



We all want extra speed, it doesn't matter how fast a human can actually read a web page or surf the ever expanding internet, when we see the new offering of 'Super-uber 500 Megabit Broadband' we sign up before even looking at the price. We want to download that movie (legal download of course) and boast to our friends how it download in just ten seconds. For the rest of us, who want to be productive in our daily work, of course speed is important, but so is stability of service and, if you use a laptop, wireless speed is also right up there on the top of the list.

Often referred to as 802.11x where 'x' can be an a, b or g, the differing speeds are not often noticeable, but a new offering has been around for a little while now, in the format of 'draft 802.11n' and we take a look at Netgear's DG834N which offers this, plus a whole lot more. Before I continue I should make a clarification about the 'draft' statement. This is because 802.11n is not a standard yet, the final specification has yet to be carved into stone, so things may change. Some say some devices may become redundant if things in the final 802.11n change too much, but I say in this day and age, any changes made would most definitely be available as a firmware update.

So, the DG834N falls into Netgear's 'RangeMax Next' range and is offered alongside various other devices that compliment the new speed offering. These include a wireless notebook adapter (WN511B) and a wireless PC adapter (WN311B) which we have here to test as well. It is only really when you use these in conjunction with the DG834N that you will benefit from all the new improvements on offer. However, you can use this device with your current set-up as it does offer compatibility with 802.11b & g.

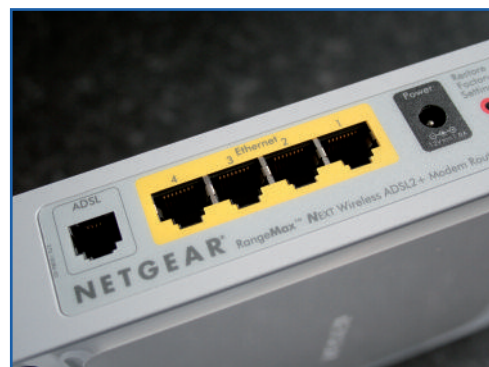
Speed Demon

So the new speed increases promise up to 270Mbps when used with the relevant adapter, compared to 11Mbps on 802.11b and 54Mbps on 802.11g, so a very worthwhile jump. In practice and without

Extra views



The Netgear DG834N is a very sleek looking unit.



The rear of the DG834N also gives you a four 100-BaseT ethernet ports for hard wired connections.



The WN311B is a PCI card that needs to be installed in your PC to give you full 802.11n speeds.

getting to technical, I found downloads over wireless to offer on average a twofold improvement, dependent on the position of my PC (with WN311B adapter installed). A handy table below shows all the different protocols and what speeds they have to offer.

Protocol	Release Date	Op. Frequency	Data Rate (Typical)	Data Rate (Max)	Range (Indoors)
Legacy	1997	2.4 GHz	1 Mbit/s	2 Mbit/s	n/a
802.11a	1999	5 GHz	25 Mbit/s	54 Mbit/s	~30 meters (~100 feet)
802.11b	1999	2.4 GHz	6.5 Mbit/s	11 Mbit/s	~30 meters (~100 feet)
802.11g	2003 (June)	2.4 GHz	25 Mbit/s	54 Mbit/s	~30 meters (~100 feet)
802.11n	2008 (April)	2.4 GHz or 5 GHz	200 Mbit/s	540 Mbit/s	~50 meters (~160 feet)

Range

In addition to the speed increase in new devices, you will hear the phrase MIMO a lot, this stands for 'Multi-In, Multi-Out'. The DG834N offers this technology too and in laymans terms it refers to devices with multiple (more than one) antennas. This not only helps to offer the increased speeds over wireless communications, but also extends the range of the device, along with improving 'whole home coverage', so your signal should be spread more evenly throughout your house. In practice the DG834N improved the range on my MacBook a great deal, where I would normally drop down to say a 50% signal strength, I was consistently getting about 80-90%.

Set-up of the device is very straightforward, a CD containing a Smart Wizard application is available (PC only), or you can opt for using a standard web browser to make all the settings. Installation of the WN311B is equally as easy, although you do have to open up your PC and insert the card into a spare PCI slot, then connect the external antenna (which looks the part), the run the software on your PC to get things up and running.

The DG834N unit itself is nicely styled, lots of glossy plastic and perspex, round the back of the unit it offers you the ADSL connection port and a 4-port ethernet switch to connect to other devices and of course the power supply connection. A stand (which must be used), telephone cable, ethernet cable and ADSL micro-filter are also included as part of the package.

So who is it for?

Well, I would say this is squarely aimed at computer users who want the ultimate in download speeds, the ADSL2+ modem can deliver downstream speeds of up to 24Mbps, so this alone could tempt you into an upgrade. If you are a laptop user that needs speed, then pop a WN511B laptop card onto your shopping list too and the DG834N will offer you a big jump in speed. For the rest of us, this may be a luxury, but the extended range, build quality and security features that I have not even touched on here, make this a worthwhile purchase. If you have the money there is no reason at all to wait for 802.11n to be finalised, splash the cash now and enjoy !

Protocols

The table below shows what speed is possible with each protocol.

System Requirements

- ADSL internet service (not cable)
- 802.11n adapter for your device or an ethernet connection
- Recommended for use with a WN311B or WN511B

Supports these standards

- 802.11n draft version
- 802.11g
- 802.11b

Security

- Double firewall NAT & SPI
- Denial of Service (DoS) attack prevention
- Intrusion Detection & Prevent
- Wi-fi protected access (WPA2-PSK, WPA-PSK)
- Wired Equivalent Privacy (WEP 64-Bit & 128-Bit)
- MAC address authentication
- Exposed Host (DMZ) for secure gaming

Warranty

- 2 year warranty

info panel

product Netgear DG834N
 price £93.88 average price
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 rating ★★★★★