Cisco Model DPC3000 DOCSIS 3.0 Cable Modem

The Cisco® Model DPC3000 DOCSIS 3.0 Cable Modem (DPC3000) provides DOCSIS® broadband service providers with a cost-effective solution for delivering high-speed bi-directional data services. The DPC3000 provides a faster connection to the Internet by incorporating four bonded downstream channels along with four bonded upstream channels. These bonded channels deliver downstream data rates in excess of 160 Mbps and upstream data rates up to 120 Mbps, up to four times faster than conventional single-channel DOCSIS 2.0 cable modems.

The DPC3000 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 DPC3000 DOCSIS 3.0 Cable Modem

Features

DOCSIS

- Four (4) bonded channels with total throughput in excess of 160 Mbps
- Designed to meet DOCSIS 3.0 specifications as well as backward compatibility with existing DOCSIS 2.0, 1.1 and 1.0 networks
- Enhanced packet processing technology to maximize performance
- 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 client port (option)
- 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
- Dual-color LED status indicators on the front-panel provide an informative and easy-to-understand display that indicates the cable modem operational
- 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 7, Windows Vista, Windows XP, and Windows 2000 operating systems

Figure 2. Cisco Model DPC3000 DOCSIS 3.0 Cable Modem Front Panel

Table 1. Front Panel Features

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

Figure 3. Cisco Model DPC3000 DOCSIS 3.0 Cable Modem Back Panel

Table 2. Back Panel Features

Feature	Description
POWER Connector Color: Black	Connects modem to the DC output of the AC power adapter
POWER SWITCH (not shown)	Turns power on and off to the device (power switch provided on all products carrying the CE mark)
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 B USB 2.0 port connects to a USB port on your PC
REBOOT	Power cycles the cable modem
MAC ADDRESS LABEL	Lists the MAC Address of 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 1000 MHz
Tuner	(1) Frequency agile block tuner, 96 MHz bandpass, 64 MHz (SCTE 40)
Demodulation	4 demodulators, each demodulator; 64 QAM or 256 QAM
Maximum Data Rate	4 downstream channels, each channel: 43 Mbps for 256 QAM and 30 Mbps for 64 QAM
Bandwidth	6 or 8 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	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	One Channel / 2 Channels / 3 or 4 Channels
TDMA	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 64 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)	~4 Watts
Data Ports	GigE (Auto-negotiate with Auto-MDIX): RJ-45 Ethernet (1) USB 2.0: USB Type B (1)
RF	Female "F" type
Output Impedance	75 ohms
Mechanical	
Dimensions (H x D x W)	1.5 in. x 5.5 in. x 5.3 in. (3.8 cm x 14.0 cm x 13.5 cm)
Weight	10.3 oz. (0.292 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
Regulatory Compliance	
Regulatory and Safety Approvals	As required per country where the DPC3000 will be used

Ordering Information

Table 4. Ordering Information

Description	Part Number
5-42/88-1002 MHz Diplex Filter	
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • USB 2.0 port • 12 VDC/1 A, 220 VAC / 50-60 Hz, desktop style linear-switching power supply, Argentina • Ethernet cable • USB cable • CD-ROM containing user guides and USB driver ***Argentina***	4037651
DPC3000 DOCSIS 3.0 Cable Modem includes: • International frequency plan • GigE port • USB 2.0 port • 12 VDC/1 A, 230 240 VAC / 50-60 Hz, wall-mount style linear-switching power supply, Australia • Ethernet cable • USB cable • CD-ROM containing user guides and USB driver ***Australia***	4021389
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • USB 2.0 port • 12 VDC/1 A, 100-240 VAC / 50-60 Hz, desktop style switching regulated power supply with detachable power cord • Power cord, Brazil • Ethernet cable • USB cable • CD-ROM containing user guides and USB driver ***Brazil***	4029776
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • USB 2.0 port • 12 VDC/1 A, 230 VAC / 50-60 Hz, wall-mount style linear-switching power supply, Europe • Ethernet cable • USB cable • CD-ROM containing user guide and USB driver ***Europe***	4036818
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB port • 12 VDC/1 A, 230 VAC / 50-60 Hz, wall-mount style linear-switching power supply, UK • Ethernet cable • CD-ROM containing user guides ***Hong Kong*** *(Customer-specific configuration)*	4036817

Description	Part Number
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB port • 12 VDC/1 A, 220 VAC / 50-60 Hz, wall-mount style linear-switching power supply, Korea • Ethernet cable • CD-ROM containing user guides ***Korea***	4021388
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • USB 2.0 port • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear-switching power supply, North America • Ethernet cable • USB cable • CD-ROM containing user guides and USB driver ***North America***	4027667
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB port • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear-switching power supply, North America • Ethernet cable • CD-ROM containing user guides ***North America***	4037933
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB port • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear-switching power supply, North America • Ethernet cable • CD-ROM containing user guides ***North America*** *(Customer-specific configuration)*	4028836

Description	Part Number
5-65/88-1000 MHz Diplex Filter	
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • USB 2.0 port • 12 VDC/1 A, 230 VAC / 50-60 Hz, wall-mount style linear-switching power supply, Europe • Ethernet cable • USB cable • CD-ROM containing user guide and USB driver ***Europe***	4029166
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB 2.0 port • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear-switching power supply, Japan • No Ethernet cable • Printed Japanese user guide (Customer specific) ***Japan*** *(Importer and customer-specific configuration)*	4028585
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB 2.0 port • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, wall-mount style linear-switching power supply, Japan • Ethernet cable, 2 meters • Printed Japanese user guide (generic) ***Japan*** *(Importer-specific configuration)*	4029167

Description	Part Number
5-65/88-1000 MHz Diplex Filter	
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB 2.0 port • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, wall-mount style linear-switching power supply, Japan • No Ethernet cable • Printed Japanese user guide (generic) ***Japan*** *(Importer-specific configuration)*	4028586
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB 2.0 port • 12 VDC/1 A, 100-120 VAC / 50-60 Hz, desktop style linear-switching power supply, Korea • Ethernet cable, 2 meters • Printed Korean user guide ***Korea***	4029777
DPC3000 DOCSIS 3.0 Cable Modem includes: • GigE port • No USB 2.0 port • No AC Power supply • Ethernet cable, 2 meters • Printed Korean user guide ***Korea***	4029778

Description	Part Number
5-85/108-1000 MHz Diplex Filter	
DPC3000 DOCSIS 3.0 Cable Modem • GigE port • No USB 2.0 port • No AC power supply • Ethernet cable, 2 meters • Printed Korean user guide ***Korea*** *(Customer-specific configuration)*	4029779

Replacement Components

Table 5. Replacement Components

Power Supply	Part Number
Linear Switching, Class 2	
100-120 VAC / 50-60 Hz, 12 VDC/1 A desktop style linear-switching power supply, North America	4018777
100-120 VAC / 50-60 Hz, 12 VDC/1 A desktop style linear-switching power supply, North America *(Customer-specific configuration)*	4034588
220 VAC / 50-60 Hz, 12 VDC/1 A desktop style linear-switching power supply, Argentina	4025790
220 VAC / 50-60 Hz, 12 VDC/1 A wall-mount linear-switching power supply, Korea	4015458
230 VAC / 50-60 Hz, 12 VDC/1 A wall-mount linear-switching power supply, Europe	4015453
100-120 VAC / 50-60 Hz, 12 VDC/1 A desktop style linear-switching power supply, Japan	4026135
100-120 VAC / 50-60 Hz, 12 VDC/1 A desktop style linear-switching power supply, Japan	4031742
230-240 VAC / 50-60 Hz, 12 VDC/1 A wall-mount linear-switching power supply, UK	4018794
230-240 VAC / 50-60 Hz, 12 VDC/1 A wall-mount linear-switching power supply, Australia	4018797

Power Cord	Part Number
Class 2	
Power cord, 2 conductor, Brazil Euro plug CEE7/16 to C7, INMETRO	4009115
Cable	**Part Number**
Ethernet cable, 1.2 meters	740580
Ethernet cable, 2.0 meters	4018790
USB cable, 1 meter	740579
User Guide	**Part Number**
CD-ROM with user guide and USB drivers	4023779

Cisco Systems, Inc.
800 722-2009 or 678 277-1120
www.cisco.com

Part Number 7012929 Rev E
December 2010