

# DrayTek Vigor 3900



Technical Specifications	
<b>WAN Protocol</b>	
Ethernet	PPPoE, PPTP, DHCP client, static IP, L2TP*, Ipv6
<b>Multi WAN</b>	
Outbound policy based load balance	Allow your local network to access Internet using multiple Internet connections with high-level of Internet connectivity availability.
	4 dedicated Ethernet WAN ports (10/100/1000Mbps) and 1 active fiber (SFP) slot.
	WAN fail-over or load-balanced connectivity
	Redundancy
	By WAN interfaces traffic volume
	By destination IP address range
	By fixed VPN connection
	Flexible pooling rule setting.


	Auto-detect line status.
	Service/IP based preference rules or auto-weight
Bandwidth on demand	Service/IP based preference rules or auto-weight
<b>VPN</b>	
Protocols	PPTP, IPsec, L2TP, L2TP over IPsec.
Up to 500 connections simultaneously	LAN to LAN, remote access (teleworker-to-LAN), dial-in or dial-out
VPN trunking	VPN load-balancing and VPN backup
VPN throughput	Up-to 800 Mbps (LAN-to-LAN IPsec)
NAT-traversal (NAT-T)	VPN over routes without VPN pass-through
PKI certificate	Digital signature (X.509)
IKE Authentication	Pre-shared key; IKE.
Authentication	Hardware-based MD5, SHA-1
Encryption	MPPE and hardware-based AES/DES/3DES
RADIUS Client	Authentication for PPTP remote dial-in
DHCP over IPsec*	Because DrayTek add a virtual NIC on the PC, thus, while connecting to the server via IPsec tunnel, PC will obtain an IP address from the remote side through DHCP protocol, which is quite similar with PPTP
GRE over IPsec	Creating a virtual point-to-point link to various brands of routers at remote sites over an IP internet network.
Dead Peer Detection (DPD)	When there is traffic between the peers, it is not necessary for one peer to send a keep-alive to check for liveness of the peer because the IPsec traffic serves as implicit proof of the availability of the peer
Smart VPN software utility	Provided free of charge for teleworker convenience (Windows environment)
Easy of adoption	No additional client or remote site licensing required


Industrial-standard interoperability	Compatible with other leading 3rd party vendor VPN devices
CVM	CVM, central VPN management, manages VPN tunnels easily
<b>Content Filter</b>	
IM/P2P blocking	Java applet, cookies, active X, compressed, executable, multimedia file blocking. Web content filter
Web Content Filter	Dynamic URL filtering database
Time Schedule Control	Set rule according to your specific office hours
<b>Firewall</b>	
Stateful Packet Inspection (SPI)	Outgoing/Incoming traffic inspection based on connection information
Multi-NAT	You have been allocated multiple public IP address by your ISP. You hence can have a one-to-one relationship between a public IP address and an internal/private IP address. This means that you have the protection of NAT (see earlier) but the PC can be addressed directly from the outside world by its aliased public IP address, but still by only opening specific ports to it (for example TCP port 80 for an http/web server)
Post redirection	The packet is forwarded to a specific local PC if the port number matches with the defined port number. You can also translate the external port to another port locally
DMZ Host	This opens up a single PC completely. All incoming packets will be forwarded onto the PC with the local IP address you set. The only exceptions are packets received in response to outgoing requests from other local PCs or incoming packets which match rules in the other two methods
Policy-based IP packet filter	The header information of an IP packet (IP or Mac source/destination addresses; source /destination ports; DiffServ attribute; direction dependent, bandwidth dependent, remote-site dependent
DoS/DDoS prevention	Act of preventing customers, users, clients or other computers from accessing data on a computer

IP address anti-spoofing	Source IP address check on all interfaces only IP addresses classified within the defined IP networks are allowed
Notification	E-mail alert* and logging via syslog
Bind IP to MAC address	Flexible DHCP with 'IP-MAC binding
<b>System Management</b>	
Web-based user interface (HTTP)	Integrated web server for the configuration of routers via Internet browsers with HTTP. Quick start wizard
Quick start wizard	Let administrator adjust time zone and promptly set up the Internet (PPPoE, PPTP, Static IP, DHCP)
User management	Dial-in access management (PPTP/L2TP and mOTP)
CLI(Command Line Interface, Telnet/SSH)	Remotely administer computers via the telnet.
DHCP client/relay/server	Provides an easy-to configure function for your local IP network
Dynamic DNS	When you connect to your ISP, by broadband or ISDN you are normally allocated an dynamic IP address. i.e. the public IP address your router is allocated changes each time you connect to the ISP. If you want to run a local server, remote users cannot predict your current IP address to find you.
Administration access control	The password can be applied to authentication of administrators.
Configuration backup/restore	If the hardware breaks down, you can recover the failed system within an acceptable time. Through TFTP, the effective way is to backup and restore configuration between remote hosts.
Built-in diagnostic function	Dial-out trigger, routing table, ARP cache table, DHCP table, NAT sessions table, data flow monitor, traffic graph, ping diagnosis, trace route.
NTP client/call scheduling	The Vigor has a real time clock which can update itself from your browser manually or more conveniently automatically from an Internet time server (NTP). This enables you to schedule the router to dial-out to the

	Internet at a pre-set time, or restrict Internet access to certain hours. A schedule can also be applied to LAN-to-LAN profiles (VPN or direct dial) or some of the content filtering options.
Tag-based VLAN (802.1Q)	By means of using a VLAN ID, a tag-based VLAN can identify VLAN group membership. The VLAN ID provides the information required to process the traffic across a network. Furthermore, the VLAN ID associates traffic with a specific VLAN group.
Firmware upgrade via TFTP/HTTP	Using the TFTP server and the firmware upgrade utility software, you may easily upgrade to the latest firmware whenever enhanced features are added.
Remote maintenance	With Telnet/SSL, SSH (with password or public key), browser (HTTP/HTTPS), TFTP or SNMP, firmware upgrade via HTTP or TFTP.
Logging via Syslog	Syslog is a method of logging router activity.
SNMP management	SNMP management via SNMP v1/v2, MIB II.
VigorACS SI Centralized Management	TR-069 based
<b>Certificate Management</b>	
Advance encrypted method	A pair of public/private key for encryption/decryption.
Comprehensive Certificate Authentication	Trusted CA / Local Certificate / CA server
<b>Bandwidth management</b>	
Bandwidth management	Dynamic bandwidth management with IP traffic shaping
Bandwidth reservation	Reserve minimum and maximum bandwidths by connection based or total data through send/ receive directions
DiffServ codepoint classifying	Priority queuing of packets based on DiffServ
Individual IP bandwidth/session limitation	Define session /bandwidth limitation based on IP address
User-defined class-based rules	More flexibility

QoS	Ingress/Egress Filter Rules monitor both LAN/WAN packets / 8 priority level setting
<b>Routing Functions</b>	
Router	IP and NetBIOS/IP-multi-protocol router
Advanced routing and forwarding	Complete independent management and configuration of IP networks in the device, i.e. individual settings for DHCP, DNS, firewall, VLAN, routing, QoS etc.
DNS	DNS cache/proxy
DHCP	DHCP client/relay/server
NTP	NTP client, automatic adjustment for daylight-saving time
Dynamic Routing	It is with routing protocol of RIP v2/OSPFv2/V3*. Learning and propagating routes. Support BGP routing protocol.
Static Routing	An instruction to re-route particular traffic through to another local gateway, instead of sending it onto the Internet with the rest of the traffic. A static route is just like a 'diversion sign' on a road.
<b>High Availability</b>	
CARP	Common address redundancy protocol
	Enhanced security with encrypted packet
<b>Hardware</b>	
LAN	2 x 10/100/1000M Base-TX LAN switch, RJ-45
	1 x active fiber (SFP) slot
WAN	4 x 10/100/1000M Base-TX WAN switch, RJ-45
	1 x active fiber (SFP) slot
Console	1 x console, RJ-45
Reset	1 x factory reset button
USB	2 x USB host 2.0

<b>Support</b>	
Warranty	2-year limited warranty, technical support through e-mail and Internet FAQ/application notes
Firmware Upgrade	Free firmware upgrade from Internet
<b>Declaration of Conformity</b>	
	

<b>Interface</b>		
<b>Hardware Interface</b>	LAN	2 x 10/100/1000M Base-TX LAN switch, RJ-45 1 x active fiber (SFP) slot
	WAN	4 x 10/100/1000M Base-TX WAN switch, RJ-45 1 x active fiber (SFP) slot
	Console	1 x console, RJ-45
	Reset	1 x factory reset button
	USB	2 x USB host 2.0
	<b>Declaration of Conformity</b>	
<b>Temperature</b>	Operating: 0°C ~ 45°C Storage: -25°C ~ 70°C	
<b>Humidity</b>	10% ~ 90% (non-condensing)	
<b>Max. Power</b>	20 Watt	
<b>Dimension</b>	L 443 * W 280 * H 44 (mm)	
<b>Power</b>	100V-240V	