms of wireless networking – 802.11b and 802.11g – are still found in the majority of wireless enabled computers, such as laptops, being used today. They will work with an 802.11n network, but be aware that the speed for all users of the network will drop back to the lowest common speed. So, if an 802.11g laptop logs on to an 802.11n network, the whole network speed will drop to less than 20Mbit/s, which will stop video from streaming properly.

Use matching access cards
The wireless base station you use is only half of the picture – the other important factor is to use matching access cards for your PCs. D-Link has a range of 802.11n access cards available to plug into your laptop's PCMCIA slot, desktop PC PCI slot or even USB ports on an existing desktop PC. These will help you get full speed, because their antenna configurations and radio specifications will be matched to the base station.

Find the ideal 802.11n device for you

	DIR-615 Wireless N Router	DSL-2740B ADSL2+ modem/ router/ 802.11n access point	DIR-655 Wireless N Router
I want to add 802.11n to my existing ADSL/cable modem	✔		✔
I want a very affordable unit	✔		
I'd rather replace my whole ADSL modem and have everything in one box		✔	
I want good speeds, but don't copy large files over the network often	✔	✔	
I want maximum wired and wireless performance – top of the line!			✔
I have a large house and have had coverage problems with other wireless products			✔
I want to make higher quality internet phone calls		✔	✔

A range of matching 802.11n access cards for notebook and desktop PCs are available that work with these routers. Ask your D-Link retailer for more details.

Use VoIP anywhere in the house

How do you make internet phone calls using the phone socket in the bedroom, kitchen, or even the shed? D-Link has the solution.

VoIP is certainly more convenient than landlines in some ways: cheaper calls and the ability to use it anywhere you have a net connection are major benefits. But connecting internet telephony up to multiple existing phone outlets in a house has posed a challenge.

D-Link now has a cordless phone solution that makes spreading VoIP around the house very easy – and you won't need an electrician!

The DPH-C160S is a cordless phone with VoIP capabilities built in that simply plugs into your home router.

You can have multiple handsets connected to one base station, and you'll still be able to make and receive phone calls on your existing regular phone line if you want to, addressing concerns from some VoIP users that they wouldn't be able to make phone calls if the internet went down.

And of course, because the phone base station itself has VoIP technology built-in, you won't need a separate analogue telephone adaptor connected to your modem. One less box means less clutter!

Cleverly, D-Link has chosen to use a set of radio frequencies for their cordless phones that don't interfere with WiFi transmissions - many cordless phones use the 2.4GHz frequency, which will cause WiFi speed to drop, while D-Link's DPH-C160S uses the 1.9GHz frequency.

Easy, affordable printer sharing

Got a printer and modem, but more than one computer? Now you can hook them all up cheaply.

It's the curse of the constant march of technology: what is ideal today is often outdated tomorrow. So it is with the thousands of printers and modems out there in Australian homes: a USB printer is great for a single computer, but it's a pain once you get more than one.

The DIR-120, D-Link's latest entry-level router, is ideal for situations where the number of PCs has outgrown the single-connection broadband modem and printer. It allows a USB printer to be plugged in to the router and shared with up to four networked PCs, and allows all the PCs to be online at the same time, by sharing the broadband internet connection from an ADSL or cable modem. It also works with certain models of Unwired or iBurst modems. (All modems must have an Ethernet port.)

The DIR-120 can also be connected to a wireless access point at a later date, if you decide you need wireless at home for notebook PCs or game consoles.

The router also has a host of internet security features, including multiple firewalls, which stop your PC from being directly exposed to threats from hackers, viruses or worms. Many people don't realise that when a PC is directly connected to a standard modem, it could take just minutes for a copy of Windows to be infected with internet-borne viruses – you don't even need to open your web browser.

You'll also appreciate the fact that the DIR-120 supports Quality of Service (QoS), which ensures that important data like internet phone calls go right to the front of the queue in any data transmissions, reducing poor call reception.

One note about the DIR-120: your printer will need to be a standard USB modem, not a "host based" or "GDI" one. Check your printer's manual to be sure. Multifunction fax/scanner/printers will only be able to share their printing function over the network.

▶DPH-C160S

▶DIR-120 Front

▶DIR-120 Back

Home networking solutions

Whether you're building a new home or renovating an existing one, it's a great time to evaluate your home networking options.

Nowadays, the temptation for everyone – regardless of their home network requirements – is to go with wireless technology, for the sake of convenience.

However, while wireless has certainly come a long way in terms of speed and range, the fact that it uses radio signals means it's more susceptible to problems than a traditional wired network, e.g. range issues, decreasing speed as you move away from the transmitter, and so on.

The beauty of a wired network is stable network speed everywhere in the house, and, with Gigabit Ethernet, much higher speeds than any consumer wireless technology offers. This is a major benefit for content streaming – playing videos from one PC on a home network to another TV or PC elsewhere in the home. Unless you have the latest 802.11n wireless, content streaming can be hit-or-miss on wireless.

So, if you're in the process of building a house, take the opportunity to cheaply lay Ethernet cables in the wall cavities – you'll only pay the negligible cost of the cables themselves and for having sockets installed in the walls. And with more and more home entertainment devices being network connectable, you may even want to put multiple Ethernet ports in each room.

Once you've got those ports in the walls, you'll be left with a bunch of cables at the other end that you'll need to connect up to something. Bear in mind that while you might have 24 cables, for example, you don't immediately need to buy a 24-port network switch. If you'll only be using a few wired devices in the immediate future, a standard home router with four ports can be used initially and then you can simply plug in unmanaged network switches in the future to add extra ports.

If you plan carefully, your broadband router, phone line and cabling can be connected up in a cupboard, out of sight.

If your home is already built ...

If you're living in a fully-built home and have no intentions of doing major renovations, the cost of cabling the home can add up quickly – threading cables through walls once wall cavities are sealed up is time-consuming, and at the rates electricians charge, probably not worth it.

However, a well-planned wireless solution with modern technology can provide good performance.

There are two key considerations with wireless networks: the technology used, and the location of the router. The latter might be constrained by the location of the broadband outlet in your house – either a cable or telephone socket. It's usually inexpensive to have one of these sockets installed in a central location in the house, though, so it's worth considering.

When buying wireless networking hardware, it's important to:
- Buy an 802.11n D-Link router so you benefit from the greatly increased speed and penetration that this new technology offers
- If you don't have computers with 802.11n built in, you should buy D-Link 802.11n add-in cards, which can communicate with the router at full speed. (If you have a single 802.11g or 802.11b device on the network, the speed for all devices will fall back to the slower speed.)

Help! Nothing's working for me!

If putting wired Ethernet ports into your home isn't cost-effective, and you simply can't get the wireless coverage you need, there is one more option: powerline networking. These great adaptors use the existing electricity cabling in your home and make them double as networking cables. Next issue, we'll cover powerline and wireless configurations in depth, showing how you can get an existing home networked.

GOOD

Sam, IT University Student

"My parents just bought me a new Intel Core Duo 2 laptop for Uni and apparently it can do wireless speeds of 300Mbps. I would really love to upgrade my current router as it only does 54G but because I only work part time, I'm on a budget. My flat mate also has a laptop he'd like to make wireless but it only has an Express Card slot and so far he's been unable to get an adapter to make it wireless!"

Solution: DIR-615 Wireless N Router & DWA-643 Express Card Adapter

Reason:

Still delivering great range and a fast wireless connection, this product comes with an entry level price tag. Sam's friend can now upgrade his laptop with a Notebook Express Card adapter and together with this router, both students can get up to 300Mbps.

The **DIR-615** Rangebooster offers the features of a superior Wireless N Router but at an entry-level price.

❖ 4 built-in 10/100 Ethernet ports to hard wire devices
❖ Dual (2) Antennas providing better wireless signal than traditional wireless 802.11g technology
❖ Connect to a Cable or ADSL modem and share high-speed internet access with everyone on the network
❖ Wireless speeds up to 270Mbps
❖ Backwards compatible with 802.11b/g products
❖ WEP/WPA/WPA2 security encryption
❖ Repels intruders with Advanced Firewall (NAT and SPI)
❖ Quick Router Setup Wizard
❖ Works with all OS

The **DWA-643** RangeBooster N PCMCIA Express Card is a draft 802.11n Notebook adapter that connects to any standard PCMCI Express Card slot. Wirelessly Stream HD Video, Share Files, and Go Online with maximum performance. Slimmer, Lighter, and Higher Performance than standard PCMCIA Cardbus Adapters.

BETTER

Jen, SOHO (Small Office Home Office)

"I don't have time to waste setting up all this technical stuff. We currently have ADSL connected in the office and I'd like to upgrade to an all-in-one unit that gives me top security and wireless performance. No fuss…"

Solution: DSL-2740B

Reason:

Combined ADSL 2/2+ Modem and N Router means one box and one configuration. With D-Link Quick Connect technology, you need no technical expertise.

The **DSL-2740B** Rangebooster N 650 is a superior Wireless N Router with built-in ADSL 2/2+ Modem perfect for an all-in-one option.

❖ Built-in ADSL 2/2+ modem supporting up to 24Mbps download speeds
❖ 4 built-in 10/100Mbps Ethernet ports to hard wire devices
❖ QoS Traffic Prioritisation provide better Internet experience by keeping digital phone calls (VoIP) and online gaming smooth and responsive
❖ Draft 802.11n Wireless speeds up to 300Mbps and wireless range of up to 300m
❖ Three (3) Antennas for Whole House coverage and eliminating dead spots
❖ Backwards compatible with 802.11b/g products
❖ Strong WPA/WPA2 data encryption security
❖ Repels intruders with Advanced Firewall (NAT and SPI)
❖ Quick Router Setup Wizard
❖ Works with all Operating Systems

Alternative: If you would like to keep your current ADSL Modem, then DIR-635 is the one for you. The **DIR-635** Rangebooster N 650 is a mainstream Wireless N Router ideal for any SOHO user.

❖ 4 built-in 10/100Mbps Ethernet ports to hard wire devices
❖ Connect to a Cable or ADSL modem and share high-speed internet access with everyone on the network
❖ QoS Traffic Prioritisation provides better Internet experience by keeping digital phone calls (VoIP) and online gaming smooth and responsive
❖ Wireless speeds up to 300Mbps and wireless range of up to 300m
❖ Three (3) Antennas for Whole House coverage and eliminating dead spots
❖ Backwards compatible with 802.11b/g products
❖ Strong WEP/WPA/WPA2 data encryption security
❖ Repels intruders with Advanced Firewall (NAT and SPI)
❖ Quick Router Setup Wizard
❖ Works with all OS including Vista Certification

BEST

Vaness, Administrative Assistant of Small Business

"I need a wireless router so the directors of our Architectural firm can be free to move around the office but we have three desktops that probably need to be physically connected. We also share a central hard drive that stores all of our drawings as the files are very large and I've heard some products come with a Gigabit wired connection? The directors would really like to be able to access this information when presenting to clients but we've had problems in the past with connection drop outs and bad signals in the boardroom…"

Solution: DIR-655

Reason:

Large file transferring requires Gigabit speeds for wired connections and Intelligent WISH technology to stream multimedia. If range and coverage is important, this product is the best in its class. To achieve its ultimate performance, combine it with the following Wireless N adapters. For Desktops, use either DWA-547 (PCI) or DWA-556 (PCI Express). For Notebooks, use either DWA-645 (Cardbus Adapter) or DWA-643 (Notebook Express) or, DWA-140 USB Key which works with all Personal Computers.

The **DIR-655** Xtreme N is the ultimate Wireless N Router for best performance and feature-rich requirements.

❖ Total Gigabit performance with 4 built-in 10/100/1000Mbps ports to hard-wire devices
❖ Intelligent Quality of Service (QoS) Technology for Superior VoIP and Online Gaming
❖ Wireless LAN Intelligent Stream Handling (WISH)
❖ Draft 802.11n Speeds Up to 300Mbps
❖ Three (3) Antennas for Whole-House coverage and eliminating dead spots
❖ Wirelessly Stream HD Video, Share Files and Go Online when connected to Cable or ADSL modem
❖ Backwards compatible with 802.11b/g products
❖ Wireless encryption at the touch of a button (WPS) for best possible security
❖ Repels intruders with Advanced Firewall (NAT and SPI)
❖ Supports Good Neighbour Policy – will not interfere with other wireless networks
❖ Quick Router Setup Wizard
❖ Works with all OS including Vista Certification*

*Vista Certification adheres to strict guidelines set by Microsoft but will work with all OS

ADSL MODEM ROUTER

DSL-2740B

- Built-in ADSL/ADSL2/ADSL2+ modem
- 4 built-in 10/100Base-TX switch ports
- Built-in NAT firewall
- Stateful Packet Inspection (SPI)
- Denial of Service (DoS) prevention
- Strong WPA™/WPA2™ data encryption security
- 802.11e Wireless QoS (WMM/WME)
- Dynamic DNS support
- Traffic prioritisation

IP ROUTER / GATEWAY

DIR-655

Works with Windows Vista™

- 64/128-bit WEP data encryption, Wi-Fi Protected Access (WPA™, WPA2™)
- 4 built-in 10/100/1000Base-T switch ports
- 1 USB port (for use with Windows Connect Now)
- Parental control
- Firewall protection with NAT, DMZ and Virtual Server Mapping support
- Built-in award-winning QoS Engine (LAN to WAN traffic prioritisation and bandwidth management)

IP ROUTER / GATEWAY

DIR-615

- 64/128-bit WEP data encryption, Wi-Fi Protected Access (WPA™, WPA2™)
- 4 built-in 10/100Base-TX switch ports
- Parental control
- Firewall protection with NAT, DMZ and Virtual Server Mapping support

IP ROUTER / GATEWAY

DIR-855
COMING SOON

Works with Windows Vista™

- Superior Performance over Competing Draft 802.11n Routers with Simultaneous Dual Band (2.4 and 5.8GHz) Operation
- Award-Winning QoS Engine for Superior VoIP and Online Gaming
- Works with Existing Wireless 802.11g Devices
- Gigabit Ethernet Ports for Optimal Speed for Wired Networking

IP ROUTER / GATEWAY

DIR-635

Works with Windows Vista™

- 64/128-bit WEP data encryption, Wi-Fi Protected Access (WPA™, WPA2™)
- 4 built-in 10/100Base-TX switch ports
- 1 USB port (for use with Windows Connect Now)
- Parental control
- Firewall protection with NAT, DMZ and Virtual Server Mapping support
- Built-in award-winning QoS Engine (LAN to WAN traffic prioritisation and bandwidth management)

ACCESS POINT

DAP-1353
COMING SOON

- 64/128-bit WEP data encryption, Wi-Fi Protected Access (WPA™, WPA2™)
- 1 10/100BASE-TX Ethernet LAN Port
- Supports AP, WDS, WDS+AP and AP Client Modes
- Built-in award-winning QoS Engine (traffic prioritisation and bandwidth management)

FEATURES & BENEFITS

- **Draft 802.11n WLAN Specifications**
Latest high-performance wireless technology.

- **Superior Wireless Speed**
Fastest wireless data transfer rate, suitable for Internet DHTV, streaming video, online games, voice, and MP3 music.

- **Superior Signal Coverage Range**
Wireless operation range many times farther than the current 802.11g devices, enables reception from greater distances.

- **Compatible with 802.11b/g Devices**
Seamless integration with current and earlier standard wireless devices.

- **Encryption**
Protection of wireless data travelling in the air that are sent by the users.

- **WPA™ EAP/PSK, WPA2™ EAP/PSK with TKIP & AES Support**
- Wireless LAN security including data encryption keys and user authentication for network access.
- Keeps out intruders located next door, upstairs or downstairs.
- Advanced encryption and security schemes for business environments.

- **Windows Vista Support**
Operate in Windows 2000, XP and the latest Vista Operating System.

PCIe EXPRESS ADAPTER

DWA-556

- Draft 802.11n Technology for Total Network Performance
- Wirelessly Stream HD Video, Share Files, and Go Online
- Get The Maximum Performance from Your Desktop Adapter
- Connects to Any Standard PCI Express (PCIe) Slot
- Supports Microsoft Windows Operating Systems

PCI ADAPTER

DWA-547

- Draft 802.11n Technology for Total Network Performance
- Connect to Secure Wireless Networks Using WEP, WPA™, and WPA2™
- Get Reception Throughout Your Home by Connecting to a Wireless N Router
- Supports Microsoft Windows Operating Systems

USB ADAPTER

DWA-140

- Draft 802.11n Technology for Total Network Performance
- Connect to Secure Wireless Networks Using WEP, WPA™, and WPA2™
- Get Reception Throughout Your Home by Connecting to a Wireless N Router
- USB 2.0 Connection for Desktop or Notebook Computer
- Supports Microsoft Windows Operating Systems

ExpressCard ADAPTER

DWA-643

- Draft 802.11n Technology for Total Network Performance
- Wirelessly Stream HD Video, Share Files, and Go Online
- Fits into All Standard ExpressCard Slots
- Slimmer, Lighter, and Higher Performance than CardBus
- Supports Microsoft Windows Operating Systems

CARDBUS ADAPTER

DWA-645

- Draft 802.11n Technology for Total Network Performance
- Connect to Secure Wireless Networks Using WEP, WPA™, and WPA2™
- Get Reception Throughout Your Home by Connecting to a Wireless N Router
- Supports Microsoft Windows Operating Systems

WIRELESS |N by D-Link

SPEED: Up to 300Mbps*
RANGE: Up to 300 metres*

Wireless speed and range will be affected by environmental factors.

Maximum wireless signal rate derived from IEEE Standard 802.11g and draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental factors will adversely affect wireless signal range. This product is based on IEEE draft 802.11n specifications and is not guaranteed to be forward compatible with future versions of IEEE 802.11n specifications. Compatibility with draft 802.11n devices from other manufacturers is not guaranteed. All references to speed and range are for comparison purposes only. Product specifications, size and shape are subject to change without notice, and actual product appearance may differ from that depicted herein.

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| NETWORK SWITCHING | WIRELESS LAN | ROUTING | FIREWALL / VPN |
| IP CAMERAS | VOIP | NETWORK STORAGE | SERVICES & SUPPORT |

How to boost your broadband - top 5 secrets

Did you know there are many things you can do to get more out of your home broadband connection? We'll show you how to get more speed, link to your home network from afar, and secure it against net nasties.

1. Make P2P file transfers faster

Are you a fan of BitTorrent, but find the transfer speeds can be frustratingly slow, taking days – or even weeks – to download a movie?

In many cases, the cause of slow file transfers on P2P networks is that people are sending files to you, but your modem doesn't know which computer on the home network to send the data on to. The solution is to manually set up "port forwarding" on your modem – but this can be quite a complicated procedure.

Fortunately, D-Link modems support a technology called UPnP, which allows software to communicate with the router and do the configuration for you. The trick is to enable UPnP in the router, and also use software that supports UPnP.

A popular BitTorrent program that supports UPnP is µTorrent. To enable it, open µTorrent and go to Options → Preferences → Connections, and check "Enable UPnP port mapping."

To enable UPnP in the router, consult your router's manual for the procedure for configuring UPnP. As an example, on a D-Link DIR-615 (a new 802.11n high-speed wireless router), you could follow these steps:
- in your Web browser, type 192.168.0.1, which is the Web address for the router's admin screens.
- in the login screen, click "submit" (leave the password blank)
- Go to the Advanced tab, then "Advanced networking" on the left side.
- Tick the box for "Enable UPnP" (or leave it ticked if it is already).
- Click "Save settings".
Now, when you open µTorrent, it will automatically configure the correct port forwarding rules in your router, and your torrent downloads should speed up.

2. Access your home PC from work

Want to log in to your home PC to email yourself a file you left at home, or check on how your P2P downloads are going? It's quite easy to do. One of the simplest programs is Logmein.com, which runs on your home PC. When you're at work, you can simply go to www.logmein.com and type in your username and password to be connected to your home PC's screen. The service and software

is free of charge – logmein.com makes money by users upgrading their software.

3. Make Web downloads faster

Did you know that you could have Australia's fastest internet connection, and some downloads from websites would still go quite slowly? The bottleneck is the server at the other end, not your home internet connection. Some websites even deliberately throttle the speed at which a single user can download a file.

Fortunately, there's a way to get around this problem – a multi-part download accelerator. They're called "multi-part" because instead of downloading a file in one continuous stream, they download different parts of the file at the same time, making the best use of your home broadband connection's maximum speed.

There are many good free multi-part download accelerators available. If you use the Firefox browser on Windows, Mac or Linux, you can use a free plug-in called DownThemAll (addons.mozilla.org/firefox/addon/201).

Internet Explorer for Windows users can use a separate program called LeechGet *(www.leechget.net).*

Safari for Mac users can try iGetter (www.igetter.net) – this shareware has a fully functional trial mode that simply presents a registration reminder at start-up. Registering the software costs around $32.

4. Secure your home network against net nasties

Most people know that it's essential to run anti-virus and firewall software on their home PC.

But did you know that if you're using a standard modem, your PC is fully exposed to the internet? An inexpensive home broadband router will automatically block incoming attacks before they even reach your PC – the router simply doesn't accept any unsolicited requests from the internet that haven't been initiated by you on your computer. It's a basic part of the design of routers.

It's also very important to secure your home wireless network. If you turn on the wireless feature of your router without also configuring the password and encryption for your network, anyone passing by your house (or your neighbours) can access your home broad-

band connection – and potentially, the contents of your home PCs. If someone were to download illegal material through your broadband connection, you'd also be responsible legally!

The best wireless encryption method is "WPA2 – PSK". This stands for WiFi Protected Access version 2 – preshared key – and it uses the strongest available encryption for your wireless signal. The "preshared key" is the password you type into each PC or laptop to access the wireless network.

Unfortunately, the design of wireless network security means there are quite a few options to choose from, and it can be confusing. Fortunately, certain D-Link routers like the new DIR-615 Wireless N router include a set-up CD that automates most of the process.

5. Update your modem's firmware

Warning: this tip is for advanced users. Updating your modem/ router's software could stop your device from working if the firmware update fails halfway, or the wrong firmware is used. We recommend only proceeding if you are confident in what you are doing. If you have any doubts, please first speak with D-Link before updating the firmware.

One thing most people don't know is that modem/router manufacturers constantly release new versions of the core software that runs on the units. The software updates correct bugs to make the unit more stable, and sometimes add new features.

If you're not having any problems with your modem or router and are happy with its performance, then there's no need to update the unit's software. But if you have had problems, like the modem/ router unexpectedly becoming unresponsive, or certain new types of applications on your PC seem to have problems with internet connectivity, it's well worth updating the software on your router.

To see if new software is available, go to your modem/router's admin screens (consult your manual – in the case of most D-Link modem/routers, you just need to open your Web browser and type 192.168.1.254).

Type in the administrator username and password listed in the manual (often username: admin, password: admin, though on some models you can simply leave the password blank). Then, look for an option named "status" or "firmware" to check your current firmware version.

Then, head on over to the D-Link Australia support site *(http:// dlink.com.au/tech/)* to see the latest firmware available for your modem/router. Select the model number of your router from the drop-down menus, and then select "downloads" from the list of results. Download the firmware and also the instructions file, and be careful to follow them closely.

■ Free upgrades: D-Link's support website has the latest version of most modem and routers' firmware for free download.

■ Download acceleration: free software can make your downloads faster.
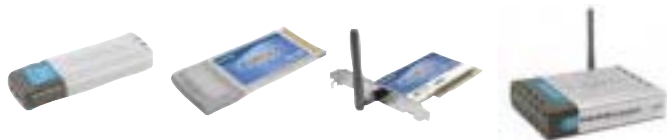■ Remote control: you can access your home PC from work.

Technology guide

▼ Wireless G | good

54 Mbps

High-Speed 2.4GHz 802.11g Wireless Network Solutions

▶01. DWL-G122   ▶02. DWL-G630   ▶03. DWL-G510   ▶04. DI-524

01.AirPlusG™ 54Mbps Wireless USB Key Adapter
USB 2.0 wireless adapter for 802.11g/b networks.

02. AirPlusG™ 54Mbps Wireless LAN Cardbus

Adapter
A wireless PC card to access 802.11g/b networks.

03. AirPlusG™ 54Mbps Wireless LAN PCI Adapter
An internal PCI wireless card for desktop computers and 802.11g/b networks.

04. AirPlusG™ 54Mbps Wireless Broadband Router
Create an advanced wireless network with USB and QoS for VoIP.

▼ Wireless N | best

Do you feel the need for speed? Wireless N transfers data at speeds of up to 650% faster than standard 54G equipment with greater range than ever before. Based on the 802.11n draft standard, you can attain speeds even faster than 100Mbps wired Ethernet networks.

Works with Windows Vista™

New!

▶05. DIR-615

05. DIR-615 Wireless N Broadband Router
Create a wireless network to share high-speed Internet access with computers, game consoles, and media players from greater distances around your home.

▶ 06. DIR-655

06. DIR-655 Xtreme N Gigabit Router
D-Link's best wireless router ever using the latest Draft N standard for even faster wired and wireless speeds than with the DIR-635 RangeBooster N below!

▶ 07. DIR-635

07. DIR-635 RangeBooster N 650 Wireless Router
The wireless router you need to create D-Link's superfast wireless network in your home or office.

New!

▶ 08. DWA-645

08. DWA-645 RangeBooster N 650 Notebook Adapter
For portable computers, this card works with the RangeBooster N router to deliver faster speeds and greater range.

09. DWA-547 RangeBooster N 650 Desktop Adapter
Desktop computers can also benefit from the massive speed and range of the RangeBooster N solution. Put your desktop computers where they suit you - the triple antenna ensures you get coverage where you need it.

▶ 09.DWA-547

▼ Wireless 108G | better

108 Mbps

High-Speed 2.4GHz XtremeG 108G Wireless Solutions

▶10. DWL-G132   ▶11. DWL-G650

▶12. DWL-G520   ▶13. DI-624S

The 108G solutions transfer data at up to twice the speed of standard 802.11g equipment.

10. Wireless 108G USB Adaptor
A USB 2.0 wireless adapter for notebooks and desktops.

11. Wireless 108G Cardbus Adapter
A wireless PC Card adaptor for notebooks.

12. Wireless 108G PCI Adapter
An internal wireless adaptor for desktops.

13. Wireless 108G Storage Router
Share a network connection, Internet access, multiple USB 2.0 storage drives and printers. Create an advanced, high speed wireless network in your home or business.

▼ SecureSpot DSD-150

SecureSpot Internet Security Device

▶14. DSD-150

One small box. Total Network Security.

14. SecureSpot DSD-150
D-Link's SecureSpot Internet Security Device (DSD-150) is a complete all-in-one Internet security solution that provides several key features including network protection, firewall protection, virus protection, spyware protection, identity theft protection, pop-up blocker, SPAM blocker and parental control - all in a palm-sized box. Provide around-the-clock protection for your data and personal information with the SecureSpot Internet Security Device. Protects up to four computers out of the box, with the ability to easily buy more licenses if required.

▼ Voice Over Internet

▶15. DPH-C160S   ▶16. DVG-2001S   ▶17. DVG-G1402S   ▶18. DI-102   ▶19. DVA-G3340S

Solutions for making phone calls over the Internet using VoIP

15. DPH-C160S Cordless Internet Telephone*
A full-featured cordless phone that works with normal and Internet phone lines at the same time! Compatible with most VoIP telephone service providers.

16. DVG-2001S VoIP Terminal Adapter*
Plug in your existing corded or cordless analog telephone and use to make Internet phone calls.

17. DVG-G1402S VoIP Station Gateway*
This wireless router allows 2 regular analogue handsets to be used to make calls over the Internet while sharing a broadband connection.

18. DI-102 Broadband Internet/VoIP Accelerator*
Uses QoS technology for static-free VoIP calls, jitter-free streaming video and lag-free online gaming by prioritising bandwidth-sensitive packets so that they can be sent over the Internet as soon as the request is made. Upgrade your existing VoIP equipment to take advantage of QoS.

19. DVA-G3340S Wireless ADSL2+ Triple Play Router*
This wireless router combines an ADSL2+ modem and allows 2 regular analogue handsets to be used to make calls over the Internet while sharing a broadband connection. (includes ADSL modem).

* Note: You must choose an Internet (VoIP) Phone Service Plan and sign up for service. VoIP phone plans, rates and features may vary depending on VoIP Phone Service Provider(s). D-Link Australia Pty Ltd is not a Telephone Service Provider or VoIP Phone Service Provider. Please check the limitations of liability as outlined by your VoIP Service Provider.

▼ Wireless Kits

20. AirPlusG™ 54Mbps Wireless USB Kit
This new kit features the DI-524 wireless router. It operates on the 802.11g standard at 54Mbps speeds. It comes with a DWL-G122 USB 54Mbps Wireless adapter which is suitable for desktop or laptop computers.

▶20. DWL-922

21. AirPlusG™ 54Mbps Wireless Laptop Kit
The second new kit is the DWL-923. This replaces the USB adaptor with the DWL-G630, a 54Mbps wireless CardBus Adaptor for laptop computers.

▶21. DWL-923

22. AirPlusG™ 54Mbps Wireless Desktop Kit
The third new kit is the DWL-925. This kit replaces the USB adapter with the DWL-G510, a 54Mbps wireless PCI Adapter for desktop computers.

▶22. DWL-925

▼ Wireless Media Player

23. DSM-320RD Wireless Media Gateway
Watch digital media stored on your PC's hard drive through your TV and existing home theatre system! Includes DVD player and memory card reader. Also available is the DSM-320.

▶23. DSM-320RD

▼ Indoor Wireless Antennae

▶24. ANT24-0700
▶25. ANT24-0600

Increase the range of your 802.11b/g wireless network

24. 7dBi High Gain Omni-Directional Antenna
Provides high transmission/reception rates for wireless LAN devices operating on the 2.4Ghz band. Works with 802.11b/g.

25. 6dBi Indoor Directional Antenna
Connect this antenna directly to the wireless access point or wireless router using a reverse SMA connector.

Technology guide

▼ ADSL Modems & Routers

01. Wireless ADSL2/2+ Router + Built-in 4-Port Switch
An ADSL2/2+ wireless broadband router (up to 24Mbps download speeds*) with 802.11g wireless networking, a 10/100 4-port switch & much more.

02. Fast Ethernet ADSL2/2+ Router + Built-in 4-Port Switch
ADSL2/2+ wired router with 10/100 4-port switch, SPI Firewall, DHCP and more.

03. RangeBooster N ADSL/ADSL2/2+ Modem Router
Combine high-performance 802.11n wireless networking with ADSL 2/2+ speeds!

04. Wireless ADSL2/2+ VPN Router
High-speed wireless router with VPN designed for business usage.

* Your ISP must support and provide you with an ADSL 2, ADSL 2+ service for these features to be available. This product will operate as a standard ADSL modem when an ADSL 2/2+ service is not available.

▶02. DSL-504T

▶03. DSL-2740B

▶01. DSL-G604T

▶04. DSL-G804V

▼ Wireless Print Servers

Turn your wired printers wireless!

05. Wireless 2.4GHz USB 2.0 Print Server
An 802.11g wireless Print Server with one USB 2.0 port that lets you share a USB printer on the network.

06. 10/100Mbps Print Server

with USB Port for Printer Connection
This print server lets you share a USB printer on the network.

07. Multi-Port Two USB 2.0 & Single Parallel Print Server
An 802.11g wireless print server with two USB 2.0 ports and a parallel port for connecting legacy parallel printers with multiple networking options.

08. Multifunction Wireless USB Print Server with 4 USB Ports
This print server lets you share up to 4 USB multifunction printers wirelessly on the network.

▶05. DP-G310

▶06. DP-301U

▶07. DP-G321

▶08. DPR-1260

▼ USB

▶09. DUB-H4

▶10. DFB-H7

▶11. DUB-A2

09. 4-Port USB 2.0 Hub, up to 480Mbps speed
A 4-port USB 2.0 hub that connects 4 USB devices to your PC or Mac. Also available in a 7-port USB 2.0 model. Comes with a DC 5V/2.5A external power supply.

10. USB 2.0/FireWire Combo Hub
A combination USB 2.0 and 1394 FireWire hub that lets you connect four USB 2.0 devices and two FireWire devices and many more if daisy-chained. Comes with a USB and a FireWire cable and must be plugged into both sockets for all ports on the hub to work.

11. USB 2.0 PCI Card
Easily add two USB 2.0 ports to your PC. Great for older PCs without USB 2.0 ports, or for simply adding more ports to your current PC so you can connect more devices to your PC. Available for PCs only.

▼ Feature Products

New!

▶12. DWA-140   ▶13. DWA-556   ▶14. DWA-643   ▶15. DIR-615

12. Wireless N USB Adapter
This adapter allows you to connect either your desktop PC or notebook to your wireless network using your USB port.

13. Wireless N PCI Adapter
Connects your PCI Express-enabled desktop computer to a wireless network to access a high-speed Internet connection, transfer files and stream media from greater distances around your entire home or office.

14. Wireless N USB Adapter
This high speed adapter allows you to connect either a desktop PC or notebook to your wireless network using your USB port.

15. Wireless N Broadband Router with 4-Port 10/100Mbps Switch
Create a wireless network to share high-speed Internet access with computers, game consoles, and media players from greater distances around your home.

▼ Internet Security Camera and Surveillance

▶17. DCS-3220G

▶16. DCS-G900

▶15. DCS-2120

▶18. DCS-5300G

15. DCS-2120 Wireless Internet Camera for Home/ SOHO
A wireless Internet security camera that allows you to view a live video stream through a web browser or compatible 3G phones and PDAs when in 3G coverage.

16. 802.11g Wireless G Internet Camera
A stand alone camera with built-in CPU and web server that transmits high quality video images for monitoring, and can be accessed remotely or controlled from any PC with Internet access.

17. 802.11g Wireless 2-Way Audio Internet Camera
A fully featured surveillance system that connects to wired Ethernet or 802.11g wireless. Offers two way audio allowing you to talk to anyone at your camera site. Sharp video with lifelike colour, a 4x digital zoom and more.

18. Wireless IP Security Camera with Integrated Pan, Tilt, Zoom, Web Server & Motion Detection
The ultimate wireless camera with pan, tilt, zoom, motion detection, a high-quality CCD sensor, remote web control and much, much more. The top of the range.

▼ Home and SOHO Switches

[SOHO = Small Office/Home Office]

D-Link's high performance switches are designed to eliminate unnecessary traffic, and relieve congestion by delivering dedicated bandwidth for each port.

▶19. DES-1008D

19. DES-1008D eight-Port 10/100Mbps Switch
This switch allows for fast and simple connection of up to 8 computers.

▶20. DGS-1008D

20. DGS-1008D eight-Port 10/100/ 1000Mbps Switch
This switch allows for fast and simple connection of up to 8 computers.

▶21. DES-1024DG

21. DES-1024DG 22-Port 10/100Mbps Switch with 2-Port Gigabit
This switch offers Gigabit connectivity allowing for simple connection of up to 8 computers.

▼ Home Network Storage

HI-SPEED CERTIFIED USB

▶22. DNS-312H

▶23. DNS-300

▶24. DNS-120

22. USB 2.0 Network Attached Storage Drives with built-in Print Server
A Network Attached Storage (NAS) device that features a 120Gb pre-installed hard drive. Quick and simple installation that requires no network downtime, with more features.

Also available as the **(23)** DNS-300 without pre-installed hard disk, while the **(24)** DNS-120 connects USB drives to your wired network. Also **(25)** DNS-323, This high performance storage enclosure allows for up to 2 3.5" SATA HDD to be used for data backup.

▶25. DNS-323

PC USER BEST BUY

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Australian PC User, August 2007
Reference: *http://www.dlink.com.au/ Products.aspx?Sec=1&Sub1=5&Sub2= 9&PID=287*

▼ PowerLine

What is it?
Powerline adapters allow you to use the electrical wiring in your home or small office to distribute Ethernet. With 2 or more of these devices, you can link computers, routers and other accessories without having to use extra cabling.

New!

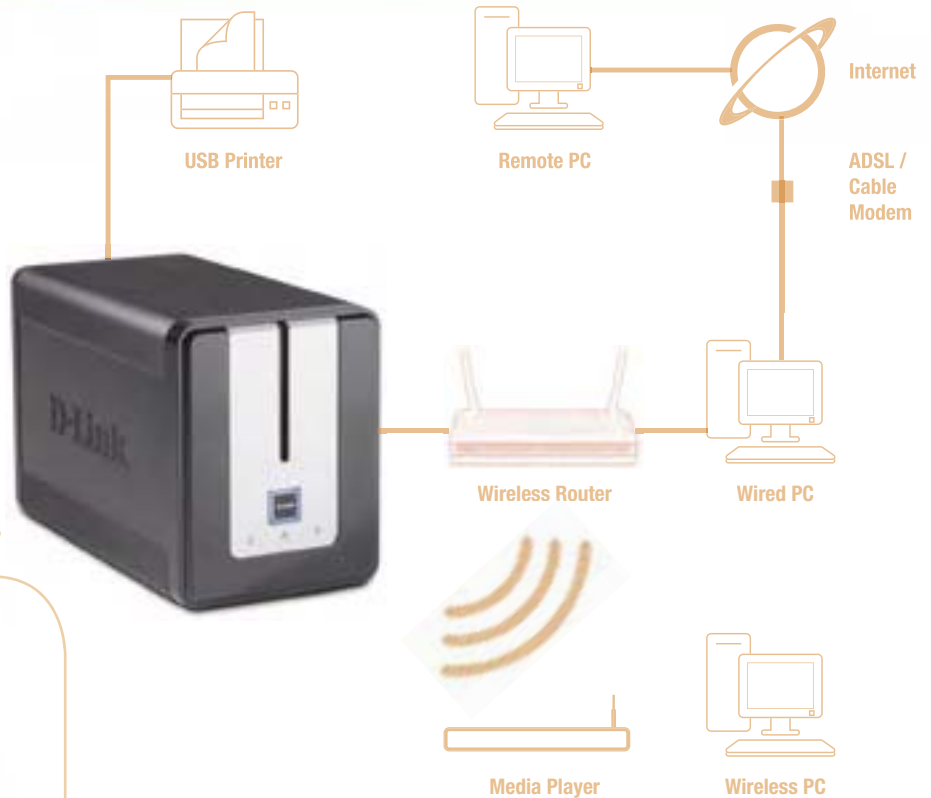▶26. DHP-300

26. DHP-300
PowerLine technology allows you to create a network using your home's existing electrical wiring.

BACK UP AND SHARE YOUR MUSIC, PHOTO AND VIDEO COLLECTIONS

THE D-LINK NETWORK ATTACHED STORAGE FOR BEGINNERS AND PROFESSIONAL ALIKE

The **DNS-323** 2-Bay Network Storage Device marks the central network point for backing up and protecting all your valuable digital files and yet enabling you to share them with your family and friends across the home or office network and on the internet.

USB Printer   Remote PC   Internet

ADSL / Cable Modem

Wireless Router   Wired PC

Media Player   Wireless PC

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PC USER BEST BUY

UNPROTECTED AGAINST DRIVE FAILURE

NETWORK

RAID 1 PROTECTED

Mirroring Hard Drives with Raid 1 Technology:

Backing up to a regular hard drive offers a basic level of protection. But what if that hard drive fails? Using the DNS-323 with 2 internal SATA drives and RAID 1 technology, users can duplicate data on both drives, ensuring maximum protection of valuable data. If one drive fails, the other continues to function as a single drive until the failed drive is replaced.

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D-LINK NEW ZEALAND Sales: 09 356 2158 | Support: 0800 900 900

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