

## 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 and prevent unwanted intrusions to your network.

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.

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 several languages).

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.

Hardware	
<b>Processor</b>	<ul style="list-style-type: none"> <li>RTL8197FH-VG (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>WLAN 2.4G</li> <li>WLAN 5G</li> </ul>
<b>Buttons</b>	<ul style="list-style-type: none"> <li>ON/OFF button to power on/power off</li> <li>RESET button to restore factory default settings</li> <li>WPS button to connect mesh network devices, set up wireless connection, and enable/disable wireless network</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>

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 (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> </ul>
<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>Ad blocking function</li> <li>DMZ</li> <li>Virtual servers</li> <li>Built-in Yandex.DNS web content filtering service</li> </ul>

<b>Software</b>	
<b>VPN</b>	<ul style="list-style-type: none"> <li>· IPsec/PPTP/L2TP/PPPoE pass-through</li> <li>· PPTP/L2TP tunnels</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>· Multilingual web-based interface for configuration and management</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> </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)</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 connection rate</b>	<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/5GHz): from 6.5 to 300Mbps (MCS0–MCS15)</li> <li>· IEEE 802.11ac (5GHz): from 6.5 to 867Mbps</li> </ul>

**Wireless Module Parameters**

<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) 15dBm at 6, 54Mbps</li> <li>• 802.11g (typical at room temperature 25 °C) 15dBm at 6, 54Mbps</li> <li>• 802.11n (typical at room temperature 25 °C) 2.4GHz 15dBm at MCS0, 7 5GHz 15dBm at MCS0, 7</li> <li>• 802.11ac (typical at room temperature 25 °C) 15dBm at MCS0, 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) -95dBm at 6Mbps -93dBm at 9Mbps -92dBm at 12Mbps -90dBm at 18Mbps -87dBm at 24Mbps -84dBm at 36Mbps -80dBm at 48Mbps -78dBm at 54Mbps</li> <li>• 802.11b (typical at PER = 8% (1000-byte PDUs) at room temperature 25 °C) -90dBm at 1Mbps -92dBm at 2Mbps -93dBm at 5.5Mbps -96dBm at 11Mbps</li> <li>• 802.11g (typical at PER &lt; 10% (1000-byte PDUs) at room temperature 25 °C) -94dBm at 6Mbps -92dBm at 9Mbps -90dBm at 12Mbps -89dBm at 18Mbps -87dBm at 24Mbps -84dBm at 36Mbps -80dBm at 48Mbps -77dBm at 54Mbps</li> <li>• 802.11n (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C) 2.4GHz, HT20 -95dBm at MCS0 -91dBm at MCS1 -88dBm at MCS2 -86dBm at MCS3 -82dBm at MCS4 -79dBm at MCS5 -77dBm at MCS6 -75dBm at MCS7 2.4GHz, HT40 -92dBm at MCS0 -89dBm at MCS1 -86dBm at MCS2 -83dBm at MCS3 -80dBm at MCS4 -77dBm at MCS5 -74dBm at MCS6 -72dBm at MCS7</li> </ul>

**Wireless Module Parameters**

	<p>5GHz, HT20  -95dBm at MCS0  -93dBm at MCS1  -90dBm at MCS2  -87dBm at MCS3  -83dBm at MCS4  -79dBm at MCS5  -77dBm at MCS6  -75dBm at MCS7</p> <p>5GHz, HT40  -92dBm at MCS0  -89dBm at MCS1  -86dBm at MCS2  -83dBm at MCS3  -80dBm at MCS4  -76dBm at MCS5  -74dBm at MCS6  -72dBm at MCS7</p> <ul style="list-style-type: none"> <li>· 802.11ac (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C)</li> </ul> <p>VHT20  -95dBm at MCS0  -92dBm at MCS1  -90dBm at MCS2  -86dBm at MCS3  -83dBm at MCS4  -79dBm at MCS5  -77dBm at MCS6  -75dBm at MCS7  -71dBm at MCS8</p> <p>VHT40  -92dBm at MCS0  -89dBm at MCS1  -87dBm at MCS2  -84dBm at MCS3  -80dBm at MCS4  -76dBm at MCS5  -74dBm at MCS6  -72dBm at MCS7  -68dBm at MCS8  -66dBm at MCS9</p> <p>VHT80  -89dBm at MCS0  -86dBm at MCS1  -83dBm at MCS2  -80dBm at MCS3  -77dBm at MCS4  -73dBm at MCS5  -71dBm at MCS6  -69dBm at MCS7  -66dBm at MCS8  -64dBm at MCS9</p>
<p><b>Modulation schemes</b></p>	<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	
Dimensions (L x W x H)	· 181 x 132.5 x 47.71 mm (7.13 x 5.22 x 1.88 in)
Weight	· 304.8 g (0.67 lb)

Operating Environment	
Power	· Output: 12V DC, 1A
Temperature	· Operating: from 0 to 40 °C · Storage: from -20 to 65 °C
Humidity	· Operating: from 10% to 90% (non-condensing) · Storage: from 5% to 95% (non-condensing)

Delivery Package	
· Router DIR-822 · Power adapter DC 12V/1A · Ethernet cable · "Quick Installation Guide" (brochure)	