

Cisco Model DPC3010 DOCSIS 3.0 8x4 Cable Modem

The Cisco® Model DPC3010 DOCSIS® 3.0 8x4 Cable Modem (DPC3010) provides DOCSIS broadband service providers with a cost-effective solution for delivering high-speed bi-directional data services. The DPC3010 provides a faster connection to the Internet by incorporating eight bonded downstream channels along with four bonded upstream channels. These bonded channels deliver downstream data rates in excess of 320 Mbps and upstream data rates up to 120 Mbps, up to eight times faster than conventional single-channel DOCSIS 2.0 cable modems.¹

The DPC3010 is designed to meet DOCSIS 3.0 specifications as well as offering backward compatibility for operation in DOCSIS 2.0, 1.1 and 1.0 networks.

Figure 1. Cisco Model DPC3010 DOCSIS 3.0 Cable Modem (image may vary from actual product and specification)



The DPC3010 also features WebWizard, a browser-based user interface. WebWizard is a powerful tool that facilitates installation and troubleshooting and eliminates the need to load set-up software on the customer premises equipment (CPE).

Features

DOCSIS

- Eight (8) bonded channels with total throughput in excess of 300 Mbps
- Designed to meet DOCSIS 3.0 specifications as well as backward compatibility with existing DOCSIS 2.0, 1.1 and 1.0 networks

¹ Channel Bonded cable modems must be used in conjunction with CMTSs that support Channel Bonded bonding per the DOCSIS 3.0 specifications. When used with non-Channel Bonded CMTSs, Channel Bonded cable modems function as conventional DOCSIS 2.0 cable modems.

- Enhanced packet processing technology to maximize performance
- Dual-color LED to indicate channel bonded and non-channel bonded operation as well as CPE data link rates
- Color-coded connectors and cables for easy installation and setup

Connections

- Bridged 1000/100/10 Mbps Ethernet port with Auto-negotiate and Auto-MDIX and USB 2.0 data port
- Support for up to 64 users (1 USB port user and up to 63 users on user-supplied Ethernet hubs)

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
- LED status indicators on the front-panel provide an informative and easy-to-understand display that indicates the cable modem operational status and real-time data transmission activity
- Rugged electronic components for long-term reliability

Management

- Software upgradeable by network download
- Remote manageability using SNMP V1/V2 and V3

Software and Documentation

- CD-ROM containing user guide and USB driver installation software for Microsoft Windows Vista, Windows XP, and Windows 2000 operating systems

Figure 2. Cisco Model DPC3010 DOCSIS 3.0 Cable Modem Front Panel (image may vary from actual product and specification)



Table 1. Front Panel Features

Feature	Description
Indicators	POWER, DS, US, ONLINE, LINK
Color	Black textured, black face plate, silver text, dual-color green/amber LEDs
Branding	Cisco and model number

Figure 3. Cisco Model DPC3010 DOCSIS 3.0 Cable Modem Back Panel (image may vary from actual product and specification)



Table 2. Back Panel Features

Feature	Description
POWER Connector Color: Black	Connects modem to the DC output of the AC power adapter
ETHERNET Connector Color: Yellow	(1) RJ-45 Ethernet port connects to the Ethernet port on your PC or your home network
USB Connector Color: Blue	(1) Type 2 USB 2.0 port connects to a USB port on your PC
RESET	Power cycles the cable modem
CABLE Connector Color: White	F-connector connects to an active cable signal from your service provider

Product Specifications

Table 3. Product Specifications

Specification	Value
RF Downstream	
Operating Frequency Range	88 to 1002 MHz or 108 to 1002 MHz
Tuner Frequency Range	88 to 1002 MHz
Tuner	(2) Frequency agile block tuners, 32 MHz bandpass each
Demodulation	8 demodulators, 4 per tuner, each demodulator; 64 QAM or 256 QAM
Maximum Data Rate	8 downstream channels, each 6 MHz channel: 42.88 Mbps for 256 QAM and 30.34 Mbps for 64 QAM
Bandwidth	6 MHz
Operating Level Range	-15 to +15 dBmV
Input Impedance	75 ohms

Specification	Value					
RF Upstream						
Operating Frequency Range	5 to 42 MHz, 5 to 65 MHz or 5 to 85 MHz					
Transmitter Frequency Range	5 to 42 MHz, 5 to 65 MHz or 5 to 85 MHz					
Upstream Transmission	4 upstream channels					
Modulation	QPSK, 8 QAM, 16 QAM, 32 QAM, 64 QAM at ATDMA mode QPSK, 8 QAM, 16 QAM, 32 QAM, 64 QAM, 128 QAM at SCDMA mode					
Maximum Data Rate per channel	<u>Modulation</u>	<u>Channel Bandwidth (MHz)</u>	<u>Raw Data Rate (Mbps)</u>			
	QPSK	1.6	2.56			
	16 QAM	1.6	5.12			
	QPSK	3.2	5.12			
	16 QAM	3.2	10.24			
	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	30.72			
Bandwidth	200 kHz to 6.4 MHz					
Maximum Operating Level	TDMA	<u>One Channel</u>		<u>2 Channels</u>	<u>3 or 4 Channels</u>	
		QPSK	+61 dBmV	+58 dBmV	+55dBmV	
		8 QAM	+58 dBmV	+55 dBmV	+52dBmV	
		16 QAM	+58 dBmV	+55 dBmV	+52dBmV	
		32 QAM	+57 dBmV	+54 dBmV	+51dBmV	
	SCDMA	QPSK	+56 dBmV	+53 dBmV	+53 dBmV	
		8 QAM	+56 dBmV	+53 dBmV	+53 dBmV	
		16 QAM	+56 dBmV	+53 dBmV	+53 dBmV	
		32 QAM	+56 dBmV	+53 dBmV	+53 dBmV	
		64 QAM	+56 dBmV	+53 dBmV	+53 dBmV	
		128 QAM	+56 dBmV	+53 dBmV	+53 dBmV	
		Electrical				
		Input Voltage	12 VDC			
		Power Consumption (modem module)	~ 7.5 Watts			
Data Ports	GigE (Auto-negotiate with Auto-MDIX): RJ-45 Ethernet (1) USB 2.0: USB Type 2 (1)					
RF	Female "F" type					
Output Impedance	75 ohms					
Mechanical						
Dimensions (H x D x W)	1.5 in. x 5.2 in. x 5.9 in. (3.8 cm x 13.2 cm x 15.1 cm)					
Weight	10.3 oz. (0.294 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 with the following standards	DOCSIS 3.0					

Specification	Value
Regulatory Compliance	
Regulatory and Safety Approvals	As required per country where the DPC3010 will be used

Ordering Information

Table 4. Ordering Information

Description	
5-42/88-1002 MHz Diplex Filter	Part Number
DPC3010 DOCSIS 3.0 Cable Modem for North America: <ul style="list-style-type: none"> • GigE port • USB 2.0 port Includes: <ul style="list-style-type: none"> • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear switching power supply • Ethernet cable • USB cable • CD-ROM with User Guides and USB drivers North America	4027668
5-65/88-1000 MHz Diplex Filter	Part Number
DPC3010 DOCSIS 3.0 Cable Modem for Australia <ul style="list-style-type: none"> • International frequency plan • GigE port • USB 2.0 port Includes: <ul style="list-style-type: none"> • 12 VDC/1 A, 240 VAC / 50-60 Hz, wall-mount style linear switching power supply for Australia • Ethernet cable • USB cable • CD-ROM Australia	4030792
DPC3010 Channel Bonded Cable Modem for International tuning plan. Includes: <ul style="list-style-type: none"> • GigE port • USB 2.0 port Includes: <ul style="list-style-type: none"> • 12 VDC/1 A, 230 VAC / 50-60 Hz, wall-mount style linear switching power supply • Data cable, Ethernet • Data cable, USB • CD-ROM with User Guide and USB drivers Europe	4030797
DPC3010 Channel Bonded Cable Modem for North American NTSC tuning plan. Includes: <ul style="list-style-type: none"> • GigE port • No USB 2.0 port Includes: <ul style="list-style-type: none"> • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear switching power supply • No data cables • Printed Japanese user guide (Customer specific) Japan – Importer and customer specific configuration	4030793
DPC3010 Channel Bonded Cable Modem for North American NTSC tuning plan. Includes: <ul style="list-style-type: none"> • GigE port • No USB 2.0 port Includes: <ul style="list-style-type: none"> • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear switching power supply • Data cable, Ethernet, 2 meters • Printed Japanese user's guide (generic) Japan – Importer specific configuration	4030794

5-65/88-1000 MHz Diplex Filter	Part Number
DPC3010 Channel Bonded Cable Modem for North American NTSC tuning plan. Includes: <ul style="list-style-type: none"> • GigE port • No USB 2.0 port Includes: <ul style="list-style-type: none"> • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear switching power supply • No data cables • Printed Japanese user's guide (generic) Japan – Importer specific configuration	4030816
DPC3010 Channel Bonded Cable Modem for Korean tuning plan. Includes: <ul style="list-style-type: none"> • GigE port • No USB 2.0 port Includes: <ul style="list-style-type: none"> • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, wall-mount style linear switching power supply • Data cable, Ethernet, 2 meters • Printed Korean user guide Korea	4030795

Description	
5-85/108-1000 MHz Diplex Filter	Part Number
DPC3010 Channel Bonded Cable Modem for International tuning plan. Includes: <ul style="list-style-type: none"> • GigE port • No USB 2.0 port Includes: <ul style="list-style-type: none"> • No AC power supply • Data cable, Ethernet, 2 meters • Printed Korean user guide Korea – Customer specific configuration	4030796

Replacement Components

Table 5. Replacement Components

AC Power Supplies	Part Number
<i>Linear Switching, Class 2</i>	
100-120 VAC / 50-60 Hz, 12 VDC/1 A desktop style linear switching power supply for North America and Japan	4018777
100-120 VAC / 50-60 Hz, 12 VDC/1 A desktop linear switching power supply for North America and Japan (ICS importer markings)	4031742
100-120 VAC / 50-60 Hz, 12 VDC/1 A desktop linear switching power supply for North America and Japan (NOS importer markings)	4026135
220 VAC / 50-60 Hz, 12 VDC/1 A desktop style linear switching power supply for Argentina	4031743
220 VAC / 50-60 Hz, 12 VDC/1 A wall-mount linear switching power supply for Korea	4031744
230-240 VAC / 50-60 Hz, 12 VDC/1 A wall-mount linear switching power supply with Euro plug	4015453
230-240 VAC / 50-60 Hz, 12 VDC/1 A wall-mount linear switching power supply for Australia	4018797
<i>Switching Mode, Class 2</i>	
100-240 VAC / 50-60 Hz, 12 VDC/1 A desktop universal switching mode power supply, Class II, C7 AC connector, 2 conductor (power cord not included, order power cord separately)	4021485

Power Cords	Part Number
<i>Class 2</i>	
Power cord, 2 conductor, North America, NEMA 1-15 to C7, non-polarized	1002239
Power cord, 2 conductor, Japan, NEMA 1-15 to C7, non-polarized	207586
Power cord, 2 conductor, European, Euro plug CEE7/16 to C7	503414
Power cord, 2 conductor, United Kingdom, BS1363 to C7	1002798
Power cord, 2 conductor, Brazil Euro plug CEE7/16 to C7, INMETRO	4009115
Power cord, 2 conductor, Korea	4010439
Power cord, 2 conductor, Argentina	4012938
Cables	Part Number
Ethernet cable, standard 1.2 meter length	740580
Ethernet cable, 2 meter	4018790
USB cable, 1 meter	740579
USB cable, 1.5 meter	4026943
User Guide and USB Drivers	Part Number
CD-ROM with user guide and USB drivers	4029645



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