Cisco Model DPC2203 Cable Modem with Embedded MTA

The Cisco® Model DPC2203 Cable Modem (DPC2203) is a high-speed cable modem with an embedded media terminal adapter (EMTA). The DPC2203 features two RJ-11 telephone ports for Voice over Internet Protocol (VoIP) service along with a 10/100BASE-T Ethernet port and a USB 1.1 port for high-speed data connectivity.

The DPC2203 is designed to meet PacketCable™ 1.5, PacketCable 1.0, and DOCSIS® 2.0 specifications as well as being backward compatible with DOCSIS 1.1 and DOCSIS 1.0 networks. The DPC2203 uses advanced line-interface technology to provide multi-country, toll-quality, telephone service using existing in-home wiring. The DPC2203 supports full 5 REN phone loading on each phone line (10 REN total).

The DPC2203 fully supports the CODECs specified in PacketCable 1.5. Additional CODECs are available through a software upgrade that includes a high fidelity CODEC option for toll-quality plus service. Standard VoIP call signaling is compliant with PacketCable's (MGCP/NCS) specifications. Software upgrades are available to support Session Initiation Protocol (SIP) call signaling.

Figure 1. DPC2203 Cable Modem with Embedded MTA (image may vary from actual product and specification)

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Features

Standards Support
- Designed to meet PacketCable 1.5, PacketCable 1.0, and DOCSIS 2.0 specifications
- Backward compatible with DOCSIS 1.1 and DOCSIS 1.0 networks

Design and Function
- Attractive compact design and versatile orientation to stand vertically, lie flat on the desktop, or mount easily on the wall
- Front panel LEDs provide visual feedback of real-time data transmission and cable modem status
- Color-coded connectors and cables for easy installation and setup

Connections

Bridged 10/100BASE-T auto-sensing/auto-MDIX Ethernet port and USB 1.1 data port provide high-speed data connectivity

VoIP Support
- Cable modem with an Embedded MTA that provides two lines of voice services
- Toll-quality, high-compression, and high-fidelity (exceeding toll quality) CODEC options

WebWizard

The DPC2203 includes WebWizard, a browser-based graphical user interface. WebWizard is a powerful tool that facilitates installation and troubleshooting by eliminating the need to load setup software on the customer premises equipment (CPE)

Battery Backup (Optional models only)

The DPC2203 can be ordered with or without the capability to provide battery backup powering. Units with battery backup capability are available in housings that have either one or two battery bays. Each bay holds a single, user replaceable, rechargeable Li-Ion battery cartridge that provides backup power in the event of an AC power failure. [1]

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[1] The listed battery backup time (8 hours) is the nominal initial time that the battery pack can provide standby power after loss of AC power and after fully charging the battery. Due to variations in individual units, the actual initial standby time can vary +/- 10%. Other factors can also influence battery standby power times such as CPE data activity, variations in DOCSIS traffic, telephone port activity, battery aging, and temperature.

Figure 2. DPC2203 Cable Modem with Embedded MTA Front Panel (image may vary from actual product and specification)

Table 1. Front Panel Features

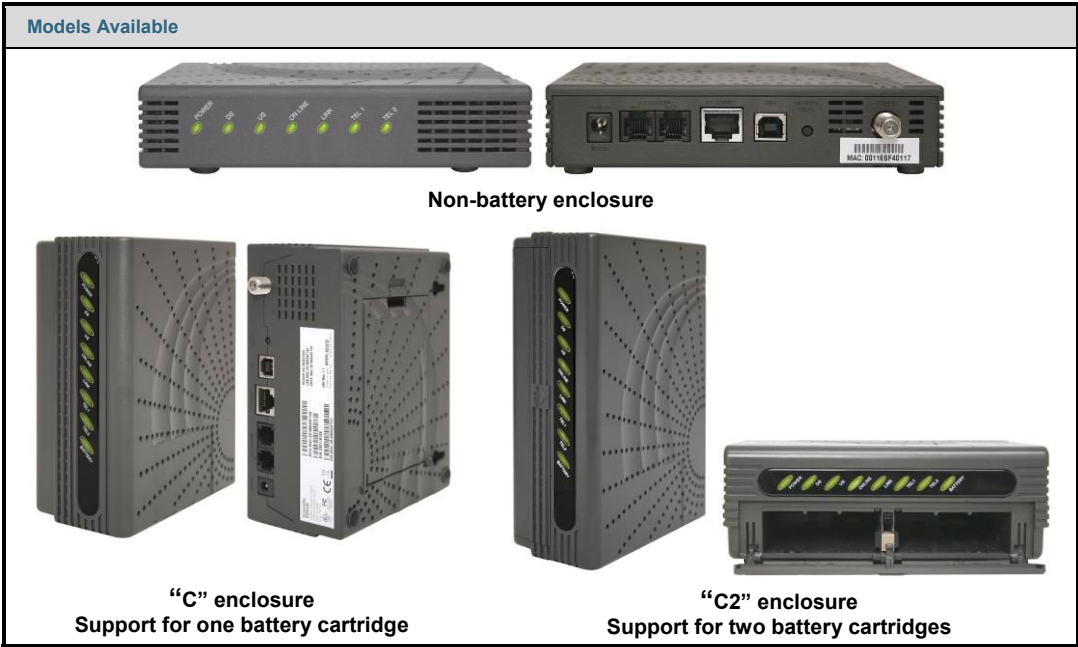| Feature	Description
Indicators	Power, DS, US, Online, Link, Tel1, Tel2, and Battery
Color	Dark gray housing, green lens, white text

Figure 3. DPC2203 Cable Modem with Embedded MTA Back Panel (image may vary from actual product and specification)

Table 2. Back Panel Features

Feature	Description
Power Connector color: Black	Connects the EMTA to the DC output of the AC power adapter that is provided with your EMTA
Telephone Connector color: Gray	RJ-11 telephone ports connect to home telephone wiring, conventional telephones, or fax machines
Ethernet Connector color: Yellow	10/100BASE-T RJ-45 Ethernet port connects to the Ethernet port on a PC or IP set-top
USB Connector color: Blue	USB 1.1 port connects to the USB port on your PC
Reboot EMTA	Resets the EMTA
Cable Connector color: White	F-connector connects to an active cable signal from your cable service provider
Label	Model type, Part Number, Regulatory approvals, MTA MAC address, Serial Number, CM MAC Address, Hardware Revision, Date of Manufacture, Factory ID

Figure 4. Models Available

Product Specifications

Table 3. Product Specifications

Specification	Value
Voice Specifications	

Call Signaling Protocol	• MGCP/NCS including configurable IPsec encryption
	• Configurable to support RFC2833 event signaling
	• Supports Bell103 detection: Improves alarm panel and Point of Sale (POS) interoperability by optimizing DSP for Bell103 protocol
	• Software upgradeable to support Session Initiation Protocol (SIP)
	• The following SIP standards are supported:
	  ◦ RFC 2617 HTTP Authentication: Basic and Digest Access Authentication
	  ◦ RFC 2976 The SIP INFO Method
	  ◦ RFC 3261 SIP: Session Initiation Protocol
	  ◦ RFC 3262 Reliability of Provisional Responses in Session Initiation Protocol (SIP)
	  ◦ RFC 3263 Session Initiation Protocol (SIP): Locating SIP Servers
	  ◦ RFC 3264 An Offer/Answer Model with Session Description Protocol (SDP)
	  ◦ RFC 3265 Session Initiation Protocol (SIP)-Specific Event Notification
	  ◦ RFC 3420 Internet Media Type message/sipfrag
	  ◦ RFC 3428 Session Initiation Protocol (SIP) Extension for Instant Messaging
	  ◦ RFC 3515 The Session Initiation Protocol (SIP) Refer Method
	  ◦ RFC 3842 A Message Summary and Message Waiting Indication Event Package for the Session Initiation Protocol (SIP)
	  ◦ RFC 3892 The Session Initiation Protocol (SIP) Referred-By Mechanism
	  ◦ RFC 3903 Session Initiation Protocol (SIP) Extension for Event State Publication
	  ◦ Draft-ietf-mmusic-sdp-new-24 SDP: Session Description Protocol (Replacement for RFC 2327)
	  ◦ Draft-ietf-sipping-cc-transfer-01 Session Initiation Protocol Call Control – Transfer
	  ◦ Draft-ietf-sip-session-timer-08 The SIP Session Timer
	  ◦ Draft-ietf-sipping-realtimefax-01 SIP Support for Real-time Fax: Call Flow Examples And Best Current Practices
	  ◦ Draft-ietf-mmusic-sdescription-09 Session Description Protocol Security Descriptions for Media Streams
	  ◦ Draft-ietf-sip-replaces-02 The Session Initiation Protocol (SIP) "Replaces" Header

Specification	Value
Provisioning Modes	• Full PacketCable secure provisioning • Kerberos support with NVRAM ticket caching • Configurable PacketCable-lite (MTA config file provisioning without security) • Configurable for non-PacketCable (MTA configuration using DOCSIS config file)
CODECS	Standard: G.711, T.38 Fax Relay, iLBC, and BV16 Software upgradeable to support other CODEC combinations including: • G.711 and G.728 • G.711 and G.729 • G.711 and G.729 a/e • G.711 and BV16 and BV32 (High fidelity – near CD quality) • G.711 and G.723 • G.711 and G.726
CODEC Packetization Intervals	10, 20, and 30 ms
CODEC Synchronization	CODEC synchronization to UGS time clock allows slip-free end-to-end sync to PSTN clock (minimizes frame slips that can cause Fax/Analog Modem call failures)
CODEC Encryption	Configurable to support AES-128 encryption or no encryption modes
Hearing Impaired Services Support	TDD support including detection of V.18 including Annex A
Fax and Analog Modem support	DSP based Modem/Fax Tone detection and support for Voice Band Data Mode with auto-CODEC negotiation and auto-control of echo canceller, jitter buffer, and voice activation detection (VAD)
Jitter Buffer Support	Adaptive dynamically controlled
Latency Control	Configurable min / max jitter buffer size
Audio Gain Levels	Independently Configurable transmit and receive audio gains
Silence Suppression	Configurable VAD with comfort noise generation
Packet Loss Concealment	ANSI T1.521-1999
Call Connection Quality Monitoring	RTCP, RFC1889, RFC1890, SNMP MIB for last call quality statistics
Dialing Modes	DTMF and configurable pulse dial support
DTMF Relay	RFC2833 including fast (40mS) DTMF Relay for alarm system signaling compatibility
Layer 2 Quality of Service	• Full PacketCable secure DQOS with GateID including UGS and UGS/AD • DQOS Lite support including UGS and UGS/AD
Layer 3 Quality of Service	Configurable DiffServe/TOS support for Signaling, RTP, and RTCP flows
Payload Header Suppression (PHS)	Supported for RTP and RTCP packet flows to reduce per-call network bandwidth. Advanced support for Dynamic Payload Header Suppression using Propane Technology.
Management	SNMPv3, SNMPv2, Telnet with configurable user ID and password, internal log, and external Syslog support
Echo Cancellation	G.168 with extended echo tail support

Specification	Value
Call Feature Support	• Caller ID • Call Waiting with Caller ID • Cancel Call Waiting • Call Conferencing (3-way calls) • Configurable hook flash support • Distinctive Ringing (Configurable for up to 11 ring patterns per phone line) • Ring splash • Stutter dial tone • Off hook warning tone • Open Switch Interval support to enhance answering machine compatibility • Configurable star codes • Euro/US hook-flash type • Call transfer • Message Waiting Indicator • Warm Line • Call Forwarding Unconditional • Call Forwarding on Busy • Call Forwarding No Answer • Call return • Redial Call • Automatic redial • Other call features available with compliant CMS or gateway
Telephone Ring Loading	Full 5 REN support on each phone line (10 REN total)
Ring Signal	Configurable balanced ring with configurable DC offset
Max Phone Line Distance	Supports up to 1000 ft of AWG26 wire (0.4 mm) on each phone line. Supports operation with typical in-home telephone wiring
Country-Specific Telephone Parameters Supported	United States, Japan, United Kingdom, Germany, France, Belgium, Netherlands, Finland, Italy, Switzerland, Sweden, Denmark, Brazil, ETSI 101 909-18
High Speed Data	
Simultaneous Access	Bridged Ethernet and USB data ports
Cable Modem Access Protection	Software based standby feature disables bridging to the WAN when enabled
Max CPE	Configurable up to 64 CPE devices (1 USB and 63 Ethernet)
RF Downstream	
Input Frequency Range	Models other than DPC2203C2: 88 to 860 MHz For DPC2203C2 only: 54 to 860 MHz
Tuner Frequency Range	88 to 860 MHz
Demodulation	64 QAM or 256 QAM
Maximum Data Rate	30 Mbps for 64 QAM and 43 Mbps for 256 QAM
Bandwidth	6 MHz
Operating Level Range	-15 to +15 dBmV
Input Impedance	75 ohms
RF Upstream	
Frequency Range	5 to 42 MHz 5 to 55 MHz (Japan)
Modulation	QPSK 8 QAM 16 QAM 64 QAM 128 QAM TCM

Specification	Value
Maximum Data Rate	5.12 Mbps for QPSK 10.2 Mbps for 16 QAM 30.0 Mbps for A-TDMA and SCDMA
Bandwidth	200 kHz to 6.4 MHz
Operating Level Range (all values +/- 0.5 dBmV) **TDMA** **SCDMA**	**DOCSIS Mode** QPSK +8 to +58 dBmV 8QAM +8 to +55 dBmV 16QAM +8 to +55 dBmV 32QAM +8 to +54 dBmV 64QAM +8 to +54 dBmV QPSK +8 to +53 dBmV 8QAM +8 to +53 dBmV 16QAM +8 to +53 dBmV 32QAM +8 to +53 dBmV 64QAM +8 to +53 dBmV 128QAM +8 to +53 dBmV
Electrical Specifications	
Input Voltage • Standard enclosure • Enclosures with battery	 12 VDC 15 VDC
Power Consumption (normal operation)	< 4 watts, on-hook
Data Ports	One (1) RJ-45 Ethernet port, 10/100BASE-T (auto-sensing with auto-MDIX) One (1) USB 1.1 Type 2
RF	One (1) Female "F" type
Output Impedance	75 ohms
Telephone / Fax	Two (2) RJ-11 supporting single-line and multi-line pinout; see **Ordering Information** for additional details
Mechanical Specifications	
Dimensions (W x D x H) • One Battery Housing • Two Battery Housing • Standard Housing	(Including "F" connector) 5.9 in. x 5.3 in. x 2.625 in. (15 cm x 13.5 cm x 6.5 cm) 6.7 in. x 5.3 in. x 2.625 in. (17 cm x 13.5 cm x 6.5 cm) 5.9 in. x 5.3 in. x 1.4 in. (15 cm x 13.5 cm x 3.5 cm)
Weight (approximate) • One Battery Housing • Two Battery Housing • Standard Housing	 12.6 oz (0.36 kg), no battery 13.5 oz (0.38 kg), no battery 10.16 oz (0.29 kg)
Battery	Li-Ion, 3 cell, cartridge style battery, 2200 mAh (approximate backup time 8.0 hours per cartridge)
Operating Temperature	Models without battery capability: 32˚ to 104˚F (0˚ to 40˚C) Models with battery capability: 32˚ to 122˚F (0˚ to 50˚C)
Operating Humidity	0 to 95% RH non-condensing
Storage Temperature	-4˚ to 140˚F (-20˚ to 60˚C)
Altitude	-200 to 10,000' AMSL (-61 to 3,048 m)
Standards and Approvals	
Designed to Comply with the Following Standards	PacketCable 1.5 PacketCable 1.0 DOCSIS 2.0
Other Approvals	WHQL
Regulatory Approvals	Certified as required per country where the DPC2203 will be used

Ordering Information

Table 4. Ordering Information

Description	Part Number
"C" housing with one (1) battery bay	
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 120 VAC / 60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • No battery included (battery ordered separately) • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4016431
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • No battery included (battery ordered separately) • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4024178
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 120 VAC / 60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • No battery included (battery ordered separately) • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4013087
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • No battery included (battery ordered separately) • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4024179
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Extended flash memory option • Battery backup housing (1 battery bay, bottom loaded) • 120 VAC / 60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • No battery included (battery ordered separately) • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4025728
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Extended flash memory option • Battery backup housing (1 battery bay, bottom loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • No battery included (battery ordered separately) • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4025729

Description	Part Number
"C" housing with one (1) battery bay (continued)	
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 120 VAC / 60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4016432
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4024176
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 120 VAC / 60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers ***Customer Specific Configuration***	4013088
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers ***Customer Specific Configuration***	4025381
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Extended flash memory option • Battery backup housing (1 battery bay, bottom loaded) • 120 VAC / 60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers ***Customer Specific Configuration***	4025730
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Extended flash memory option • Battery backup housing (1 battery bay, bottom loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers ***Customer Specific Configuration***	4025731

Description	Part Number
"C" housing with one (1) battery bay (continued)	
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 120 VAC / 60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America, polarized • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4025302
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (1 battery bay, bottom loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A desktop style linear-switching power supply with attached power cord for North America, polarized • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4024177
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (PAL/NTSC) • Battery backup housing (1 battery bay, bottom loaded) • 230 VAC / 50 Hz, 15 VDC / 1 A wall-mount style linear-switching power supply for Europe • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables CD-ROM containing user guide and USB drivers	4017981
International Configuration – PAL/NTSC	
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (PAL/NTSC) • Battery backup housing (1 battery bay, bottom loaded) • 230 VAC / 15 VDC / 1 A wall-mount style linear-switching power supply for Australia • No battery included (battery ordered separately) • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration* *Australia*	4024333
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (PAL/NTSC) • Battery backup housing (1 battery bay, bottom loaded) • 230 VAC / 15 VDC / 1 A wall-mount style linear-switching power supply for Austrailia • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration* *Australia*	4025394
2-Line VoIP Cable Modem with EMTA for International markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (PAL/NTSC) • Battery backup housing (1 battery bay, bottom loaded) • 100-240 VAC / 50-60 Hz, 12 VDC / 1 A desktop style switching-regulated universal power supply with detachable power cord • Power cord, North America • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4013089

Description	Part Number
"C" housing with one (1) battery bay (continued)	
2-Line VoIP Cable Modem with EMTA for International markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (PAL/NTSC) • Battery backup housing (1 battery bay, bottom loaded) • 100-240 VAC / 50-60 Hz, 15 VDC / 1 A desktop style switching-regulated universal power supply with detachable power cord • Power cord, Europe • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4013090
2-Line VoIP Cable Modem with EMTA for International markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (PAL/NTSC) • Battery backup housing (1 battery bay, bottom loaded) • 230 VAC / 50 Hz, 15 VDC / 1 A wall-mount style linear-switching power supply for Europe • One (1) 2200 mAh Li-Ion battery • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4013793
International Configuration – Japanese Diplexer (5-55 MHz/88-860 MHz)	
2-Line VoIP Cable Modem with EMTA for Japan. Includes: • PacketCable 1.0 / DOCSIS 2.0 (NTSC Japan) • Battery backup housing (1 battery bay, bottom loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A wall-mount style linear-switching power supply • One (1) 2200 mAh Li-Ion battery • No USB 1.1 port • Ethernet cable • Paper Japanese user guide ***Importer Specific Configuration*** ***Japan***	4016465

Description	Part Number
"C2" housing with two (2) battery bays	
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (2 battery bays, front loaded) • 120 VAC / 60 Hz, 15 VDC / 1 A desktop style linear-switching power supply, polarized • One (1) 2200 mAh Li-Ion battery • No Ethernet cable • No USB cable • CD-ROM containing user guide and USB drivers	4015069
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Battery backup housing (2 battery bays, front loaded) • 100-120 VAC / 50-60 Hz, 15 VDC / 1 A desktop style linear-switching power supply, polarized • One (1) 2200 mAh Li-Ion battery • No Ethernet cable • No USB cable • CD-ROM containing user guide and USB drivers	4024180

Description	Part Number
Housing with no battery backup capability	
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 120 VAC / 60 Hz, 12 VDC / 1 A desktop style linear power supply with attached power cord • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4011094
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 100-120 VAC / 50-60 Hz, 12 VDC / 1 A desktop style linear-switching power supply with attached power cord • Ethernet and USB cables • CD-ROM containing user guide and USB drivers	4025738
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 120 VAC / 60 Hz, 12 VDC / 1 A desktop style linear-switching power supply with attached power cord • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4016466
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 100-120 VAC / 50-60 Hz, 12 VDC / 1 A desktop style linear-switching power supply with attached power cord • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4025739
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Extended flash memory option • Standard housing (no battery backup capability) • 120 VAC / 60 Hz, 12 VDC / 1 A desktop style linear-switching power supply with attached power cord • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4025726
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Extended flash memory option • Standard housing (no battery backup capability) • 100-120 VAC / 50-60 Hz, 12 VDC / 1 A desktop style linear-switching power supply with attached power cordS • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Customer Specific Configuration*	4025727

Description **Housing with no battery backup capability**	Part Number
International Configuration - NTSC	
1-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 220 VAC / 60 Hz, 12 VDC / 1 A desktop style linear power supply with attached power cord for Argentina • No USB port, no USB Cable • Ethernet cable • CD-ROM containing user guide and USB drivers *Argentina*	4019841
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 220 VAC / 60 Hz, 12 VDC / 1 A desktop style linear power supply with attached power cord for Argentina • Ethernet and USB cables • Ethernet cable • CD-ROM containing user guide and USB drivers *Argentina*	4027076
2-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 220 VAC / 50-60 Hz, 12 VDC / 1 A desktop style linear-switching power supply with attached power cord for Argentina • Ethernet and USB cables • Ethernet cable • CD-ROM containing user guide and USB drivers *Argentina*	4027077
1-Line VoIP Cable Modem with EMTA for NTSC markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 100-120 VAC / 50-60 Hz, 12 VDC / 1 A desktop style linear power supply • 2-conductor detachable power cord for Brazil • No USB port, no USB Cable • Ethernet cable • CD-ROM containing user guide and USB drivers *Columbia*	4019840
International Configuration – PAL/NTSC	
2-Line VoIP Cable Modem with EMTA for International markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (PAL/NTSC) • Standard housing (no battery backup capability) • 230 VAC / 50 Hz, 12 VDC / 1 A wall-mount style linear-switching power supply for Europe • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Europe*	4013808
2-Line VoIP Cable Modem with EMTA for International markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (PAL/NTSC) • Standard housing (no battery backup capability) • 230 VAC / 50 Hz, 12 VDC / 1 A wall-mount style linear-switching power supply with attached power cord for Europe • Ethernet and USB cables • Danish telephone cable • Custom CD-ROM containing user guide and USB drivers *Customer Specific Configuration* *Denmark*	4017664

Description Housing with no battery backup capability (continued)	Part Number
International Configuration – PAL/NTSC	
2-Line VoIP Cable Modem with EMTA for International markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 (NTSC) • Standard housing (no battery backup capability) • 100-240 VAC / 50-60 Hz, 12 VDC / 1 A desktop style switching-regulated universal power supply with detachable power cord • Power cord, Brazil • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Brazil*	4011102
2-Line VoIP Cable Modem with EMTA for International markets. Includes: • PacketCable 1.0 / DOCSIS 2.0 • Standard housing (no battery backup capability) • 100-240 VAC / 50-60 Hz, 12 VDC / 1 A desktop style switching-regulated universal power supply with detachable power cord • Power cord, Europe • Ethernet and USB cables • CD-ROM containing user guide and USB drivers *Europe*	4013091
International Configuration –Japanese Diplexer (5-55 MHz/88-860 MHz)	
2-Line VoIP Cable Modem with EMTA for Japan. Includes: • PacketCable 1.0 / DOCSIS 2.0 (NTSC Japan and North America)S • Standard housing (no battery backup capability) • 100-120 VAC / 50-60 Hz, 12 VDC / 1 A desktop style linear-switching power supply with attached power cord • No USB 1.1 port • Ethernet cable • Paper Japanese user guide *Importer Specific Configuration* *Japan*	4016464

Table 5.   Replacement Components

Description AC Power Supplies, 12 VDC	Part Number
12 VDC, Linear-Switching, Class 2	
100-120 VAC / 50-60 Hz, 12 VDC / 1 A desktop style linear-switching power supply with attached power cord and connector for North America and Japan	4018777
100-120 VAC / 50-60 Hz, 12 VDC / 1 A wall-mount linear-switching power supply for North America and Japan	4015452
220 VAC / 50-60 Hz, 12 VDC / 1 A wall-mount linear-switching power supply for Argentina	4015457
230 VAC / 50-60 Hz, 12 VDC /1 A wall-mount linear-switching power supply for Australia	4018797
230 VAC / 50-60 Hz, 12 VDC /1 A wall-mount linear-switching power supply with Euro style connector	4015453
220 VAC / 50-60 Hz, 12 VDC / 1 A wall-mount linear-switching power supply for Korea	4015458
230-240 VAC / 50-60 Hz, 12 VDC /1 A wall-mount linear-switching power supply with BS-1363 United Kingdom style 3-pin connector	4018794
12 VDC, Universal Switching Mode, Class 2	
100-240 VAC / 50-60 Hz, 12 VDC / 1 A desktop style universal switching mode power supply, Class II, C7 AC connector, 2 conductor (power cord not included, order power cord separately)	4009116

Description	Part Number
AC Power Supplies, 12 VDC (continued)	
12 VDC, Linear, Class 2	
120 VAC / 60 Hz, 12 VDC / 1 A desktop style linear power supply with attached power cord and connector (not for use in the United States)	749826
220 VAC / 50 Hz, 12 VDC / 1 A desktop style linear power supply with attached power cord and connector for Argentina	4012871
220 VAC / 60 Hz, 12 VDC / 1 A desktop style linear power supply with attached power cord and connector for Korea	4004222
Description	
AC Power Supplies, 15 VDC	
15 VDC, Linear-Switching, Class 2	
100-120 VAC / 50-60 Hz, 15 VDC /1 A desktop style linear-switching power supply with attached power cord for North America	4018776
100-120 VAC / 50-60 Hz, 15 VDC /1 A wall-mount style linear-switching power supply with non-polarized connector for North America and Japan	4015454
100-120 VAC / 50-60 Hz, 15 VDC /1 A wall-mount linear-switching power supply with polarized AC connector for North America	4018796
230 VAC / 50-60 Hz, 15 VDC /1 A wall-mount linear-switching power supply with Euro style connector	4015453
230-240 VAC / 50-60 Hz, 15 VDC /1 A wall-mount linear-switching power supply with BS-1363 United Kingdom style 3-pin connector	4018795
230-240 VAC / 50-60 Hz, 15 VDC / 1 A wall-mount linear-switching power supply for Australia	4020503
15 VDC, Universal Switching Mode, Class 2	
100-240 VAC / 50-60 Hz, 15 VDC / 1 A desktop universal switching mode power supply, Class II, C7 AC connector, 2 conductor power cord (power cord not included, order power cord separately)	4007274
15 VDC, Linear, Class 2	
120 VAC / 60 Hz, 15 VDC / 1 A desktop linear power supply with attached power cord and connector (not for use in the United States)	4004854
230 VAC / 50 Hz, 15 VDC / 1 A desktop linear power supply with attached cord and CEE7/16 Euro plug power connector	4004855
230 VAC / 50 Hz, 15 VDC / 1 A desktop linear power supply with attached cord and BS-1363 style 3-pin United Kingdom power connector	4006872

Power Cords	Part Number
Class 2	
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

Battery Cartridge	Part Number
2200 mAh Li-Ion Battery Cartridge	4008300

Cables	Part Number
Ethernet cable, standard length, 48 inches long	740580
Ethernet cable, 2 meters long	4018790
USB cable	740579

User Guide and USB Drivers	Part Number
CD-ROM with user guide and USB drivers	4029640