D-Link®
Building Networks for People

DSA-2308X

Service Router with 8 Configurable Ports (6x10/100/1000Base-T, 2x10GBase-X SFP+) and 2 USB Ports

The router DSA-2308X is equipped with 6 10/100/1000Base-T ports and 2 10G SFP+ ports, which provide a very high-throughput connection to deploy a larger network. The device is designed to protect SMB networks infrastructure against external threats and organize secure VPN connection. The router supports concurrent connection of a large number of users.

The advanced security functions allow to divide the network into zones, configure the zone interaction policies and traffic filtering rules with a wide range of available parameters.

The router supports multiple types of secure VPN connection tunnels: IPsec (IKEv1/IKEv2), L2TP over IPsec, PPTP/L2TP, GRE, IPIP, EoGRE, and unmanaged L2TPv3 tunnels.

In addition, the SSH protocol support provides more secure remote configuration and management of the router due to encryption of all transmitted traffic, including passwords.

The router supports the SkyDNS web content filtering service, which provides more settings and opportunities for safer Internet experience for home users of all ages and for professional activities of corporate users.

The schedules are also implemented; they can be applied to the rules and settings of the firewall and used to reboot the router at the specified time or every specified time period and to automatically save the configuration of the router to a connected USB storage.

The new ad blocking function effectively blocks advertisements which appear during web surfing.

LAN/WAN Conversion, WAN Failover

You can use any Ethernet or SFP port of the router as LAN or WAN port. The firmware supports assigning several WAN ports, for example, in order to configure the primary and backup WAN connection of different ISPs. In addition, you can configure the WAN failover using a 3G/4G modem.

USB Ports

The router is equipped with two USB ports for connecting a USB modem, a USB storage device or a printer. You are able to quickly connect to the Internet via a USB modem and use a USB storage device as a network drive.

In order to use multifunction USB ports effectively, the router supports simultaneous operation of several USB devices. For example, you can access multimedia content of the connected HDD storage and at the same time share a USB printer.

Easy configuration and update

By default, a DHCP client WAN connection is configured for each WAN port and all settings to get started are configured.

You can customize the settings of the router DSA-2308X via the user-friendly web-based interface (the interface is available in two languages – in Russian and in English).

You can simply update the firmware: the router itself finds approved firmware on D-Link update server and notifies when ready to install it.

The built-in TR-069 client allows to perform remote configuration and diagnostics of the device.

The built-in SLA agent allows to monitor the state of the router's network and clients and to pass the collected data in order to timely troubleshoot the problems.

Hardware

Processor	· Intel Atom C3758 (2.2GHz, 8-core)
RAM	· 16GB, DDR4
Flash	· 32GB, eMMC
Interfaces	· 6 10/100/1000BASE-T LAN/WAN ports · 2 10GBase-X SFP+ LAN/WAN ports · USB 2.0 port · USB 3.0 port · RJ-45 console port
LEDs	· Power · Activity/Link (per port)
Buttons	· POWER button to power on/power off and restore factory default settings · RST button for hardware reboot · Switch to power on/power off
Power connector	· Power input connector (AC)

Performance

Number of VPN tunnels	· Up to 250
VPN connections throughput	· IPsec tunnel (56-bit key) 250Mbps · GRE/IPIP tunnel 900Mbps · PPTP server 70Mbps · L2TP server 900Mbps · EoGRE tunnel 900Mbps · L2TPv3 tunnel 900Mbps
Maximum number of concurrent sessions	· 500,000
New sessions per second	· 45,000
Number of policies	· 2000

Software

Firewall functions	· **Zones** Division into zones; ability to specify rules and policies for zone interaction One or several interfaces or VPN servers in a zone Types of zones: FW, IPv4, IPv6, IPSec · **Policies** Types of policies: ACCEPT, DROP, REJECT · **Rules for zones, network interfaces, and VPN servers** Wide choice of parameters to add to a rule Exclusion of parameters from a rule Action upon rule activation: ACCEPT, DROP, REJECT, RETURN, REDIRECT, POLICY, MASQUERADE, DNAT, SNAT, LOG, TTL Port Knocking (Recent) Statistics collection · **Others** Stateful Packet Inspection (SPI) URL filter Ad blocking function Built-in SkyDNS web content filtering service Support of TWIN IP (IP Passthrough)

Software	
WAN connection types	· Mobile Internet (via supported USB modem) · PPPoE · IPv6 PPPoE · PPPoE Dual Stack · Static IPv4 / Dynamic IPv4 · Static IPv6 / Dynamic IPv6 · PPPoE + Static IP (PPPoE Dual Access) · PPPoE + Dynamic IP (PPPoE Dual Access) · PPTP/L2TP + Static IP · PPTP/L2TP + Dynamic IP · L2TP Dual Stack · IPIP6 in DSLite mode · 6in4 · 6to4 · 6rd
Network functions	· **Physical** Configuration of the device's ports according to the switch model Support of several physical switches Port tagging Tracking link watcher events (port connection on/off) Combining interfaces into network bridges Ports/connections statistics · **Networks interaction** Support of several independent LAN subnets Support of several physical WAN ports; WAN failover Network isolation or routing · **Routing** Static routing (flexible configuration of routes, rules, and routing tables) RIP v1/v2 · **Others** DHCP server/relay Advanced configuration of built-in DHCP server Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation DNS relay Dynamic DNS IGMPx Support of UPnP Support of VLAN Interface grouping Support of SIP ALG Support of RTSP Support of H.323 Autonegotiation of speed, duplex mode, and flow control / Manual speed and duplex mode setup for each Ethernet port Built-in UDPXY application XUPNPD plug-in Equal load distribution while using several WAN connections (traffic balancing) Support of VRRP Support of TWAMP Wake-on-LAN support
VPN	· PPPoE pass-through · L2TP over IPsec client · PPTP/L2TP servers · PPTP/L2TP/IPIP/GRE tunnels (L3) · EoGRE/L2TPv3 tunnels (L2) · IPsec tunnels Transport/Tunnel mode IKEv1/IKEv2 support DES/3DES/AES/BLOWFISH/CAMELLIA/SERPENT/TWOFISH encryption NAT Traversal Support of DPD (Keep-alive for VPN tunnels)

Software	
USB interface functions	· USB modem Auto connection to available type of supported network (4G/3G/2G) Auto configuration of connection upon plugging in USB modem Enabling/disabling PIN code check, changing PIN code[1] Sending/receiving/reading/removing SMS messages[1] Support of USSD requests[1] · USB storage File browser Print server Access to storage via accounts Built-in Samba server Built-in FTP server supporting TLS Built-in DLNA server Built-in Transmission torrent client; uploading/downloading files from/to USB storage
Management and monitoring	· Local and remote access to settings through SSH/TELNET/WEB (HTTP/HTTPS) · Bilingual web-based interface for configuration and management (Russian/English) · Firmware update via web-based interface · Automatic notification on new firmware version · Saving/restoring configuration to/from file · Support of logging to remote host/connected USB storage · Automatic synchronization of system time with NTP server and manual time/date setup · Ping utility · Traceroute utility · TR-069 client · SNMP agent · SLA agent · Schedules for rules and settings of firewall, automatic reboot, and saving a configuration backup to a connected USB storage · Automatic upload of configuration file from ISP's server (Auto Provision) · Automatic and manual recovery points · iPerf3 utility (client/server) · Route monitoring

Physical Parameters	
Dimensions (L x W x H)	· 428 x 270 x 44 mm (16.9 x 10.6 x 1.7 in)

Operating Environment	
Power	· 100 ~ 240V AC, internal power supply
Ventilation system	· 2 fans
Temperature	· Operating: from 0 to 45 °C · Storage: from -20 to 80 °C
Humidity	· Operating: from 5% to 90% (non-condensing) · Storage: from 5% to 90% (non-condensing)

Delivery Package	
· Router DSA-2308X · Power cable · 2 19-inch rack mounting brackets · "Quick Installation Guide" (brochure)	

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1   For some models of USB modems.

Supported USB Modems[2]	
GSM	· Alcatel X500 · D-Link DWM-152C1 · D-Link DWM-156A6 · D-Link DWM-156A7 · D-Link DWM 156A8 · D-Link DWM-156C1 · D-Link DWM-157B1 · D-Link DWM-157B1 (Velcom) · D-Link DWM-158D1 · D-Link DWR-710 · Huawei E150 · Huawei E1550 · Huawei E156G · Huawei E160G · Huawei E169G · Huawei E171 · Huawei E173 (Megafon) · Huawei E220 · Huawei E3131 (MTS 420S) · Huawei E352 (Megafon) · Huawei E3531 · Prolink PHS600 · Prolink PHS901 · ZTE MF112 · ZTE MF192 · ZTE MF626 · ZTE MF627 · ZTE MF652 · ZTE MF667 · ZTE MF668 · ZTE MF752
LTE	· Alcatel IK40V · Brovi E3372-325 · D-Link DWM-221 · D-Link DWM-222 · D-Link DWR-910 (revision D1) · Huawei E3131 · Huawei E3272 · Huawei E3351 · Huawei E3372s · Huawei E3372h-153 · Huawei E3372h-320 · Huawei E367 · Huawei E392 · Megafon M100-1 · Megafon M100-2 · Megafon M100-3 · Megafon M100-4 · Megafon M150-1 · Megafon M150-2 · Megafon M150-3 · Megafon M150-4 · Quanta 1K6E (Beeline 1K6E) · MTS 824F · MTS 827F · MTS 830FT · Yota LU-150 · Yota WLTUBA-107 · ZTE MF823 · ZTE MF823D · ZTE MF827 · ZTE MF833T · ZTE MF833V
Smartphones in USB tethering mode	· Some models of Android smartphones

2   The manufacturer does not guarantee proper operation of the router with every modification of the firmware of USB modems.

Compatible Equipment	
DEM-310GT	1000Base-LX Single-Mode SFP transceiver (up to 10 km)
DEM-311GT	1000Base-SX Multi-Mode SFP transceiver (up to 550 m)
DEM-330T/10KM	1000Base-BX-D Single-Mode WDM SFP transceiver (LC connector, up to 10 km), Tx:1550 nm, Rx:1310 nm
DEM-330R/10KM	1000Base-BX-U Single-Mode WDM SFP transceiver (LC connector, up to 10 km), Tx:1310 nm, Rx:1550 nm
DEM-432XT	10GBase-LR Single-Mode SFP+ transceiver (up to 10 km)
DEM-433XT	10GBase-ER Single-Mode SFP+ transceiver (up to 40 km)
DEM-436XT-BXD	10GBase-LR Single-Mode WDM SFP+ transceiver (up to 20 km), Tx:1330 nm, Rx:1270 nm)
DEM-436XT-BXU	10GBase-LR Single-Mode WDM SFP+ transceiver (up to 20 km), Tx:1270 nm, Rx:1330 nm