VIGOR2820 SERIES

ADSL2+ SECURITY FIREWALL

DrayTek

- ▶ 2ⁿᵈ WAN port for policy-based load-balance and fail-over
- ▶ Flexible bandwidth management to optimize bandwidth usage
- ▶ Object-based firewall preventing from external attacks and simplifying the Internet access policy settings

- ▶ Hardware-based VPN platform for high performance remote data access
- ▶ 802.11n (Draft-n) improves the wireless speed and coverage
- ▶ VoIP capabilities with twin analogue phones and one line port, one ISDN S0 for ISDN phone, and one configurable ISDN port for ISDN phone and line

The Vigor2820 is an ADSL2+ router with 2ⁿᵈ Ethernet WAN. This 2ⁿᵈ WAN can connect to DSL/Cable modem or fiber media converter for policy-based load-balance, fail-over and BoD (Bandwidth on Demand); it also features advanced bandwidth control mechanisms such as IP-layer QoS, NAT Session Limitation, Bandwidth Borrowed, etc., to allow easy, flexible and reliable access control and bandwidth management.

The SPI (Stateful Packet Inspection) firewall uses Object-Based design to make setting of firewall policies easy. The CSM (Content Security Management) feature allows more precise and efficient access control for URL/Web Content Filtering, IM (Instant Messenger) and P2P (Peer to Peer) applications.

With hardware-based implementation of the VPN protocol, the Vigor2820 supports up to 32 VPN tunnels using advanced protocols such as IPSec/PPTP/L2TP/L2TP over IPSec with AES/DES/3DES for encryption and MD5/SHA-1 for authentication.

Vigor2820 'n' models comply with 802.11n Draft-n standards. They support WEP/WPA/WPA2 encryption and MAC Address Control, Wireless LAN Isolation, Wireless VLAN and 802.1X authentication. The Wireless Rate Control function can adjust the data rate of each wireless station (client). WDS can help users to extend wireless coverage easily.

Vigor2820 'V' models provide twin analogue phone and one line port. 'S' models also support twin ISDN ports that one is fixed ISDN S0 port for ISDN phone and another is configurable for ISDN line and phone. It supports multiple SIP registrars with high flexible configuration and call handing options.

WAN Protocol (WAN2)
- DHCP Client
- Static IP
- PPPoE
- PPTP
- L2TP *
- BPA

Dual-WAN
- Outbound Policy-Based Load-Balance
- BoD (Bandwidth On Demand)
- WAN Connection Failover

Firewall
- Object Firewall
- CSM (Content Security Management) for IM/P2P Application and URL/Web Content Filter
- Multi-NAT, DMZ Host, Port-Redirection and Open Port
- SPI (Stateful Packet Inspection) (Flow Track)
- DoS/DDoS Prevention
- E-Mail Alert and Logging via Syslog
- IP and MAC Binding

VPN
- Up to 32 VPN Tunnels
- Protocol : PPTP, IPSec, L2TP, L2TP over IPSec
- Encryption : MPPE and Hardware-Based AES / DES / 3DES
- Authentication : Hardware-Based MD5, SHA-1
- IKE Authentication : Pre-Shared Key and Digital Signature (X.509)
- LAN-to-LAN, Teleworker-to-LAN
- DHCP over IPSec
- NAT-Traversal (NAT-T)
- Dead Peer Detection (DPD)
- VPN Pass-Through

ADSL Compliant (DSL)
- ANSI T1.413 Issue2
- ITU-T G.992.1 G.dmt
- ITU-T G.992.2 G.lite
- ITU-T G.992.3 ADSL2 G.dmt.bis
- ITU-T G.992.5 ADSL2+
- Annex L (READSL)
- Annex M
- Multi-PVC*

ATM Protocols (DSL)
- 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

* Firmware Upgradeable

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## ADSL2+ SECURITY FIREWALL

VoIP

- Protocol: SIP, RTP/RTCP
- One Dozen SIP Registrars
- G.168 Line Echo-Cancellation
- Automatic Gain Control
- Jitter Buffer (180ms)
- Voice codec:
  - G.711, G.723.1, G.726, VAD / CNG, iLBC
- DTMF Tone :
  - In band / Out band (RFC-2833) / SIP Info
- Supplemental Services :
  - Internal Call
  - Call Hold/Retrieve / Waiting
  - Call Waiting with Caller ID
  - Call Transfer
  - Call Forwarding (Always, Busy and No Answer)
  - Call Barring (Incoming / Outgoing)
  - DND (Do Not Disturb)
  - MWI (Message Waiting Indicator) (RFC-3842)
  - Hotline
- ISDN Loop-Through (VS model with TE mode only)
- ISDN On-Net/Off-Net (VS model with TE mode only)
- Two MSN (Multiple Subscriber Numbers) on each ISDN S0 port for VoIP call (for VS model)
- Dial Plan :
  - Phone Book
  - Digit Map

Wireless AP

- IEEE802.11n Compliant
- Wireless Client List
- Wireless LAN Isolation
- 64/128-bit WEP
- WPA/WPA2
- Hidden SSID
- MAC Address Access Control
- Access Point Discovery
- WDS (Wireless Distribution System)*
- 802.1x Authentication*
- Multiple SSID
- Wireless Rate-Control
- WMM (Wi-Fi Multimedia)

ISDN

- Euro ISDN Compatible
- Automatic ISDN Backup
- Support 64/128Kbps (multilink-PPP)/BOD (Bandwidth On Demand)
- Remote Dial-In/LAN-to-LAN connection
- Remote Activation
- Virtual TA
- Bypass the right and left ISDN port during power cut (if the left ISDN port is NT)
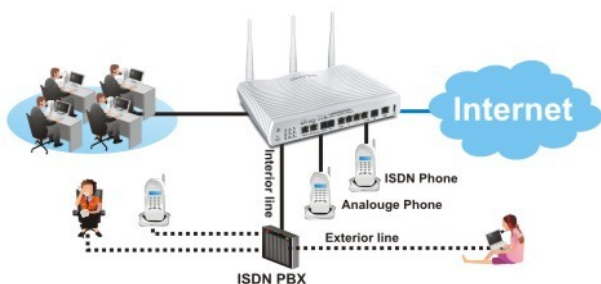
Bandwidth Management

- QoS :
  - Guarantee bandwidth for VoIP
  - Class-based bandwidth guarantee by user-defined traffic categories
  - DiffServ Code Point classifying
  - 4-level priority for each direction (Inbound/Outbound)
  - Bandwidth borrowed
- Bandwidth/Session limitation

Network Feature

- Port-based VLAN
- DHCP Client / Relay / Server
- IGMP Proxy
- Dynamic DNS
- NTP Client
- Call Scheduling
- RADIUS Client
- DNS Cache/Proxy
- UPnP
- Routing protocol:
  - Static routing
  - RIP V2

Network Management

- Web-Based User Interface (HTTP/HTTPS)
- Quick Start Wizard
- CLI (Command Line Interface, Telnet/SSH)
- Administration Access Control
- Configuration Backup / Restore
- Built-in Diagnostic Function
- Firmware Upgrade via TFTP / FTP / HTTP
- Logging via Syslog
- SNMP Management MIB-II
- Three-Level Management (by project)
- TR-069
- TR-104

Model Comparison Chart

	VoIP	ISDN	Wireless AP
Vigor2820	—	—	—
Vigor2820n	—	—	◉
Vigor2820Vn	◉	—	◉
Vigor2820VS	◉	◉	—
Vigor2820VSn	◉	◉	◉

Wireless Security
* WPA/ WPA2
* 64/128-bit WEP Encryption
* MAC Address Blocking
* Hidden SSID
* 802.1x Authentication

VoIP

Dual-WAN