AMW lab: wireless internet routers

No strings attached

Your router is a key part of your network. It allows the various computers and other devices on your LAN to use the internet connection and to access shared resources. It needs to be reliable and not get in the way of your work.

When the first routers hit the consumer market they were difficult to configure and often unreliable. Rebooting a "hung" router was often a daily chore. Since then, a great deal has changed with manufacturers addressing issues of usability and reliability. However, the technical standards to which they conform have also changed with some, such as the 802.11n standard, still in draft.

Purchasing a router can be a tricky business. That's possibly why many ISPs offer routers with their internet connection contracts. However, if you're after some specific features then you'll have to do some research and hit the stores.

Fast Ethernet versus Gigabit. Start by looking at the nature of the internet connection. If you're an ADSL user then a combined modem/router might be a good idea. It's one less power supply to connect to the wall and may make the initial set up a little easier. We'd recommend that you look for a unit that supports ADSL 2+. Even if you're not currently using that level of service you'll be future proofed if or when you decide to upgrade your service.

Wired connections use a standard called Ethernet. The earliest standard supported connections of 10Mbps and was boosted to 100Mbps a few years later. All routers on the market today support at least 10/100 connections. These are sometimes called "Fast Ethernet". Over the last 12 months or so, domestic routers have started appearing that support Gigabit Ethernet, or 1000Mbps. If you're in the business of moving large files within your network, gigabit Ethernet routers can offer significantly faster file transfers.

Cutting the wires. Where home networking gets tricky is with wireless connections, or WiFi. Wireless networks can transmit data over either the 2.4GHz or 5GHz frequency bands. The original WiFi standard, 802.11b, uses 2.4GHz, as does the later 802.11g. 802.11b can send data at a rated maximum of 11Mbps at a range of about 30 metres (with no walls or other interference) Routers that support 802.11g are backwards compatible with "b" devices but can move data at 54Mbps (provided all devices on the network use 802.11g).

Between the releases of "b" and "g" came 8032.11a. It uses the 5GHz frequency and can transmit data at a rated maximum of 54Mbps. Its advantage is that the 5GHz frequency is less congested than 2.4GHz. However, by the time 802.11a was released, 802.11b was so prevalent that it never garnered much market share.

More recently, the 802.11n standard came into play. The IEEE hasn't yet ratified the final version of this standard but the hardware that will support 802.11n is settled so the final version of the standard should be supported by a simple firmware upgrade to your router. 802.11n supports both the 2.4Ghz or 5GHz frequency bands so it's backwards compatible will all the previous standards. However, not every router comes with radio transmitters for both frequencies. That means you can buy an 802.11n compliant router that only supports 2.4GHz.

Other bits. Finally, there are some other features to look at. Many routers include a USB port for sharing either printers or hard disks. However, if you've got a

View your options, make your choices. Australian Macworld puts latest-release hardware and software through its paces.

RATINGS KEY

Outstanding ★★★★★
Very good ★★★★
Good ★★★
Flawed ★★
Unacceptable ★
Dangerous

	Virgin Mobile Broadband / GlobeSurfer II	Linksys WRT310N
Type	Router	Router
Rating	♦♦♦	♦♦♦½
Pros	Works anywhere, no excess charges	Speed, range
Cons	Speed, limited connectivity	No USB
SRP	$60 per month for 24 months	$240
Manfacturer	Virgin	Linksys
Distributor	Virgin 1300 555 100	Linksys 1800 605 971
Reviewer	Anthony Caruana	Anthony Caruana
Hot links	www.virginbroadband.com.au	www.linksys.com.au

multifunction printer, the scanning functions aren't likely to be supported through the router. QoS, or Quality of Service, allows traffic on your LAN to be prioritised. If you're using VoIP, this can be used to ensure that phone call quality isn't diminished when you're downloading large files through your internet connection.

One of the challenges with routers is that there are so many to choose from. Rather than compare half a dozen similar devices we've gone for a slightly different approach and will try to cover a cross section of the router market. Each of the units in our rogue's gallery delivers a different balance of features and performance. The routers we've chosen will support the needs of a diverse population as, in our experience, there's no one router that is perfect for everyone.

NewerTechnology MAXRange

Router

[illegible] hg

Wireless range

No Gigabit, no Aussie power adapter

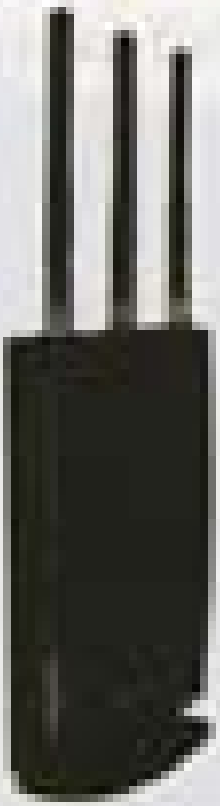
US$58 plus shipping

NewerTechnology

Other World Computing

Anthony Caruana

www.macsales.com



The Max. NewerTechnology doesn't have a retail presence in Australia but that hasn't stopped it from seeing us as a worthwhile market. The MAXPower is a competent, if unspectacular, router that may not light up the world on the spec sheet but, even allowing for overseas shipping for deliver from the US, delivers good bang for buck.

Setup is a very simple affair. We connected an Optus-Net Cable service to the MAXPower directly and had a working internet connection in seconds. The actual unit can be either sat flat on its base or, using the supplied stand, placed upright. This is handy if you want to reduce the MAXPower's footprint. It can also easily be wall mounted with a couple of screws. One thing to note is that the MAXPower doesn't ship with a localised power plug. The power supply can deal with 240v but you'll need an adaptor to plug it into an Australian outlet.

Changing configuration options was simple using a web browser although we did find that some of the CGI scripts used by the set up tool failed when used with Safari. We found Firefox 3 a far more reliable browser with the MAXPower.

The MAXPower has four wired connections that are limited to the 10/100 Fast Ethernet standard. While power users might bypass the MAXPower for that reason, most home users, particularly if shopping for an inexpensive solution, won't be too phased by this. In our testing, we didn't find that the 10/100 connection made a noticeable difference in the retrieval of e-mail or web pages. Moving large files between machines on the network was slower than with Gigabit routers but that was to be expected.

Wireless support is limited to the 2.4GHz band with the most recent draft of 802.11n supported as well as the older "b" and "g" standards. What astounded us was the MAX-Power's incredible range. We're used to having manufacturers boast of their superior wireless range but the MAX-Power lived up to the claim. We maintained a full strength signal to our MacBook Pro at 40 meters through a single wall. Connectivity dropped away very sharply from that point but this is the first router we've tested that managed to maintain a solid connection at that distance.