



Product Name: Draytek Vigor2820n ADSL/Cable/3G Router Firewall

Manufacturer: -

Model Number: V2820N

Please Note: The Draytek 2820 series has been discontinued. It has been replaced by the 2830 Series.

The Vigor 2820 series is DrayTek's latest premium ADSL and broadbandrouter/firewall family, featuring an entirely new stylish case designand new DrayOS 3 operating system. Packed with features, the Vigor 2820offers truly comprehensive ADSL connetivity and security. Compatiblewith all variants of ADSL (include ADSLMax and ADSL2+) the Vigor 2820can also be used for cable-modem and leased line applications thanks toits additional WAN port (Ethernet). A Gigabit Ethernet port on the WANside provides high speed connectivity for your server (or uplink to alarger Ethernet Switch). Security features include content filtering, web application controls and a new object based firewall managementsystem.

Robust & Comprehensive Firewall

As with previous DrayTek firewalls, security is taken seriously onthe Vigor 2820 Series. The firewall features measures for protectionagainst attacks including DoS (Denial of Service) attacks, IP-basedattacks and access by unauthorised remote systems. Wireless, Ethernetand VPN are also protected by various protection systems (see later). Anew DrayTek object-based firewall allows even more setup flexibilitythan ever, enabling you to create combinations of users, rules andrestrictions to suit multi-departmental organisations.

Content control features of the firewall allow you to setrestrictions on web site access, blocking download of certain filetypes, blocking specific web sites, blocking IM/P2P applications orother potentially harmful or wasteful content. Using the SurfControlsite categorisations enable you to block whole categories of web sites(e.g. gambling, pornography etc.), subject to subscription Dual-WAN Load Balancing & Sange; Backup

As well as the primary ADSL interface, the Vigor 2820 features asecondary WAN port for Internet access. This is an Ethernet interfaceand can connect to a second ADSL modem, cable modem or any otherEthernet-based Internet feed. The secondary interface can be usedeither for WAN-Backup or load balancing.

WAN-Backup provides contingenry (redunancy) in case of your primaryADSL line or ISP suffering temporary outage). Internet Traffic will betemporarily routed via the secondary Internet access. When normalservices is restored to your primary ADSL line, all traffic is switchback to that. If you don't have ADSL, the Ethernet WAN port can instead be used asyour primary/only Internet connection (using NAT) so the same routercan be used for either ADSL or Ethernet Internet connections.

The USB port provides an alternative connection method (Firmware Upgradable) for Internet backup by connecting to a compatible USB modem (or cellphone) for access to the high speed 3G cellular networksfrom UK providers such as Vodafone, Orange, 3 and T-Mobile. If youdon't have ADSL at all, the USB/3G access method can be used as yourprimary/only Internet connection, ideal for temporary locations, mobileapplications or where broadband access is not available.

Note: For WAN2 you can use either a Ethernet or USB 3G connection but not both at the same time.

Wireless LAN ('n' models only)

The Vigor2820 Series features the latest 802.11n Draft 2.0 wirelessLAN specification and has been certified by the WiFi alliance for crosscompatibility and WiFi compliance (including WPA/WPA2 and WMM).

802.11n Draft 2.0 provides a total wireless bandwidth of up to300Mb/s using new methods such as packet aggregation and channelbonding. Throughput depends on your own environment (factors such asobstructions, number of hosts and distance all make a significant difference), but actual transfer speeds of 100Mb/s are achievable (based on our real world tests). In addition, 802.11n Draft 2.0provides greater coverage and resilience to interference compared toprevious wireless standards thanks to the MIMO technology and the Vigor's triple-antennae diversity



arrangement. This offset arrangement of aerials provides offset paths between hosts so that interference can be overcome.

Wireless Security is comprehensive too; the Vigor2820 Series provides several independent levels of security includingencryption (up to WPA2), authentication (802.11x) and methods such asMAC address locking and DHCP fixing to restrict access to authorisedusers only. The Web interface lets you see how many and which clientsare currently connected as well as their current bandwidth usage. An 'instant' block lets you disconnect a wireless user temporarily in caseof query. The Wireless VLAN facility allows you to isolate wirelessclients from each other or from the 'wired' LAN.

The Multiple SSID features enables you to have up to four distinctor common virtual wireless access points. For example, you could haveone for company usage, with access to your company LAN and another forpublic access which allows internet surfing only. Setting up wirelesssecurity is made easier thanks to the WPS feature (WiFi protectedsetup) whereby your client PC can get it's security keys by pressing abutton on the front of the router.

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Detailed Specification:
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� Physical Interfaces:

ï¿1/2 LAN Ports (Switch)

ï¿1/2 1 X Gigabit Ethernet (1000Mb/s) Ports

� 3 X Megabit (100Mb/s) Ports

า๊¿½ Port-Based VLAN (Inclusive/Exclusive Groups)

آز½ WAN Ports:

� ADSL Port Compliant with:

ï¿1/2 ANSI T1.413 Issue2

ï¿⅓ ITU-T G.992.1 G.dmt (ADSL)

ï¿⅓ ITU-T G.992.2 G.lite

� ITU-T G.992.3 ADSL2

ï¿⅓ ITU-T G.992.5 ADSL2+

ï¿⅓ Annex L (READSL)

Annex M

 $\ddot{\imath}_{\dot{\epsilon}}$ Secondary WAN Port : 10/100 Base-TX Ethernet for load balance and WAN failover

17:1/2 USB Port for 3G Cellular Modem or Printer

آزا VoIP: 2-port FXS Phone Ports (Vigor2820 'V' models only)

� Load Balance/Failover Features:

ï¿1/2 Outbound Policy-Based Load-Balance

ï¿1/2 WAN Connection Fail-over

� BoD (Bandwidth on Demand)

آزٰ Vigor 2820 ATM Protocols (DSL):



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12.1/2 RFC-2684/RFC-1483 Multiple Protocol over AAL5
� RFC-2516 PPP over Ethernet
� RFC-2364 PPP over AAL5
� PPPoE pass through LAN/WLAN
� PPPoE/PPPoA Relay
� Transparent bridge for MPoA
آذًا Multiple PVC support for Triple Play Applications (up to 8 simultaneous)
تز 1/2 Wireless LAN Features ('n' Models Only):
ï¿1/2 802.11n Compliant (Draft 2.0)
i¿½ Latest 'MIMO' Technology with three aerials (2T3R)
រីដូ½ Multiple SSID : Create up to 4 virtual wireless LANs (independent or joined)
12.1/2 Packet Aggregation and Channel Bonding
تز½ Compatible with 802.11b and 802.11g Standards
� Active Client list in Web Interface
آذِيً Wireless LAN Isolation (from VLAN groups and wired Ethernet interfaces)
� 64/128-bit WEP Encryption
� WPA/WPA2 Encryption
� Switchable Hidden SSID
آذِيًا Restricted access list for clients (by MAC address)
าั¿½ Time Scheduling (WLAN can be disabled at certain times of day)
ï¿1/2 Access Point Discovery
ī¿1/2 WDS (Wireless Distribution system) for WLAN Bridging and Repeating (Firmware
Upgradable)
� 802.1x Radius Authentication
� Wireless Rate-Control
ï¿1/2 Automatic Power Management
� 802.11e WMM (Wi-Fi Multimedia)
� VoIP Features (Vigor2820 'V' Models only):
� Protocols: SIP, RTP / RTCP
าั¿½ 12 SIP Registrar Accounts (for up to 12 VoIP providers)
า๊¿½ Line port for PSTN Passthrough (integrates POTS line)
าั¿1/2 Auto-fallback to PSTN under power/Internet failure
ï¿⅓ G.168 Line Echo-cancellation
ï¿1/2 Automatic Gain Control
� Jitter Buffer (125ms)
� Voice Codecs:
� G.711 A / µ Law
ï¿⅓ G.723.1
� G.726
 G.729 A / B
� VAD / CNG
آذِرُ Tone Generation: DTMF, Dial, Busy, Ring Back, Call Progress
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าั¿½ DTMF Transmission: In Band / Out Band (RFC-2833) / SIP info

� FAX / Modem Support G.711 Pass-through

� T.38 for FAX

� Supplemental Services:



� Caller ID

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� Call Hold / Retrieve
تز½ Call Waiting
� Call Waiting with Caller ID
ï¿1/2 Call Transfer
ī¿½ Call Forwarding ( Always , On Busy and On No Answer )
� DND (Do not Disturb)
� Call Barring (Incoming / Outgoing)
า๊¿½ MWI ( Message Waiting Indicator ) ( RFC-3842 )
าั¿½ Hotline (Dial preset number when handset lifted)
تزار WAN Protocols (Ethernet):
� DHCP Client
آز½ Static IP
PPPoE ½′3
� PPTP
" L2TP ½ L2TP ئزï
ï¿⅓ BPA
آذِرُ Firewall & Security Features:
i¿½ CSM (Content Security Management):
าั¿½ URL Keyword Filtering - Whitelist or Blacklist specific sites or keywords in URLs
آذِيًّ Surfcontrol Support - Block Web sites by category (subject to subscription)
آذِيً Prevent accessing of web sites by using their direct IP address (thus URLs only)
ī సై Blocking automatic download of Java applets and ActiveX controls
ï¿⅓ Blocking of web site cookies
ı̈¿½ Block http downloads of file types :
تز1/2 Binary Executable : .EXE / .COM / .BAT / .SCR / .PIF
\ddot{i}_{\dot{c}} Compressed : .ZIP / .SIT / .ARC / .CAB/. ARJ / .RAR
آذِري Multimedia: .MOV / .MP3 / .MPEG / .MPG / .WMV / .WAV / .RAM / .RA / .RM / .AVI / .AU
าั¿½ Time Schedules for enabling/disabling the restrictions
آذِيً Block P2P (Peer-to-Peer) file sharing programs (e.g. Kazza, WinMX etc. )
آذِيًّ Block Instant Messaging programs (e.g. IRC, MSN/Yahoo Messenger etc.)
آذِ1/2 Multi-NAT, DMZ Host
17:1/2 Port Redirection and Open Port Configuration
� Policy-Based Firewall
� MAC Address Filter
īస్ట్ SPI ( Stateful Packet Inspection ) with new FlowTrack Mechanism
� DoS / DDoS Protection
� IP Address Anti-spoofing
� E-Mail Alert and Logging via Syslog
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ï¿1/2 Bind IP to MAC Address



ï¿1/2 Bandwidth Management:

- � QoS
- ï¿⅓ Guaranteed Bandwidth for VoIP
- ī¿1/2 Class-based Bandwidth Guarantee by User-Defined Traffic Categories
- � DiffServ Code Point Classifying
- � 4-level Priority for each Direction (Inbound / Outbound)
- ï¿1/2 Bandwidth Borrowed
- īస్ట్ Temporary (5 minute) Quick Blocking of any LAN Client
- ï¿⅓ Bandwidth / Session Limitation

� Network/Router Management:

- آذِ1/2 Web-Based User Interface (HTTP / HTTPS)
- تز // CLI (Command Line Interface) / Telnet / SSH*
- ï¿⅓ Administration Access Control
- � Configuration Backup / Restore
- � Built-in Diagnostic Function
- า๊¿½ Firmware Upgrade via TFTP / FTP
- � Logging via Syslog
- ï¿⅓ SNMP Management with MIB-II
- � TR-069
- 73½ TR-104 الأخ

تز 1/2 VPN Facilities:

- � Up to 32 Concurrent VPN Tunnels (incoming or outgoing)
- าั¿½ Tunnelling Protocols: PPTP, IPSec, L2TP, L2TP over IPSec
- � IPSec Main and Agressive modes
- រ៉េះ Encryption : MPPE and Hardware-Based AES / DES / 3DES
- ī¿½ Authentication : Hardware-Based MD5 and SHA-1
- าั¿½ IKE Authentication : Pre-shared Key and X.509 Digital Signature
- � LAN-to-LAN & Teleworker-to-LAN connectivity
- ï¿⅓ DHCP over IPSec
- � NAT-Traversal (NAT-T)
- � Dead Peer Detection (DPD)
- ï¿1/2 VPN Pass-Through

� Network Features:

- � DHCP Client / Relay / Server
- � Dynamic DNS
- ï¿1/2 NTP Client (Syncrhonise Router Time)
- า๊ะ่½ Call Scheduling (Enable/Trigger Internet Access by Time)
- � RADIUS Client
- � DNS Cache / Proxy
- ï¿1/2 Microsoft™ UPnP Support

� Routing Protocols:



ï¿⅓ Static Routing ï¿⅓ RIP V2

� Operating Requirements:

īస్ట్ Rack Mountable (Optional Vigor 2820 mounting bracket required)

ï¿⅓ Wall Mountable

� Temperature Operating : 0°C ~ 45°C

ï¿1/2 Storage : -25°C ~ 70°C

� Humidity 10% ~ 90% (non-condensing)

� Power Consumption: 18 Watt Max.

 $\ddot{\text{1}}\dot{\text{2}}^{1}\!\!\!/_{2}$ Dimensions: L240.96 * W165.07 * H43.96 (mm)

� Operating Power: DC 15V (via external PSU, supplied)

� Warranty : Two (2) Years RTB

ï¿1/2 Power Requirements : 220-240VAC

Please Enquire