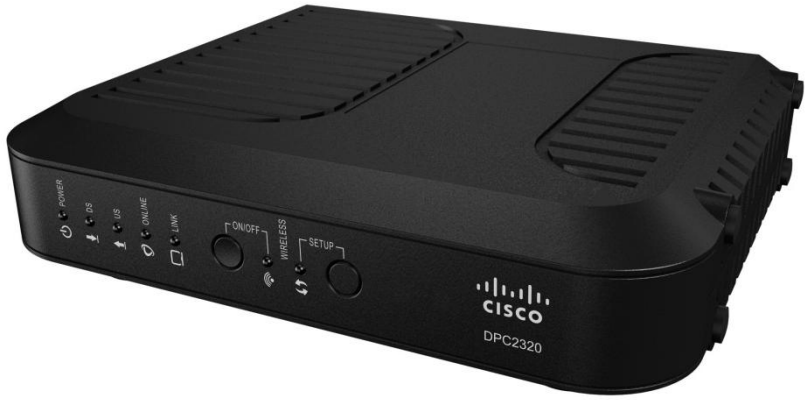
Cisco Model DPC2320 DOCSIS 2.0 Wireless Residential Gateway

The Cisco® Model DPC2320 DOCSIS 2.0 Wireless Residential Gateway with Embedded Digital Voice Adapter (DPC2320) is a high-performance home gateway that combines a cable modem, router and 802.11n wireless access point in a single device providing a cost-effective voice and networking solution for both the home and small office.

The DPC2320 is designed to meet DOCSIS® 2.0 specifications as well as offering backward compatibility for operation in DOCSIS 1.1, and 1.0 networks.

Figure 1. Cisco Model DPC2320 DOCSIS 2.0 Wireless Residential Gateway (image may vary from actual product and specification)



Designed for the active digital home or office, the DPC2320 integrated router features a Dynamic Host Configuration Protocol (DHCP) server, Network Address and Port Translation (NAT/NAPT), and a Stateful Packet Inspection (SPI) firewall. These features allow the user to share a single high-speed public Internet connection as well as share files and folders between devices within the home network by attaching multiple wired and wireless devices in the user's home or office to the wireless residential gateway.

Cisco Connect® software makes home wireless simple and accessible for everyone by empowering consumers to easily set up and manage all of their wireless devices anywhere in their homes. The simple user interface was designed to transform how families use the Internet in their homes so they can enjoy the freedom of wireless access without the traditional frustration and complexity of setting up a home network.

Consumer-friendly features such as wireless ON/OFF button, Wireless Protected Setup (WPS), and user-configured Parental Control can protect the home network from unwelcome intruders and family members from access to undesirable websites.

Features

DOCSIS

- Compliant with DOCSIS 2.0, 1.1, and 1.0 standards to deliver high-end performance and reliability

Connections

- One 10/100 BASE-T Ethernet port to provide wired connectivity
- High-performance broadband Internet connectivity to energize your online experience
- 802.11n Draft-Compliant, Single Band 2.4 GHz Single Stream Wireless Access Point (WAP) with four Service Set Identifiers (SSIDs)
- WPS, including a push-button switch to activate WPS for simplified and secure wireless setup
- Wireless On/OFF button (optional) to activate or turn off the wireless feature

Design and Function

- Attractive, compact design and versatile orientation to stand vertically, lie flat on the desktop or shelf, or mount easily on a wall
- LEDs provide a user-friendly method to check real-time operational status
- TR-068 compliant color-coded interface ports and corresponding cables simplify installation and setup

Management

- User-configurable Parental Control blocks access to undesirable Internet sites
- Advanced firewall technology deters hackers and protects the home network from unauthorized access
- Allows automatic software upgrades by your service provider
- Cisco Connect – wireless network setup and management software (optional)

Software and Documentation

- CD-ROM containing user guide and Cisco Connect (optional)

Figure 2. Cisco Model DPC2320 Front Panel (image may vary from actual product and specification)

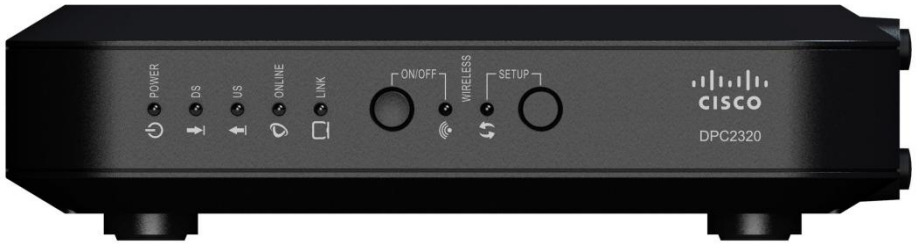


Table 1. Front Panel Features

Feature	Description
Indicators and Controls	Power, DS, US, Online, Link, Wireless ON/OFF (option), Wireless ON/OFF button (option), Wireless Setup, Wireless Setup button
Color	Black housing, black lens, silver text
Branding	Cisco logo and model number

Figure 3. Cisco Model DPC2320 Back Panel (image may vary from actual product and specification)

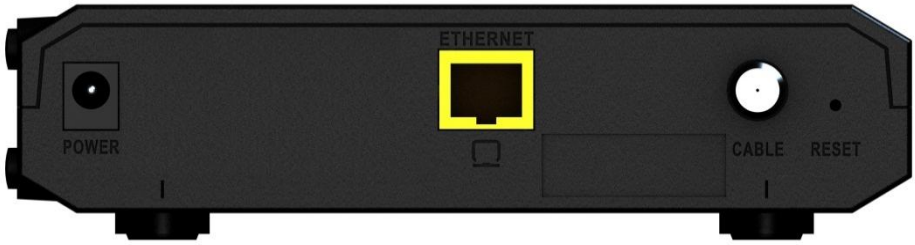


Table 2. Back Panel Features

Feature	Description
POWER Connector Color: Black	Connects the wireless home gateway to the DC output of the AC power adapter
POWER SWITCH (Not Shown)	Turns power ON and OFF to the device (available only on products carrying the CE mark)
ETHERNET Connector Color: Yellow	One RJ-45 Ethernet port connects to the Ethernet port on your PC or home network
CABLE Connector Color: White	F-connector connects to an active cable signal from the service provider
RESET	Resets the cable modem
ANTENNA (internal, 2)	Two internal antennas provide a communication connection for the built-in 802.11n wireless access point

Product Specifications

Table 3. Product Specifications

Specification	Value
Residential Gateway	
Gateway Configuration Management	• TR-069 and subset of TR-098 data model (optional) • Extensive custom SNMP MIB for the Gateway • Provisioning with XML and/or with SNMP • HNAP server 1.2+ • SNMP v1/v2/v3
ICSA (Independent Computer Security Association) Firewall Compliant	• IP Address, Port Number and MAC address filtering • TCP flags, ICMP types, fragmentation • Connection Creation and Teardown • Timestamps • Payload Modification • Web filtering: Pop-ups, Cookies, Java & ActiveX scripts • Intrusion detection/prevention: WAN ping blocking, IP fragment blocking, Port scan detection, TCP Port Probe, UDP Port Probe • DoS Protection: inbound, outbound, WAN interface, LAN interface, SYN flood, Ping of Death, Smurf, Bonk, Jolt, Land, Nestea, Newtear, Syndrop, Teardrop, WinNuke/OOBNuke (Invalid TCP urgent pointer), x1234, Saihyousen , Oshare, ARP flood, TCP Hijacking, Christmas Tree, SYN/FIN (jackal), BackOffice (UDP 32337), NetBus, ICMP Flooding
Parental Controls	• Content Filtering with Per-User Policies • Domain Block/Deny • Keyword Blocking • Java X Applet Blocking • Per-User MAC Address Filtering
Advanced Event Logging	• Filtering Activity • Session Tracking • User Notification via E-mail Alert and SNMP Traps
DOS attack protection	• Replay Attack Protection • Malformed Packet Protection • SYN Flooding • TCP Hijacking • LAND Attack • WinNuke/OOBNuke (Invalid TCP urgent pointer) • Christmas Tree • SYN/FIN (jackal) • BackOffice (UDP 32337) • NetBus • Smurf • Tear Drop • ICMP Flooding • Ping of Death • TCP Port Probe • UDP Port Probe • New Tear • Nestea • SYNdrop • Jolt • Boink • Bonk

Specification	Value
Residential Gateway (continued)	
Routing Features	• IPv4 and IPv6 dual stack • NAPT, NAT, and Pass-through (layer 2) Operational Modes • RIP v1/v2 with MD5 • Static Routes • Port Forwarding • Port Triggering • UPnP IGD 1.0 • RFC3489 (STUN) "Port-restricted cone NAT" behavior • IPSec Pass-through • L2TP Pass-through • PPTP Pass-through
ALG Support	• FTP • Real Audio • H.323 • ICQ • TFTP • mIRC • PIRCH • MS NetMeeting • Net2phone • AOL and MSN Messenger • Yahoo Messenger • Go2Call • Hotline Server • Visual IRC • CuSeeme • AT&T Instant Messenger Anywhere • Active Worlds • Buddy Phone Calista IP Phone • Delta Three PC to Phone • Dial Pad • Dwyco Video Conferencing • OrbitRC • Xircon • Netscape Chat
Wireless Access Point	
802.11b/g/n	• 2.4 GHz Single Band, Single Stream 1x1 wireless access point • Two (2) internal antenna • Wi-Fi Compliant (WPA2-Enterprise, WPA2-PSK, WPA-Enterprise, WPA-PSK, WEP) • WMM-QoS (Wireless Multi Media - Quality of Service), WMM Power Save • WPS • Wireless ON/OFF button (option) • Wireless Bridging - WDS (Wireless Distribution System) – allows connection to “Range Extender Products” • RADIUS Authentication (Client, EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-MD5) • MBSSID (4 SSIDs with unique NAT scopes) • Wi-Fi "Hot Spot" support (Static DHCP IP Scope over tunnel)

Specification	Value
RF Downstream	
Operating Frequency Range	88 to 1002 MHz, 108 to 1002 MHz
Tuner Frequency Range	88 to 1002 MHz, 108 to 1002 MHz
Demodulation	64 QAM or 256 QAM
Maximum Data Rate	1 downstream 6 MHz channel, 42.88 Mbps for 256 QAM and 30.34 Mbps for 64 QAM
Bandwidth	6 or 8 MHz
Operating Level Range	-15 to +15 dBmV
Input Impedance	75 ohms
RF Upstream	
Operating Frequency Range	5 to 42 MHz, 5 to 85 MHz
Transmitter Frequency Range	5 to 42 MHz, 5 to 85 MHz
Upstream Transmission	1 upstream channel
Modulation	QPSK, 8 QAM, 16 QAM, 32 QAM, 64 QAM / ATDMA, 128 QAM / SCDMA
Maximum Data Rate per channel	Modulation / Channel Bandwidth (MHz) / Raw Data Rate (Mbps) QPSK / 1.6 / 2.56 16 QAM / 1.6 / 5.12 QPSK / 3.2 / 5.12 16 QAM / 3.2 / 10.2 32 QAM / 3.2 / 12.8 64 QAM / 3.2 / 15.4 16 QAM / 6.4 / 20.5 32 QAM / 6.4 / 25.6 64 QAM / 6.4 / 30.7
Bandwidth	200 kHz to 6.4 MHz
Maximum Operating Level	Modulation / Power TDMA QPSK / +8 to +58 dBmV 8 QAM / +8 to +55 dBmV 16 QAM / +8 to +55 dBmV 32 QAM / +8 to +54 dBmV 64 QAM / +8 to +54 dBmV SCDMA QPSK / +8 to +53 dBmV 8 QAM / +8 to +53 dBmV 16 QAM / +8 to +53 dBmV 32 QAM / +8 to +53 dBmV 64 QAM / +8 to +53 dBmV 128 QAM / +8 to +53 dBmV
Electrical	
Input Voltage	12 VDC
Power Consumption (DC, in modem module)	6.9 Watts
Data Ports	Auto-negotiate with Auto-MDIX RJ-45 Ethernet (1)
RF	Female F-Type
Output Impedance	75 ohms

Specification	Value
Mechanical	
Dimensions (W x D x H)	With F-Type connector: 5.93 in. x 5.42 in. x 1.38 in. (15.05 cm x 13.77 cm x 3.5 cm) Without including F-Type connector: 5.93 in. x 4.8 in. x 1.38 in. (15.05 cm x 12.2 cm x 3.5 cm)
Weight	8.46 oz. (0.24 kg)
Operating Temperature	32˚ to 104˚F (-0˚ to 40˚C)
Operating Humidity	0 to 95% RH non-condensing
Storage Temperature	-4˚ to 158˚F (-20˚ to 70˚C)
Standards and Approvals	
Designed to meet these standards	DOCSIS 2.0, 1.1, 1.0 IEEE 802.11b/g/draft n WEP, WPA, and WPA2 WMM, WPS
Regulatory Compliance	
Regulatory and Safety Approvals	As required per country where the DPC2320 will be used

Ordering Information

Table 4. Ordering Information

Description	Part Number
DPC2320 DOCSIS 2.0 Wireless Residential Gateway • 802.11n 1x1 Wireless Access Point • 220 VAC / 50-60 Hz, 12 VDC/ 1 A wall-mount style linear-switching power supply, Argentina • Ethernet cable, 1.2 meters • CD-ROM containing user guide and Cisco Connect ***Argentina (Customer specific configuration)***	4040530
DPC2320 DOCSIS 2.0 Wireless Residential Gateway • 802.11n 1x1 Wireless Access Point • 220-230 VAC / 50-60 Hz, 12 VDC/ 1 A wall-mount style linear-switching power supply, Europe • Ethernet cable, 1.2 meters • CD-ROM containing user guide and Cisco Connect ***Chile (Customer specific configuration)***	DPC2320-4041760-K9
DPC2320 DOCSIS 2.0 Wireless Residential Gateway • 802.11n 1x1 Wireless Access Point • 220-230 VAC / 50-60 Hz, 12 VDC/ 1 A wall-mount style linear-switching power supply, Europe • Ethernet cable, 1.2 meters • CD-ROM containing user guide and Cisco Connect ***India (Customer specific configuration)***	4040532
DPC2320 DOCSIS 2.0 Wireless Residential Gateway • 802.11n 1x1 Wireless Access Point • 100-120 VAC / 50-60 Hz, 12 VDC/ 1 A desktop style linear-switching power supply, North America • Ethernet cable, 1.2 meters • CD-ROM containing user guide and Cisco Connect ***North America***	DPC2320-4041705-K9

Replacement Components

Table 5. Replacement Components

Description	Part Number
Power Supply	
Class 2 Switching Regulated	
100-240 VAC/50-60 Hz, 12 VDC / 1 A desktop-style switching regulated power supply with detachable power cord (order power cord separately)	4039445
Class 2 Linear Switching	
100-120 VAC/50-60 Hz, 12 VDC / 1 A desktop style linear-switching power supply, North America	4018777
220-230 VAC/50-60 Hz, 12 VDC / 1 A wall-mount style linear-switching power supply, Europe	4040239
220 VAC/50-60 Hz, 12 VDC / 1 A wall-mount style linear-switching power supply, Argentina	4025790
Power Cord	
Power cord, 2 conductors, North America (polarized)	4026134
Data Cable	
Ethernet cable, 1.2 meters	740580
CD-ROM	
CD-ROM with user guides and Cisco Connect	4042996

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