

Product Highlights

HIGH SPEED

Total wireless connection rate up to 1200Mbps¹

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-820

AC1200 Wave 2 MU-MIMO Wi-Fi Router

LAN/WAN Conversion, WAN Failover

You can use any Ethernet port of the router as LAN or WAN port. The new-generation firmware supports assigning several WAN ports, for example, in order to configure the primary and backup WAN connection of different ISPs.

Wireless Interface

Using the DIR-820 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 1167Mbps¹).

Secure Wireless Connection

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

Advanced Capabilities of Wireless Network

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.

Smart adjustment of Wi-Fi clients is useful for networks based on several D-Link access points or routers – when the smart adjustment function is configured on each of them, a client always connects to the access point (router) with the highest signal level.

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.

3-port Switch

The built-in 3-port switch enables you to connect Ethernet-enabled computers, game consoles, and other devices to your network.

¹ Up to 300Mbps for 2.4GHz and up to 867Mbps for 5GHz.

Security

The wireless router DIR-820 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.

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.

Easy configuration and update

You can configure the settings of the wireless router DIR-820 via the user-friendly web-based interface (the interface is available in several languages).

The configuration wizard allows you to quickly switch DIR-820 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-820 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	
Processor	<ul style="list-style-type: none"> MT7628DAN (575MHz)
RAM	<ul style="list-style-type: none"> 64MB, built in processor
Flash	<ul style="list-style-type: none"> 16MB, SPI
Interfaces	<ul style="list-style-type: none"> 10/100BASE-TX WAN port 3 10/100BASE-TX LAN ports
LEDs	<ul style="list-style-type: none"> Power WAN 3 LAN LEDs WLAN 2.4G WLAN 5G WPS
Buttons	<ul style="list-style-type: none"> WPS/RST button to restore factory default settings and set up wireless connection
Antenna	<ul style="list-style-type: none"> Four external non-detachable antennas (5dBi gain)
MIMO	<ul style="list-style-type: none"> 2 x 2, MU-MIMO
Power connector	<ul style="list-style-type: none"> Power input connector (DC)
Mounting	<ul style="list-style-type: none"> Desktop Wall

Software	
WAN connection types	<ul style="list-style-type: none"> 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
Network functions	<ul style="list-style-type: none"> DHCP server/relay Advanced configuration of built-in DHCP server Stateful/Stateless mode for IPv6 address assignment, IPv6 prefix delegation Automatic obtainment of LAN IP address (for access point/repeater/client modes) DNS relay Dynamic DNS Static IPv4/IPv6 routing IGMP Proxy Support of UPnP Support of VLAN WAN ping respond Support of SIP ALG Support of RTSP WAN failover LAN/WAN conversion Multi-WAN support Autonegotiation of speed, duplex mode, and flow control / Manual speed and duplex mode setup for each Ethernet port Built-in UDPXY application
Firewall functions	<ul style="list-style-type: none"> Network Address Translation (NAT) Stateful Packet Inspection (SPI) IPv4/IPv6 filter MAC filter URL filter DMZ Virtual servers
VPN	<ul style="list-style-type: none"> IPsec/PPTP/L2TP/PPPoE pass-through

Software	
Management and monitoring	<ul style="list-style-type: none"> · Local and remote access to settings through SSH/TELNET/WEB (HTTP/HTTPS) · Multilingual web-based interface for configuration and management · Support of D-Link Assistant application for Android and iPhone smartphones · Notification on connection problems and auto redirect to settings · Firmware update via web-based interface · Automatic notification on new firmware version · Saving/restoring configuration to/from file · Support of logging to remote host · Automatic synchronization of system time with NTP server and manual time/date setup · Ping utility · Traceroute utility · TR-069 client · SNMP agent · Schedules for rules and settings of firewall, automatic reboot, and enabling/disabling wireless network and Wi-Fi filter · Automatic upload of configuration file from ISP's server (Auto Provision) · Configuration of action for hardware buttons

Wireless Module Parameters	
Standards	<ul style="list-style-type: none"> · IEEE 802.11ac Wave 2 · IEEE 802.11a/b/g/n · IEEE 802.11k/v
Frequency range <i>The frequency range depends upon the radio frequency regulations applied in your country</i>	<ul style="list-style-type: none"> · 2400 ~ 2483.5MHz · 5150 ~ 5350MHz · 5650 ~ 5850MHz
Wireless connection security	<ul style="list-style-type: none"> · WEP · WPA/WPA2 (Personal/Enterprise) · MAC filter · WPS (PBC/PIN)
Advanced functions	<ul style="list-style-type: none"> · Support of client mode · WMM (Wi-Fi QoS) · Information on connected Wi-Fi clients · Advanced settings · Smart adjustment of Wi-Fi clients · Guest Wi-Fi / support of MBSSID · Periodic scan of channels, automatic switch to least loaded channel · Support of 2.4GHz TX Beamforming · Autonegotiation of channel bandwidth in accordance with environment conditions (20/40 Coexistence) · Support of STBC
Wireless connection rate	<ul style="list-style-type: none"> · IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, and 54Mbps · IEEE 802.11b: 1, 2, 5.5, and 11Mbps · IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, and 54Mbps · IEEE 802.11n (2.4GHz/5GHz): from 6.5 to 300Mbps (from MCS0 to MCS15) · IEEE 802.11ac (5GHz): from 6.5 to 867Mbps (from MCS0 to MCS9)
Transmitter output power <i>The maximum value of the transmitter output power depends upon the radio frequency regulations applied in your country</i>	<ul style="list-style-type: none"> · Less than 20dBm (100mW)
Receiver sensitivity	<ul style="list-style-type: none"> · 802.11a (typical at PER < 10% (1000-byte PDUs) at room temperature 25 °C) -90dBm at 6Mbps -88dBm at 9Mbps -86dBm at 12Mbps -85dBm at 18Mbps -82dBm at 24Mbps -78dBm at 36Mbps -74dBm at 48Mbps -73dBm at 54Mbps

Wireless Module Parameters

- 802.11b (typical at PER = 8% (1000-byte PDUs) at room temperature 25 °C)
 - 93dBm at 1Mbps
 - 90dBm at 2Mbps
 - 88dBm at 5.5Mbps
 - 86dBm at 11Mbps

- 802.11g (typical at PER < 10% (1000-byte PDUs) at room temperature 25 °C)
 - 90dBm at 6Mbps
 - 84dBm at 9Mbps
 - 82dBm at 12Mbps
 - 80dBm at 18Mbps
 - 77dBm at 24Mbps
 - 75dBm at 36Mbps
 - 74dBm at 48Mbps
 - 73dBm at 54Mbps

- 802.11n (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C)
 - 2.4GHz, HT20
 - 90dBm at MCS0/8
 - 82dBm at MCS1/9
 - 80dBm at MCS2/10
 - 77dBm at MCS3/11
 - 74dBm at MCS4/12
 - 73dBm at MCS5/13
 - 72dBm at MCS6/14
 - 71dBm at MCS7/15
 - 2.4GHz, HT40
 - 88dBm at MCS0/8
 - 79dBm at MCS1/9
 - 77dBm at MCS2/10
 - 74dBm at MCS3/11
 - 71dBm at MCS4/12
 - 70dBm at MCS5/13
 - 69dBm at MCS6/14
 - 68dBm at MCS7/15
 - 5GHz, HT20
 - 90dBm at MCS0/8
 - 86dBm at MCS1/9
 - 84dBm at MCS2/10
 - 81dBm at MCS3/11
 - 77dBm at MCS4/12
 - 73dBm at MCS5/13
 - 72dBm at MCS6/14
 - 71dBm at MCS7/15
 - 5GHz, HT40
 - 87dBm at MCS0/8
 - 84dBm at MCS1/9
 - 82dBm at MCS2/10
 - 79dBm at MCS3/11
 - 75dBm at MCS4/12
 - 71dBm at MCS5/13
 - 70dBm at MCS6/14
 - 69dBm at MCS7/15

- 802.11ac (typical at PER = 10% (1000-byte PDUs) at room temperature 25 °C)
 - VHT20
 - 90dBm at MCS0
 - 86dBm at MCS1
 - 84dBm at MCS2
 - 81dBm at MCS3
 - 77dBm at MCS4
 - 73dBm at MCS5
 - 72dBm at MCS6
 - 71dBm at MCS7
 - 66dBm at MCS8

Wireless Module Parameters	
	VHT40 -87dBm at MCS0 -84dBm at MCS1 -82dBm at MCS2 -79dBm at MCS3 -75dBm at MCS4 -71dBm at MCS5 -70dBm at MCS6 -69dBm at MCS7 -64dBm at MCS8 -62dBm at MCS9 VHT80 -83dBm at MCS0 -81dBm at MCS1 -78dBm at MCS2 -75dBm at MCS3 -71dBm at MCS4 -67dBm at MCS5 -66dBm at MCS6 -65dBm at MCS7 -60dBm at MCS8 -58dBm at MCS9
Modulation schemes	<ul style="list-style-type: none"> · 802.11a: BPSK, QPSK, 16QAM, 64QAM with OFDM · 802.11b: DQPSK, DBPSK, DSSS, CCK · 802.11g: BPSK, QPSK, 16QAM, 64QAM with OFDM · 802.11n: BPSK, QPSK, 16QAM, 64QAM with OFDM · 802.11ac: BPSK, QPSK, 16QAM, 64QAM, up to 256QAM with OFDM

Physical Parameters	
Dimensions (L x W x H)	<ul style="list-style-type: none"> · 190 x 120 x 30 mm (7.48 x 4.72 x 1.18 in)
Operating Environment	
Power	<ul style="list-style-type: none"> · Output: 12V DC, 0.5A
Temperature	<ul style="list-style-type: none"> · Operating: from 0 to 40 °C · Storage: from -20 to 65 °C
Humidity	<ul style="list-style-type: none"> · Operating: from 10% to 90% (non-condensing) · Storage: from 5% to 95% (non-condensing)

Delivery Package	
	<ul style="list-style-type: none"> · Router DIR-820 · Power adapter DC 12V/0,5A · Ethernet cable · "Quick Installation Guide" (brochure)