Cisco Explorer 8642HDC DVR with M-Card Interface

The Cisco® Explorer™ 8642HDC DVR with Multi-Stream CableCARD™ (M-Card™) interface 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 8642HDC becomes the multimedia service gateway for the home – sharing and managing video and audio experiences between the television and other home network devices. Multimedia over Coax Alliance (MoCA™) technology enables an IP LAN connection over coaxial cable, minimizing the need for new wiring in the home.

Figure 1.   Cisco Explorer 8642HDC 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

- *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 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)

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
- *Whole Home DVR* enables sharing and managing of video services throughout the home to other connected DVRs, set-tops, and consumer electronic devices using standards based connection and security technologies (optional software)
- *MoCA Connection* enables an IP LAN connection over coaxial cable, which minimizes the need for new wiring in the home
- *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 8642HDC 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 8642HDC 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, Cable In with MoCA, DTCP-IP on MoCA, 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, M-Card Serial Number (if optional M-Card module is included), M-Card MAC Address (if optional M-Card module is included), Removal evident M-Card label (if optional M-Card module is included), 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, MoCA 1.0-1.5 GHz
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	Separable security with Multi-Stream CableCARD interface
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. 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

Table 4.   Accessories

Specification	Value	Part Number
In Carton		
	Power Cord, Quick Reference Guide, HDMI-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
	PowerKEY® Multi-Stream CableCARD PKM802	4014733
	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 Set-Top Only	Part Number Set-Top with PowerKEY M-Card Module
Explorer 8642HDC	8642HDC, HD Digital Only MPEG-4/-2 DVR with 160 GB HDD, 384 MB RAM, DOCSIS, Ethernet, MoCA, DTCP-IP, and M-Card Interface	4026538	4026531
Explorer 8642HDC	8642HDC, HD Digital Only MPEG-4/-2 DVR with 320 GB HDD, 384 MB RAM, DOCSIS, Ethernet, MoCA, DTCP-IP, and M-Card Interface	TBD	4028948
Explorer 8642HDC	8642HDC, HD Digital-Only MPEG4/2 DVR with 500GB HDD, 512MB RAM, DOCSIS, Ethernet, MoCA, DTCP-IP, and PK M-Card	TBD	4033772

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.

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