

## Product Highlights

### HIGH SPEED

Total wireless connection rate up to 1200Mbps<sup>1</sup>

### EXTREME WI-FI PERFORMANCE

MU-MIMO for best rates, 2 data streams for increased throughput

### IPV6 SUPPORT

All needed functions for up-to-date networking



## DIR-822

### AC1200 Wave 2 MU-MIMO Wi-Fi EasyMesh Router

#### Wireless Interface

Using the DIR-822 device, you are able to quickly create a high-speed 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). Simultaneous activity of 2.4GHz band and 5GHz band allows performing a wide range of tasks. The router can operate as a base station for connecting wireless devices of the standards 802.11a, 802.11b, 802.11g, 802.11n, and 802.11ac (at the wireless connection rate up to 1167Mbps<sup>1</sup>).

#### Secure Wireless Connection

The router supports multiple functions for the wireless interface: several security standards (WEP, WPA/WPA2/WPA3), 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

The EasyMesh function is D-Link implementation of mesh networks designed to quickly connect several<sup>2</sup> devices into one transport network, for example, when it's required to provide high-quality Wi-Fi coverage without dead zones in living units of complicated planning or it's needed to create a large temporary Wi-Fi network for an outdoor event.

Multi-user MIMO technology allows to distribute the router's resources to let multiple wireless clients use the Wi-Fi network efficiently, keeping high rates for HD media streaming, lag-free gaming, and fast transfer of large files.

Transmit Beamforming technology allows to flexibly change the antennas' radiation pattern and to redistribute the signal directly to wireless devices connected to the router.

Support of guest Wi-Fi network allows you to create a separate wireless network with individual security settings and maximum rate limitation. 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.

<sup>1</sup> Up to 300Mbps for 2.4GHz and up to 867Mbps for 5GHz.

<sup>2</sup> Up to 6 devices.

### **Security**

The wireless router DIR-822 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.

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

In addition, the router supports IPsec and allows to create secure VPN tunnels. Support of the IKEv2 protocol allows to provide simplified message exchange and use asymmetric authentication engine upon configuration of an IPsec tunnel.

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

The router also 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.

Now 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 enable/disable the wireless network and the Wi-Fi filter.

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

### **Easy configuration and update**

You can configure the settings of the wireless router DIR-822 via the user-friendly web-based interface (the interface is available in two languages – in Russian and in English).

The configuration wizard allows you to quickly switch DIR-822 to one of the following modes: router (for connection to a wired or wireless ISP), access point, repeater, or client, and then configure all needed setting for operation in the selected mode in several simple steps.

Also DIR-822 supports configuration and management via mobile application for Android and iPhone smartphones.

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

<b>Hardware</b>	
<b>Processor</b>	<ul style="list-style-type: none"> <li>• RTL8197FH-VG5 (1GHz)</li> </ul>
<b>RAM</b>	<ul style="list-style-type: none"> <li>• 128MB, DDR2, built in processor</li> </ul>
<b>Flash</b>	<ul style="list-style-type: none"> <li>• 128MB, SPI NAND</li> </ul>
<b>Interfaces</b>	<ul style="list-style-type: none"> <li>• 10/100BASE-TX WAN port</li> <li>• 4 10/100BASE-TX LAN ports</li> </ul>
<b>LEDs</b>	<ul style="list-style-type: none"> <li>• Power</li> <li>• Internet</li> <li>• 4 LAN LEDs</li> <li>• WLAN 2.4G</li> <li>• WLAN 5G</li> <li>• WPS</li> </ul>
<b>Buttons</b>	<ul style="list-style-type: none"> <li>• POWER button to power on/power off</li> <li>• WIFI button to enable/disable wireless network</li> <li>• WPS button to connect mesh network devices and set up wireless connection</li> <li>• RESET button to restore factory default settings</li> </ul>
<b>Antenna</b>	<ul style="list-style-type: none"> <li>• Four external non-detachable antennas (5dBi gain)</li> </ul>
<b>MIMO</b>	<ul style="list-style-type: none"> <li>• 2 x 2, MU-MIMO</li> </ul>
<b>Power connector</b>	<ul style="list-style-type: none"> <li>• Power input connector (DC)</li> </ul>

<b>Software</b>	
<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 (PPPoE Dual Access)</li> <li>• PPPoE + 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>• Advanced configuration of built-in DHCP server</li> <li>• Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation</li> <li>• Automatic obtainment of LAN IP address (for access point/repeater/client modes)</li> <li>• DNS relay</li> <li>• Dynamic DNS</li> <li>• Static IPv4/IPv6 routing</li> <li>• IGMP/MLD 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>• WAN failover</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>

<b>Software</b>	
<b>Firewall functions</b>	<ul style="list-style-type: none"> <li>· Network Address Translation (NAT)</li> <li>· Stateful Packet Inspection (SPI)</li> <li>· IPv4/IPv6 filter</li> <li>· MAC filter</li> <li>· URL filter</li> <li>· Ad blocking function</li> <li>· DMZ</li> <li>· Virtual servers</li> <li>· Built-in Yandex.DNS web content filtering service</li> <li>· Built-in SkyDNS web content filtering service</li> </ul>
<b>VPN</b>	<ul style="list-style-type: none"> <li>· IPsec/PPTP/L2TP/PPPoE pass-through</li> <li>· L2TP over IPsec</li> <li>· IPsec tunnels Transport/Tunnel mode IKEv1/IKEv2 support DES encryption NAT Traversal Support of DPD (Keep-alive for VPN tunnels)</li> </ul>
<b>Management and monitoring</b>	<ul style="list-style-type: none"> <li>· Local and remote access to settings through SSH/TELNET/WEB (HTTP/HTTPS)</li> <li>· Bilingual web-based interface for configuration and management (Russian/English)</li> <li>· Support of D-Link Assistant application for Android and iPhone smartphones</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> <li>· Schedules for rules and settings of firewall, automatic reboot, and enabling/disabling wireless network and Wi-Fi filter</li> <li>· Automatic upload of configuration file from ISP's server (Auto Provision)</li> </ul>

<b>Wireless Module Parameters</b>	
<b>Standards</b>	<ul style="list-style-type: none"> <li>· IEEE 802.11ac Wave 2</li> <li>· IEEE 802.11a/b/g/n</li> <li>· IEEE 802.11k/v</li> <li>· IEEE 802.11w</li> </ul>
<b>Frequency range</b> <i>The frequency range depends upon the radio frequency regulations applied in your country</i>	<ul style="list-style-type: none"> <li>· 2400 ~ 2483.5MHz</li> <li>· 5150 ~ 5350MHz</li> <li>· 5650 ~ 5850MHz</li> </ul>
<b>Wireless connection security</b>	<ul style="list-style-type: none"> <li>· WEP</li> <li>· WPA/WPA2 (Personal/Enterprise)</li> <li>· WPA3 (Personal)</li> <li>· MAC filter</li> <li>· WPS (PBC/PIN)</li> </ul>
<b>Advanced functions</b>	<ul style="list-style-type: none"> <li>· EasyMesh function</li> <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>· Rate limitation for wireless network/separate MAC addresses</li> <li>· Periodic scan of channels, automatic switch to least loaded channel</li> <li>· Support of 5GHz TX Beamforming</li> <li>· Autonegotiation of channel bandwidth in accordance with environment conditions (20/40 Coexistence)</li> <li>· Support of STBC</li> </ul>

<b>Wireless Module Parameters</b>	
<p><b>Wireless connection rate</b></p>	<ul style="list-style-type: none"> <li>· IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54Mbps</li> <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 (2.4GHz): from 6.5 to 300Mbps (MCS0–MCS15)</li> <li>· IEEE 802.11n (5GHz): from 6.5 to 300Mbps (from MCS0 to MCS15)</li> <li>· IEEE 802.11ac (5GHz): from 6.5 to 867Mbps (from MCS0 to MCS9)</li> </ul>
<p><b>Transmitter output power</b></p> <p><i>The maximum value of the transmitter output power depends upon the radio frequency regulations applied in your country</i></p>	<ul style="list-style-type: none"> <li>· 802.11a (typical at room temperature 25 °C) 14dBm at 6, 9, 12, 18, 24Mbps 13dBm at 36Mbps 12.5dBm at 48Mbps 12dBm at 54Mbps</li> <li>· 802.11b (typical at room temperature 25 °C) 15dBm at 1, 2, 5.5, 11Mbps</li> <li>· 802.11g (typical at room temperature 25 °C) 15dBm at 6, 9, 12, 18, 24, 36, 48, 54Mbps</li> <li>· 802.11n (typical at room temperature 25 °C) 2.4GHz, HT20 15dBm at MCS0~7 2.4GHz, HT40 15dBm at MCS0~7 5GHz, HT20 14dBm at MCS0~4 13dBm at MCS5 12.5dBm at MCS6 12dBm at MCS7 5GHz, HT40 14dBm at MCS0~2 13dBm at MCS3~4 12.5dBm at MCS5~6 12dBm at MCS7</li> <li>· 802.11ac (typical at room temperature 25 °C) VHT20 14dBm at MCS0~4 13dBm at MCS5 12dBm at MCS6 11dBm at MCS7/8 VHT40 14dBm at MCS0~2 13dBm at MCS3~4 12dBm at MCS5~6 11dBm at MCS7/8/9 VHT80 14dBm at MCS0~4 13dBm at MCS5~6 12dBm at MCS7 11dBm at MCS8/9</li> </ul>
<p><b>Receiver sensitivity</b></p>	<ul style="list-style-type: none"> <li>· 802.11a (typical at PER &lt; 10% (1000-byte PDUs) at room temperature 25 °C) -82dBm at 6Mbps -81dBm at 9Mbps -79dBm at 12Mbps -77dBm at 18Mbps -74dBm at 24Mbps -70dBm at 36Mbps -66dBm at 48Mbps -65dBm at 54Mbps</li> <li>· 802.11b (typical at PER = 8% (1000-byte PDUs) at room temperature 25 °C) -80dBm at 1Mbps -80dBm at 2Mbps -76dBm at 5.5Mbps -76dBm at 11Mbps</li> </ul>

**Wireless Module Parameters**

- 802.11g (typical at PER < 10% (1000-byte PDUs) at room temperature 25 °C)
  - 82dBm at 6Mbps
  - 81dBm at 9Mbps
  - 79dBm at 12Mbps
  - 77dBm at 18Mbps
  - 74dBm at 24Mbps
  - 70dBm at 36Mbps
  - 66dBm at 48Mbps
  - 65dBm at 54Mbps
  
- 802.11n (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C)
  - 2.4GHz, HT20
    - 82dBm at MCS0
    - 79dBm at MCS1
    - 77dBm at MCS2
    - 74dBm at MCS3
    - 70dBm at MCS4
    - 66dBm at MCS5
    - 65dBm at MCS6
    - 64dBm at MCS7
  - 2.4GHz, HT40
    - 79dBm at MCS0
    - 76dBm at MCS1
    - 74dBm at MCS2
    - 71dBm at MCS3
    - 67dBm at MCS4
    - 63dBm at MCS5
    - 62dBm at MCS6
    - 61dBm at MCS7
  - 5GHz, HT20
    - 82dBm at MCS0
    - 79dBm at MCS1
    - 77dBm at MCS2
    - 74dBm at MCS3
    - 70dBm at MCS4
    - 66dBm at MCS5
    - 65dBm at MCS6
    - 64dBm at MCS7
  - 5GHz, HT40
    - 79dBm at MCS0
    - 76dBm at MCS1
    - 74dBm at MCS2
    - 71dBm at MCS3
    - 67dBm at MCS4
    - 63dBm at MCS5
    - 62dBm at MCS6
    - 61dBm at MCS7
  
- 802.11ac (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C)
  - VHT20
    - 82dBm at MCS0
    - 79dBm at MCS1
    - 77dBm at MCS2
    - 74dBm at MCS3
    - 70dBm at MCS4
    - 66dBm at MCS5
    - 65dBm at MCS6
    - 64dBm at MCS7
    - 56dBm at MCS8
  - VHT40
    - 79dBm at MCS0
    - 76dBm at MCS1
    - 74dBm at MCS2
    - 71dBm at MCS3
    - 67dBm at MCS4
    - 63dBm at MCS5
    - 62dBm at MCS6
    - 61dBm at MCS7
    - 56dBm at MCS8
    - 54dBm at MCS9

Wireless Module Parameters	
	VHT80 -76dBm at MCS0 -73dBm at MCS1 -71dBm at MCS2 -68dBm at MCS3 -64dBm at MCS4 -60dBm at MCS5 -59dBm at MCS6 -58dBm at MCS7 -53dBm at MCS8 -51dBm at MCS9
<b>Modulation schemes</b>	<ul style="list-style-type: none"> <li>· 802.11a: BPSK, QPSK, 16QAM, 64QAM with OFDM</li> <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> <li>· 802.11ac: BPSK, QPSK, 16QAM, 64QAM, up to 256QAM with OFDM</li> </ul>
Physical Parameters	
<b>Dimensions (L x W x H)</b>	· 205 x 136 x 33 mm (8.07 x 5.35 x 1.3 in)
<b>Weight</b>	· 285 g (0.63 lb)
Operating Environment	
<b>Power</b>	· Output: 12V DC, 1A
<b>Temperature</b>	<ul style="list-style-type: none"> <li>· Operating: from 0 to 40 °C</li> <li>· Storage: from -20 to 65 °C</li> </ul>
<b>Humidity</b>	<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 DIR-822</li> <li>· Power adapter DC 12V/1A</li> <li>· Ethernet cable</li> <li>· "Quick Installation Guide" (brochure)</li> </ul>	