

Cisco Explorer 8640HD DVR

The Cisco® Explorer™ 8640HD DVR provides high quality video, audio, DVR, and two-way capabilities that cable operators have come to expect. The platform provides faster processing of applications while also supporting bandwidth management objectives.

The 8640HD becomes the multimedia service gateway for the home – sharing and managing video and audio experiences between the television and other home network devices.

Figure 1. Cisco Explorer 8640HD DVR (image may vary from actual product and specification)



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 increased upstream throughput for future advanced services and provides a path for future IP video services (optional software)
- *Digital-Only Tuning* enables service providers to improve bandwidth efficiency and accelerate the transition to an all-digital network by migrating analog subscribers to digital services

tru2way™ and Conventional Network Support

- *Embedded PowerKEY® Conditional Access* provides digital security using an RSA encryption algorithm
- *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 DVR Software* on a set-top provides native navigator and user interface in a non-tru2way 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)
- *ENERGY STAR® Tier 1* qualified set-top box must meet strict energy-efficiency guidelines set by the US Environmental Protection Agency (EPA) and the US Department of Energy (DOE), see Note 4

DVR and Home Networking Features

- *Dual-tuner DVR* allows one program to be recorded while viewing or recording another
- *160 GB Internal Hard Drive* stores up to 90 hours of SD or 20 hours of HD programs
- *320 GB Internal Hard Drive (optional)* stores up to 180 hours of SD or 40 hours of HD programs
- *500 GB Internal Hard Drive (optional)* stores up to 280 hours of SD or 62 hours of HD programs
- *Personal media player* enables display of photos and playback of video and audio from standards based home network connected devices (optional software)
- *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
- *Digital Transmission Content Protection over IP (DTCP-IP)* provides encrypted content protection, such as “copy-one-generation” or “copy-never” based upon content’s copy control information (CCI), when output through an IP connection to an authenticated device

Figure 2. Cisco Explorer 8640HD 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, List, Exit, Info, Guide, Vol+, Vol-, Ch+, Ch-, Select
Indicators	Four 7-segment digits, Power (icon), Message (icon), Record (icon), Home Networking (icon), HDTV, 5.1, Auto, 1080i p, 720i p, 480i p, software controlled
Color	Black finish, black lens, black buttons, grey text
Branding	Cisco, model number, provision for service provider branding, HDTV Cable

Figure 3. Cisco Explorer 8640HD Back Panel (image may vary from actual product and specification)**Table 2.** Back Panel Features

Feature	Description
Connections In	Cable In
Connections Out	HDMI™ (1.3) with CEC, YPbPr, Optical Digital Audio, Coax Digital Audio, Video, L/R Audio 1, S-Video, L/R Audio 2, IR, TV Cable Out, IEEE-1394 4-Pin, software controlled, see Note 1
Output Resolutions	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, software controlled, see Note 1
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	eSATA, USB 2.0 Host, Support for generic serial interface via USB, RJ-45 Ethernet, DTCP-IP on Ethernet, software controlled
Power Input	Polarized 2-prong modular cord plug, 115 VAC, 60 Hz
Power Output	Polarized 2-prong outlet, 500W max, at input line voltage, software controlled
Labels	Serial Number, RF MAC Address, eCM MAC Address, Cisco, FCC, UL, Shock Warning, CATV Converter, Made In
Labels-Bottom	Scientific Atlanta, Inc., STB Model, Assembly P/N, Rev, Date, FCC, Patents, RSA

Specifications

Table 3. Product Specifications

Specification	Value
Tuning and Decoding	
DVR	Dual tuning, Dual Record, Pause, Rewind, Fast-Forward, Record one program while viewing or recording another, software controlled
Picture in Picture	Digital, HD, software controlled
Tuning	Dual QAM 64 or 256, In-Band 54 MHz - 1 GHz, QPSK out-of-band (OOB) 70-130 MHz, DOCSIS 91-867 MHz
Video Decoders	Dedicated Dual 400 MHz VLIW CPU Processors, Dual MPEG-4 (H.264) up to HP@L4.0 (HD), Dual VC1 AP@L2&3, Dual 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, software controlled
Audio Decoders	Dedicated 250 MHz DSP CPU Processor, Dolby™ Digital to 5.1, MPEG-1 and MPEG-2, BTSC/SAP, Dolby Digital+, AAC, AAC+, software controlled
Conditional Access	PowerKEY, software controlled
Encoders	Audio BTSC for TV Cable (RF) Output, software controlled
Graphics Engine	2.5 Dimension graphics, up to 960 x 540 resolution, 32 bit (16 million) color
DAVIC	DAVIC 1.2, QPSK FDC at 1.5 Mbps, QPSK RDC at 1.5 Mbps, software controlled
DOCSIS	OOB and Interaction via DOCSIS 2.0, DOCSIS Set-top Gateway, Baseline Privacy Interface, software controlled

Specification	Value
Memory/Storage	
Unified RAM	384 MB, 512MB (optional), see Note 2
Flash	2 MB
CPU NVM	16 KB
Hard Drive	160 GB, 320 GB (optional), 500 GB (optional), Internal SATA, 1.5 Gbs
Boot Partition on HDD	256 MB, see Note 3
Hard Drive Expansion	External SATA (eSATA), 1.5 Gbs, on rear panel, software controlled
Processors	
Application/CPU	700 MHz (1000 MIPS)
Video/Graphics	Dual 400 MHz VLIW CPUs
Audio	250 MHz DSP CPU
DOCSIS CPU	333 MHz CPU
Network CPU	400 MHz CPU
Dimensions	
Product (HxWxD)	3.25 in. x 15.6 in. x 11.2 in. (8.3 cm x 39.7 cm x 28.5 cm)
Product Weight	8.3 lbs (3.8 kg)
Carton (HxWxD)	6.12 in. x 18.0 in. x 14.0 in. (15.6 cm x 45.8 cm x 35.6 cm)
Total Weight	11.6 lbs (5.3 kg)
Operating Conditions	
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	50W maximum peak, ENERGY STAR Tier 1

Table 4. Accessories

Specification	Value	
In Carton		
	Power Cord, Quick Reference Guide, HDM-to-HDMI Cable	
Sold Separately		Part Number
	Axiom DVR Middleware License, see Note 2	4014594
	SARA DVR Software License 3-year	752351
	SARA DVR Software License 2-year	4020470
	SARA DVR Software License 1-year	4020469
	AllTouch® AT8550 Remote Control	4006369
	AllTouch AT8560 Remote Control	4016237
	HDMI-to-HDMI Cable (additional or replacement)	1002048
	HDMI-to-DVI Cable	1002056
	YPbPr and L/R Cable Set	1000944
	RGB adapter and cables	749790
	IR Extender (USB)—12 ft	1001807
	IR Extender (USB)—25 ft	4006725
	IR Extender (3.5mm)—12 ft	1004648

Ordering Information

Table 5. Ordering Information

Model	Description	Part Number
Explorer 8640HD	8640HD, HD Digital Only MPEG-4/-2 DVR with 160 GB HDD, 512 MB RAM, DOCSIS, Ethernet, and DTCP-IP	4026533
Explorer 8640HD	8640HD, HD Digital Only MPEG-4/-2 DVR with 320 GB HDD, 512 MB RAM, DOCSIS, Ethernet, and DTCP-IP	4026534
Explorer 8640HD	8640HD, HD Digital Only MPEG-4/-2 DVR with 500 GB HDD, 512 MB RAM, DOCSIS, Ethernet, and DTCP-IP	4034563

Notes:

1. 1080p/24 or 1080p/30 output formats are available on HDMI, if those formats are presented to the set-top box at its input. Incoming video formats will not be converted to either of these for output. Output of these formats is under software control.
2. Axiom DVR Middleware for tru2way (formerly OCAP) support is recommended only for the 8600 models that have a minimum of 384 MB RAM.
3. Boot Partition provides space on the hard drive for storing the set-top's core software. Additional non-core application storage space may be made available on the hard drive. The Boot Partition is analogous to a portion of the role traditional flash memory serves on non-hard drive set-tops.
4. In order to use the ENERGY STAR name or marks in association with this product deployed to subscribers, service providers must first sign a Partnership Agreement with EPA and abide by all of the conditions set forth in the ENERGY STAR Program Requirements for Cable, Satellite, and Telecom Service Providers. ENERGY STAR is a registered mark owned by the U.S. government and its use is reserved for partners. Service providers that have not signed an ENERGY STAR Partnership Agreement are not to distribute boxes labeled with the ENERGY STAR.

With respect to each AVC/H.264 product, we are obligated to provide the following notice:

AVC VIDEO LICENSE

THIS PRODUCT IS LICENSED UNDER THE AVC PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION MAY BE OBTAINED FROM MPEG LA, L.L.C. SEE <http://www.mpegla.com>.

Accordingly, please be advised that service providers, content providers, and broadcasters are required to obtain a separate use license from MPEG LA prior to any use of AVC/H.264 encoders and/or decoders.



Cisco, Cisco Systems, the Cisco logo, the Cisco Systems logo, AllTouch, Axiom, and PowerKEY are registered trademarks or trademarks of Cisco Systems, Inc. and/or its affiliates in the U.S. and certain other countries. DOCSIS is a registered trademark of Cable Television Laboratories, Inc. CableCARD, M-Card, OCAP, and tru2way are trademarks of Cable Television Laboratories, Inc. Manufactured under license from Dolby Laboratories. Dolby is a trademark of Dolby Laboratories. ENERGY STAR and the ENERGY STAR mark are registered trademarks of the U.S. government. HDMI, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC. *All other trademarks mentioned in this document are the property of their respective owners.* Specifications and product availability are subject to change without notice. © 2008-2009 Cisco Systems, Inc. All rights reserved.

Cisco Systems, Inc.
1-800-722-2009 or 678-277-1120
www.cisco.com

Part Number 7015627 Rev B
November 2009