D-Link
Building Networks for People

Product Highlights

Comprehensive Management Solution

Advanced features such as WAN failover, load balancing and an integrated firewall make this a reliable, secure, and flexible way to manage your network

Complete VPN Features

With a fully featured VPN as well as IPSec hub-and-spoke technology, secure communications between mobile employees and offices can be configured easily

Web Authentication Capabilities

Captive Portal allows employees and guest users to be easily authenticated and authorized by accessing customized landing pages

DSR Series

Unified Services Routers

Features

High-Performance VPN

- Protocols
  - IPSec, PPTP/L2TP, GRE, SSL, OpenVPN
- VPN Tunnels
  - DES, 3DES, AES, Blowfish, Twofish, CAST128
  - Hub and Spoke

Enhanced Network Service

- IPv6
- IEEE 802.11q VLAN
- Multiple SSIDs[1]
- Port Monitoring/Bandwidth Control
- IGMP Proxy, IGMP Snooping
- Web Content Filtering
- Web Authentication Capabilities
- Application Control

Wireless Access and Security

- IEEE 802.11 a[2]/b/g/n/ac[2]
- IEEE 802.1x RADIUS Authentication with EAP-TLS, EAP-TLLS, EAP-PEAP
- 802.11 128-bit AES wireless encryption

Fault Tolerance

- WAN Traffic Failover and Outbound Load Balancing

The D-Link DSR Series Unified Services Routers provide secure, high-performance networking solutions to address the growing needs of small and medium-sized businesses. With integrated high-speed wireless[1] technology, the DSR series routers offer comparable performance to wired networks, but with fewer limitations. Next generation wireless performance is available on the DSR-500AC and DSR-1000AC, which introduces 802.11ac support to the family. Available on the 5 GHz band, the combination of wider radio frequency bandwidths take data rates available to clients supporting the wireless AC standard to the next level.

Comprehensive Management Capabilities

The DSR Series family of Unified Services Routers support dual WAN Gigabit Ethernet ports to provide high availability for your WAN or Internet connections. Traffic can be load-balanced across the links with Outbound Load Balancing, increasing the performance and availability of business applications. The secondary WAN port can also be used to create a DMZ, isolating servers from your LAN. The DSR series supports mobile broadband networks via an extendable USB modem[3], such as 3G or 4G dongles. Traffic load balancing can be performed on the mobile data connections, providing an additional layer of redundancy for critical or backup applications.

Web Authentication Capabilities

Captive Portal allows employees and guest users to be easily authenticated and authorized by accessing a customized landing page. Users can be authenticated by a local database, RADIUS, LDAP, Microsoft Windows Active Directory, NT Domain or POP3 server. A maximum of four servers can be configured at any one time.

Complete and Robust VPN Features

A fully featured virtual private network (VPN) provides your mobile workers and branch offices with a secure link to your network. The DSR series routers are capable of Secure Sockets Layer (SSL) VPN tunnels, as well as Generic Routing Encapsulation (GRE) tunnels, empowering your mobile users by providing remote access to a central corporate database. Site-to-site VPN tunnels use IP Security (IPSec) Protocol, Point-to-Point Tunneling Protocol (PPTP), or Layer 2 Tunneling Protocol (L2TP) to facilitate branch office connectivity through encrypted virtual links. OpenVPN allows mobile users to connect to the intranet via encrypted links with their PC, laptops or mobile devices.

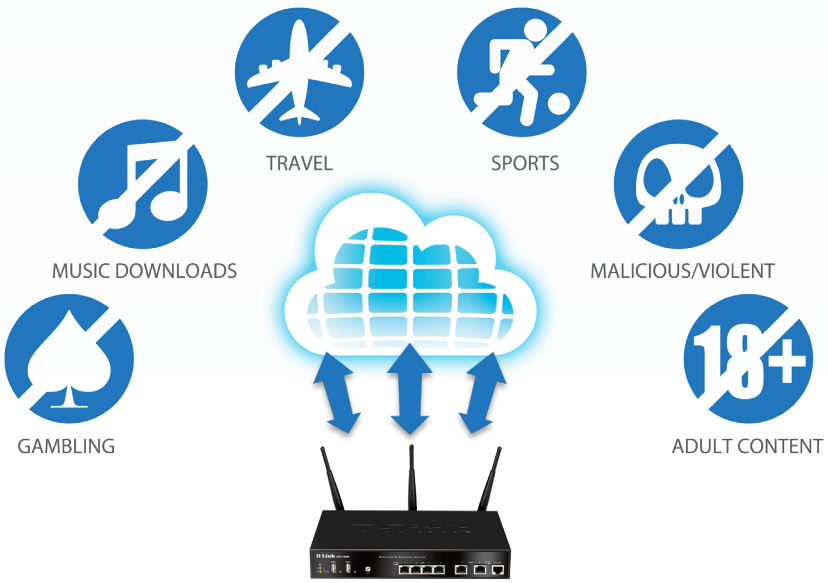
Web Content Filtering

The DSR Series also provides a web content filtering feature to help administrators monitor, manage and control employees' Internet usage. Static web content filtering helps to remove malicious objects such as Java applets, ActiveX, and cookies, or to block URLs by keyword. Dynamic web content filtering, which requires a license subscription, allows administrators to filter content from a list of categories. Multiple global index servers, with millions of URLs and real-time website data, enhance performance and maximize service availability.

Application Control

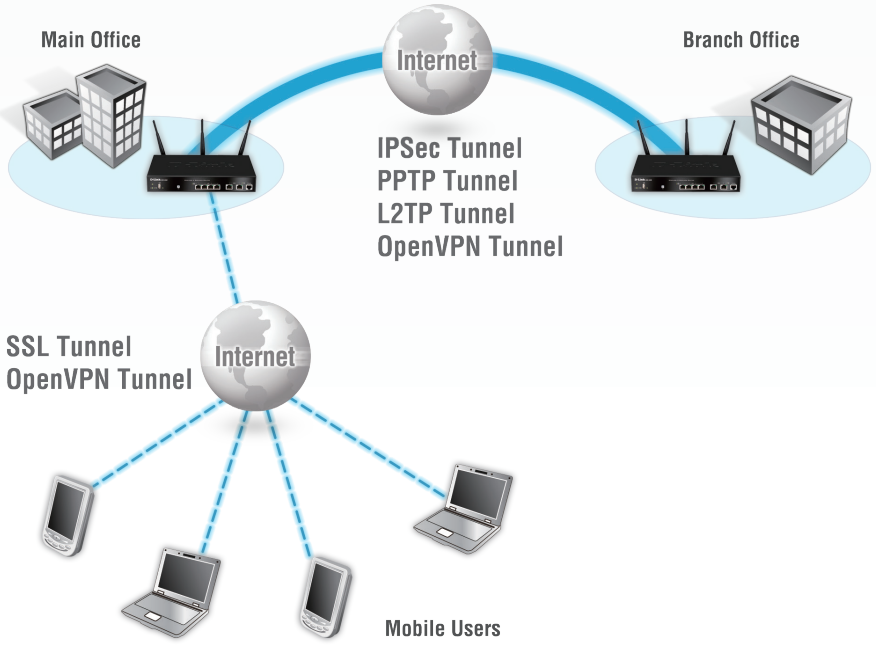
Application control enhances security by only allowing certain types of network traffic for predefined applications. The DSR Series uses application control to help accurately shape network traffic by either giving priority or applying control policies to effectively manage network utilization. Using packet inspection and a database of application signatures based on the application's network usage patterns, the DSR Series gives complete control over the content that is delivered to end users.

Web Content Filtering for HTTP/HTTPs

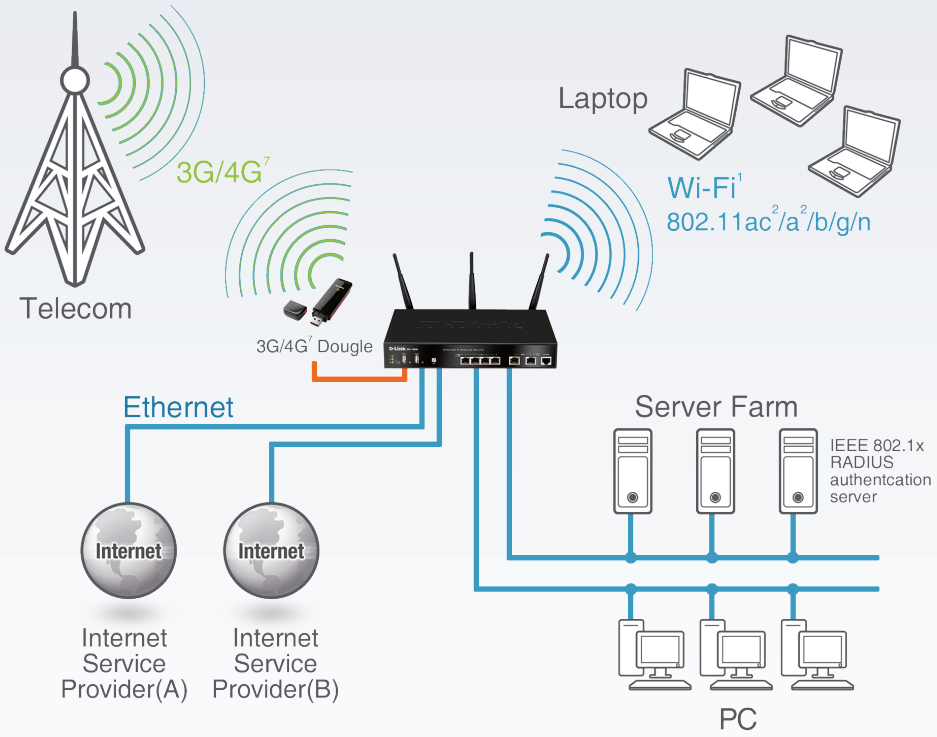


Application Control

Secure VPN Network Implementation



Dual WAN for Redundant Internet



Technical Specifications

General	DSR-250V2	DSR-500/500AC	DSR-1000/1000AC
Hardware Version	A1	DSR-500 B1 DSR-500AC A1	DSR-1000 B1 DSR-1000AC A1
Ethernet Interface	• 1 x 10/100/1000 Mbps WAN port • 3 x 10/100/1000 Mbps LAN ports • 1 x 10/100/1000 Mbps configurable port	• 2 x 10/100/1000 Mbps WAN ports • 4 x 10/100/1000 Mbps LAN ports	• 2 x 10/100/1000 Mbps WAN ports • 4 x 10/100/1000 Mbps LAN ports
Wireless Interface	—	802.11 ac/a/b/g/n (Selectable Dual Band) 2 Detachable 2 dBi Omni-Directional Antennas	802.11 ac/a/b/g/n (Concurrent Dual Band) 3 Detachable 2 dBi Omni-Directional Antennas
USB Port	1 x USB 3.0	1 x USB 2.0	2 x USB 2.0
Console Port	RJ-45		
Performance[5]			
Firewall Throughput[4]	900 Mbps	950 Mbps	950 Mbps
VPN Throughput (3DES)[6]	200 Mbps	200 Mbps	250 Mbps
Concurrent Sessions	50,000	50,000	100,000
New Sessions (per second)	2000	500	1000
Firewall Policies	300	400	600
Internet Connection Type			
Static/Dynamic IP	✓		
PPPoE/L2TP/PPTP	✓		
Multiple PPPoE	✓		
Firewall System			
Static Route	✓		
Dynamic Route	RIP v1/v2, OSPF, OSPFv3		
Dynamic DNS	✓		
Inter-VLAN Route	✓		
NAT, PAT	✓		
Web Content Filtering	Static URL, Keywords, Dynamic WCF (License is required)		
Intrusion Prevention System (IPS)	Signature Package Included in Firmware		
Authentication	Internal User Database, Radius, POP3, LDAP, AD, NT Domain		
Application Control[7]	Well-known Application Control (license required)		

Technical Specifications

Networking	DSR-250V2	DSR-500/500AC	DSR-1000/1000AC
DHCP Server/Client	1024 clients	512 clients	1024 clients
DHCP Relay	✓		
IEEE 802.11q VLAN	✓		
VLAN (port-based)	✓		
Number of VLANs	16	8	16
IP Multicast	IGMP Proxy, IGMP Snooping		
IPv6	✓		
Route Failover	✓		
Outbound Load Balancing	✓		
3G/4G Redundancy	✓		
Wireless[1]			
Multiple Service Set Identifier (SSID)	—	✓	
Service Set Identifier (SSID) to VLAN Mapping	—	✓	
Standard	—	802.11 ac/a/b/g/n	
Wireless Security	—	Wired Equivalent Privacy (WEP) Wi-Fi Protect Setup (WPS) 802.11 128-bit AES	
Virtual Private Network (VPN)			
VPN Tunnels	75	110	195
IPSec Tunnels	50	35	70
PPTP/L2TP Tunnels	30	30	50
GRE	20	15	25
OpenVPN Tunnels	20	15	25
Encryption Methods	DES, 3DES, AES, Twofish, Blowfish, CAST-128, NULL		
SSL Encryption Methods	RC4-128, 3DES, AES		
IPSec/PPTP/L2TP/OpenVPN Server	✓		
IPSec NAT Traversal	✓		
Dead Peer Detection	✓		
IP Encapsulating Security Payload (ESP)	✓		
IP Authentication Header (AH)	✓		
VPN Tunnel Keep Alive	✓		
Hub and Spoke	✓		

Technical Specifications			
Bandwidth Management	**DSR-250/250N**	**DSR-500/500AC**	**DSR-1000/1000AC**
Maximum Bandwidth Control	Minimum/maximum bandwidth control rate		
Priority Bandwidth Control	Low/Medium/High		
System Management			
Web-based User Interface	✓		
Command Line	✓		
SNMP	v1, v2c, v3		
Physical & Environment			
Power Supply	External Power Supply Unit DC 12 V/1.5 A	External Power Supply Unit DC 12 V/2.5 A	External Power Supply Unit DSR-1000: DC 12 V/2.5 A DSR-1000AC: DC 12 V/3 A
Max. Power Consumption	11.8 W/ 12.6 W	11.03 W/ 13.1 W	20.69 W/ 23.1 W
Dimensions (L x W x H)	190 x 120 x 38 mm (7.48 x 4.72 x 1.49 in)	280 x 180 x 44 mm (11.02 x 7.09 x 1.73 in)	
Operation Temperature	0 to 40 °C (32 to 104 °F)		
Storage Temperature	-20 to 70 °C (-4 to 158 °F)		
Operation Humidity	5% to 95% non-condensing		
EMI/EMC	FCC Class B, CE Class B, RCM, IC		FCC Class B, CE Class B, RCM, IC, VCCI
Safety	cUL, LVD (EN60950-1)		
MTBF	250,000 hours	360,000 hours	

[1] DSR-500AC/1000AC only.
[2] DSR-500AC/1000AC only.
[3] The following portable modem are supported: DWM-152 A1, DWM-156 A1/A3/A5/A6/A7/A8, DWM-157 A1/B1/C1/D1, DWM-158 D1/E1 and DWP-156 B1 and DWP-157 B1, DWM-221/222, HUAWEI: E1550, E173, EC306 and E303.
[4] Firewall throughput is measured using UDP traffic with a 1,518 bytes packet size, adhering to RFC2544.
[5] Actual performance may vary depending on network conditions and activated services.
[6] VPN throughput is measured using UDP traffic with the packet size 1420 bytes and encryption method 3DES plus SHA-1, adhering to PFC2544.

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