

## Product Highlights

### FXS PORT

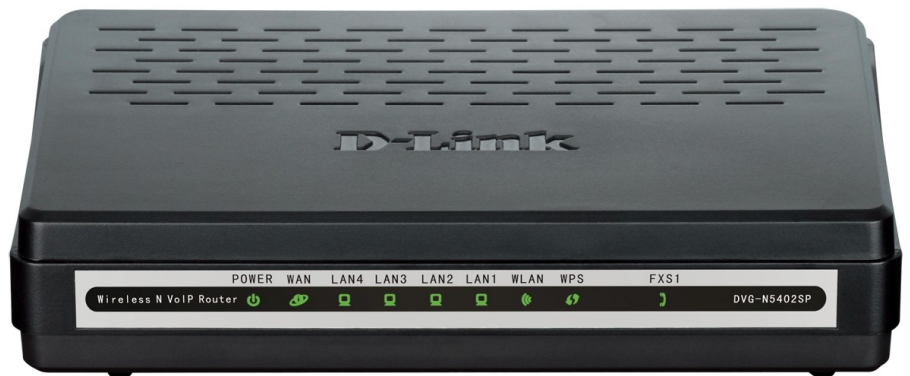
Support of analog phone,  
good quality of voice  
transmission

### 802.11N

High connection rate  
(up to 300Mbps)  
and superior wireless range

### IPV6 SUPPORT

All needed functions  
for up-to-date networking



## DVG-N5402SP

### Wireless Router with 1 FXS Port

#### Voice

The VoIP router is equipped with an FXS port which allows connection of an analog phone for calls via Internet.

#### Wireless Interface

Using the DVG-N5402SP device, you are able to quickly create a wireless network at home or in your office, which lets computers and mobile devices access the Internet virtually anywhere (within the operational range of your wireless network). The router can operate as a base station for connecting wireless devices of the standards 802.11b, 802.11g, and 802.11n (at the rate up to 300Mbps).

#### Secure Wireless Connection

The router supports multiple functions for the wireless interface: several security standards (WEP, WPA/WPA2), MAC address filtering, WPS, WMM.

In addition, the device is equipped with a button for switching the Wi-Fi network off/on. If needed, for example, when you leave home, you can easily switch the router's WLAN by pressing the button, and devices connected to the LAN ports of the router will stay online.

#### Advanced Capabilities of Wireless Network

Support of guest Wi-Fi network allows you to create a separate wireless network with individual security settings. Devices connected to the guest network will be able to access the Internet, but will be isolated from the devices and resources of the router's LAN.

#### Security

The wireless router DVG-N5402SP includes a built-in firewall. The advanced security functions minimize threats of hacker attacks, prevent unwanted intrusions to your network, and block access to unwanted websites for users of your LAN.

In addition, the router supports IPsec and allows to create secure VPN tunnels.

Built-in Yandex.DNS service protects against malicious and fraudulent web sites and helps to block access to adult content on children's devices.

### Easy configuration and update

You can configure the settings of the wireless router DVG-N5402SP via the user-friendly web-based interface (the interface is available in two languages – in Russian and in English).

The fast and easy configuration wizard allows you to specify all needed parameters in several simple steps.

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

Hardware	
<b>Processor</b>	· BCM5358B0KFBG
<b>RAM</b>	· 64MB, DDR2 SDRAM
<b>Flash</b>	· 16MB, SPI
<b>Interfaces</b>	· 10/100BASE-TX WAN port · 4 10/100BASE-TX LAN ports · FXS port
<b>LEDs</b>	· POWER · WAN · 4 LAN LEDs · WLAN · WPS · FXS1
<b>Buttons</b>	· ON/OFF button to power on/power off · RESET button to restore factory default settings · WPS button to set up wireless connection · WLAN button to enable/disable wireless network
<b>Antenna</b>	· Two internal omnidirectional Airgain antennas (5dBi gain)
<b>MIMO</b>	· 2 x 2
<b>Power connector</b>	· Power input connector (DC)
<b>Mounting</b>	· Desktop · Wall

Phone	
<b>General SIP Features</b>	<ul style="list-style-type: none"> <li>· Invite with Challenge</li> <li>· Register by IP address or domain name of SIP server</li> <li>· Backup proxy support</li> <li>· Support of DHCP option 120</li> <li>· RFC3986 SIP URI format support</li> <li>· Outbound proxy support</li> <li>· STUN client</li> <li>· NAT public IP address</li> <li>· NAT keep-alive</li> <li>· Session timer (re-invite)</li> <li>· Call types: voice/modem/fax</li> <li>· User programmable Dial Plan</li> <li>· Manual peer table (for P2P calls)</li> <li>· E.164 Numbering, ENUM support</li> </ul>

Phone	
<b>Call Features</b>	<ul style="list-style-type: none"> <li>· Direct IP-to-IP call without SIP proxy</li> <li>· Call hold / retrieve</li> <li>· Call awaiting</li> <li>· Forwarding (unconditional, busy, no answer)</li> <li>· Do Not Disturb</li> <li>· Anonymous call blocking</li> <li>· Speed dialing</li> <li>· Phone book</li> <li>· Hotline</li> <li>· Vertical service codes</li> <li>· CLIR</li> <li>· Filtering by IP address (white/black list)</li> <li>· Call logging</li> </ul>
<b>Voice Features</b>	<ul style="list-style-type: none"> <li>· Codecs: G.711 a/μ-law, G.729A, G.726, G.722</li> <li>· DTMF detection and generation</li> <li>· In-band DTMF, out-of-band DTMF (RFC2833, SIP-INFO)</li> <li>· Comfort Noise Generation (CNG)</li> <li>· Voice Activity Detection (VAD)</li> <li>· Adaptive (Dynamic) Jitter Buffer</li> <li>· Call progress tone generation (FXS)</li> <li>· DTMF/PULSE dial support</li> <li>· Caller ID detection and generation</li> <li>· T.30 FAX bypass to G.711, T.38 Real Time FAX Relay</li> <li>· Volume control (speaker/microphone)</li> </ul>

Software	
<b>WAN connection types</b>	<ul style="list-style-type: none"> <li>· PPPoE</li> <li>· IPv6 PPPoE</li> <li>· PPPoE Dual Stack</li> <li>· Static IPv4 / Dynamic IPv4</li> <li>· Static IPv6 / Dynamic IPv6</li> <li>· PPPoE + Static IP / Dynamic IP (PPPoE Dual Access)</li> <li>· PPTP/L2TP + Static IP</li> <li>· PPTP/L2TP + Dynamic IP</li> </ul>
<b>Network functions</b>	<ul style="list-style-type: none"> <li>· DHCP server/relay</li> <li>· Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation</li> <li>· DNS relay</li> <li>· Dynamic DNS</li> <li>· Static IP routing</li> <li>· Static IPv6 routing</li> <li>· IGMP Proxy</li> <li>· RIP</li> <li>· Support of UPnP IGD</li> <li>· Support of VLAN</li> <li>· WAN ping respond</li> <li>· Support of SIP ALG</li> <li>· Support of RTSP</li> <li>· Autonegotiation of speed, duplex mode, and flow control/Manual speed and duplex mode setup for each Ethernet port</li> <li>· Built-in UDPXY application</li> </ul>

Software	
<b>Firewall functions</b>	<ul style="list-style-type: none"> <li>· Network Address Translation (NAT)</li> <li>· Stateful Packet Inspection (SPI)</li> <li>· IP filter</li> <li>· IPv6 filter</li> <li>· MAC filter</li> <li>· URL filter</li> <li>· DMZ</li> <li>· Prevention of ARP and DDoS attacks</li> <li>· Virtual servers</li> <li>· Built-in Yandex.DNS web content filtering service</li> </ul>
<b>VPN</b>	<ul style="list-style-type: none"> <li>· IPsec/PPTP/L2TP/PPPoE pass-through</li> <li>· IPsec tunnels</li> </ul>
<b>Management</b>	<ul style="list-style-type: none"> <li>· Local and remote access to settings through TELNET/WEB (HTTP/HTTPS)</li> <li>· Bilingual web-based interface for configuration and management (Russian/English)</li> <li>· Notification on connection problems and auto redirect to settings</li> <li>· Firmware update via web-based interface</li> <li>· Automatic notification on new firmware version</li> <li>· Saving/restoring configuration to/from file</li> <li>· Support of logging to remote host</li> <li>· Automatic synchronization of system time with NTP server and manual time/date setup</li> <li>· Ping utility</li> <li>· Traceroute utility</li> <li>· TR-069 client</li> </ul>

Wireless Module Parameters	
<b>Standards</b>	<ul style="list-style-type: none"> <li>· IEEE 802.11b/g/n</li> </ul>
<b>Frequency range</b>	<ul style="list-style-type: none"> <li>· 2400 ~ 2483.5MHz</li> </ul>
<b>Wireless connection security</b>	<ul style="list-style-type: none"> <li>· WEP</li> <li>· WPA/WPA2 (Personal/Enterprise)</li> <li>· MAC filter</li> <li>· WPS (PBC/PIN)</li> </ul>
<b>Advanced functions</b>	<ul style="list-style-type: none"> <li>· Support of client mode</li> <li>· WMM (Wi-Fi QoS)</li> <li>· Information on connected Wi-Fi clients</li> <li>· Advanced settings</li> <li>· Guest Wi-Fi / support of MBSSID</li> <li>· Autonegotiation of channel bandwidth in accordance with environment conditions (20/40 Coexistence)</li> </ul>
<b>Wireless connection rate</b>	<ul style="list-style-type: none"> <li>· IEEE 802.11b: 1, 2, 5.5, and 11Mbps</li> <li>· IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54Mbps</li> <li>· IEEE 802.11n: from 6.5 to 300Mbps (from MCS0 to MCS15)</li> </ul>
<b>Transmitter output power</b>	<ul style="list-style-type: none"> <li>· Less than 20dBm (100mW)</li> </ul>
<i>The maximum value of the transmitter output power depends upon the radio frequency regulations applied in your country</i>	
<b>Receiver sensitivity</b>	<ul style="list-style-type: none"> <li>· 802.11b (typical at PER = 8% (1000-byte PDUs) at room temperature 25 °C) -76dBm at 11Mbps</li> <li>· 802.11g (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C) -68dBm at 54Mbps</li> <li>· 802.11n (typical at PER = 10% (1000-byte PDUs)) HT20 -67dBm at MCS7 HT40 -64dBm at MCS7</li> </ul>

Wireless Module Parameters	
Modulation schemes	<ul style="list-style-type: none"><li>· 802.11b: DQPSK, DBPSK, DSSS, CCK</li><li>· 802.11g: BPSK, QPSK, 16QAM, 64QAM with OFDM</li><li>· 802.11n: BPSK, QPSK, 16QAM, 64QAM with OFDM</li></ul>

Physical Parameters	
Dimensions (L x W x H)	<ul style="list-style-type: none"><li>· 182 x 119 x 39 mm (7.2 x 4.7 x 1.5 in)</li></ul>
Weight	<ul style="list-style-type: none"><li>· 280 g (0.6 lb)</li></ul>

Operating Environment	
Power	<ul style="list-style-type: none"><li>· Output: 12V DC, 1.25A</li></ul>
Temperature	<ul style="list-style-type: none"><li>· Operating: from 0 to 40 °C</li><li>· Storage: from -20 to 70 °C</li></ul>
Humidity	<ul style="list-style-type: none"><li>· Operating: from 10% to 90% (non-condensing)</li><li>· Storage: from 5% to 95% (non-condensing)</li></ul>

Delivery Package	
	<ul style="list-style-type: none"><li>· Router DVG-N5402SP</li><li>· Power adapter DC 12V/1.25A</li><li>· Ethernet cable (CAT 5E)</li><li>· RJ-11 telephone cable</li><li>· "Quick Installation Guide" (brochure)</li></ul>