

Cisco Explorer 4540HDC with M-Card Interface

The Cisco® Explorer® 4540HDC digital-only next-generation cable set-top box gives you the opportunity to create a highly-connected home IP network while building a software framework that enables flexible and rapid application deployment to enable services. The 4540HDC delivers the features you have come to expect from us, including video-on-demand (VOD), pay-per-view (PPV), and pristine audio and video.

Service providers can elevate the service bundle with higher-quality audio and video, faster applications processing, and home networking capabilities – all while supporting bandwidth management objectives.

Figure 1. Cisco Explorer 4540HDC



Features

Network Utilization Enhancements

- *1 GHz Tuning* allows service providers to expand network bandwidth to provide additional services such as HD and VOD, VoIP video, and high speed data
- *MPEG-4 (H.264) Decoding* supports compression technology that provides better video quality at about half the data rate of MPEG-2
- *DOCSIS® 2.0* provides greatly increased upstream throughput for future advanced services and provides a path for future IP video services (optional software)

OpenCable and Conventional Network Support

- *M-Card™ Interface* uses a Multi-Stream CableCARD™ for separable security
- *Axiom™ DVR Middleware* supports tru2Way™ (formerly OCAP™) applications such as Service Navigators, Games, and many other future applications (optional software)
- *DOCSIS Set-top Gateway (DSG)* provides a powerful standard transport mechanism for command and control signaling between the set-top and service provider network (optional software)
- *SARA Software* on a separable security set-top provides native navigator and user interface in a non-OCAP environment (optional software)

- *DAVIC Receiver/Transmitter* allows IP-based, real-time, two-way communication between the set-top and the service provider network for services such as on-demand (optional software)

Home Networking Features

- *USB 2.0 Connection* enables a host connection to peripheral devices such as navigation controllers, network adapters, and memory media readers
- *Ethernet Connection* enables a connection to the home IP LAN for advanced services such as content sharing to the set-top from retail-purchased electronic devices

Figure 2. Cisco Explorer 4540HDC Front Panel (image may vary from actual product and specification)



Table 1. Front Panel Features

Feature	Description
Connections	USB 2.0 Host, software controlled
Controls	IR Receiver, 10 Buttons: Power, Settings, Exit, Info, Guide, Vol+, Vol-, Ch+, Ch-, Select
Indicators	Four 7-segment digits, Power (icon), Message (icon), HDTV, 5.1, Auto, 1080i p, 720i p, 480i p
Color	Silver paint, black lens, silver buttons, dark grey button text, white button text
Branding	Cisco, model number, provision for service provider branding, HDTV Cable

Figure 3. Cisco Explorer 4540HDC Back Panel (image may vary from actual product and specification)



Table 2. Back Panel Features

Feature	Description
Connections In	Cable In
Connections Out	HDMI™, YPbPr, Optical Digital Audio, Coax Digital Audio, Video 1, L/R Audio 1, S-Video, L/R Audio 2, IR, TV Cable Out, Dual IEEE-1394 4-Pin, software controlled
Output Resolutions	1920 x 1080i 60 Hz, 1920 x 1080p 30 Hz, 1920 x 1080p 24Hz, 1280 x 720p 60 Hz, 720 x 480p 60 Hz, 720 x 480i 60 Hz, software controlled
Output Control	Scaled video in graphics, scaled HD video in graphics, graphics on HD and SD outputs, aspect ratio control, native resolution pass-thru, HD down convertible to SD, software controlled
Connections-Interactive	Cable In, USB 2.0 Host, RJ-45 Ethernet, software controlled
Power Input	Polarized 2-prong modular cord plug, 115 VAC, 60 Hz

Power Output	Polarized 2-prong outlet, at input line voltage, software controlled
Labels	Serial Number, RF MAC Address, eCM MAC Address, M-Card Serial Number, M-Card MAC Address

Product Specifications

Table 3. Product Specifications

Specification	Value
Tuning and Decoding	
Tuning	Single QAM 64 or 256, In-Band 54 MHz–1GHz, QPSK out-of-band (OOB) 70–130 MHz, DOCSIS 91–867 MHz
Video Decoders	Dedicated 400 MHz VLIW CPU Processor, MPEG-4 (H.264) up to HP@L4.0 (HD), VC1 AP@L2&3, MPEG-2 up to MP@HL, 1920 x 1080i 60 Hz, 1920 x 1080p 30 Hz, 1920 x 1080p 24 Hz, 1280 x 720p 60 Hz, 720 x 480p 60 Hz, 720 x 480i 60 Hz, Video Scaling
Audio Decoders	Dedicated 250 MHz DSP CPU Processor, Dolby™ Digital to 5.1, MPEG-1 and MPEG-2, Dolby Digital+, AAC, AAC+
Conditional Access	Separable security with Multi-stream CableCARD
Encoders	Audio BTSC for TV Cable (RF) Output
Graphics Engine	2.5 Dimension graphics, up to 960 x 540 resolution, 32 bit (16 million) color
Memory/Storage	
DRAM	Minimum of 192 MB
Flash	Minimum of 128 MB
NVM	Minimum of 16 KB
Processors	
Application/CPU	600 MHz (800 DMIPS)
Video Graphics	400 MHz VLIW CPU
Audio	250 MHz DSP CPU
DOCSIS	200 MHz CPU
Dimensions	
Product (HxWxD)	2.75 in. x 13.75 in. x 8.5 in. (7.0 cm x 29.9 cm x 21.6 cm)
Product Weight	4.25 lb (2.0 kg)
Carton (HxWxD)	15.75 in. x 18.125 in. x 10.75 in. (40.1 cm x 41.0 cm x 27.3 cm)
Total Weight	23.45 lb (10.7 kg)
Environment Specifications	
Placement	Locate with at least 2 inches of open space above and on each side
Room Temperature	32 to 105°F (0 to 40°C) during operation
Power Dissipation	40 W maximum

Table 4. Accessories

Specification	Value	
In Carton		
	Power Cord, Quick Reference Guide, YPbPr Component Video, L/R Audio Cable	
Sold Separately		Part Number
	Multi-Stream CableCARD PKM802	4014733
	AllTouch® AT8550 Remote Control	4006369
	AllTouch® AT8560 Remote Control	4016237

Ordering Information

Table 5. Ordering Information

Model	Description	Part Number Set-Top with PowerKEY® M-Card Module
Explorer 4540HDC	4540HDC, Digital only, HD MPEG-4/2 set-top, 192 MB CPU RAM, 128 MB Flash, DOCSIS, Ethernet, and M-Card Interface	4019335

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