Cisco Explorer 1640HDC and 1642HDC Digital-Only High-Definition Interactive Set-Tops with Multi-Stream CableCARD Interface

Power, flexibility, and advanced security features highlight the Cisco® Explorer® 1640HDC and 1642HDC Digital-Only High-Definition Interactive Set-Tops with Multi-Stream CableCARD™ (M-Card™) interface. Additionally, the 1642HDC supports Multimedia over Coax Alliance (MoCA™) technology, which lets subscribers use their cable wiring for LAN connections.

The 1640HDC and 1642HDC set-tops support tru2way™ (formerly OCAP™) and Federal Communications Commission (FCC) mandates for separable security. The set-tops also offer MPEG-4 (H.264) high definition (HD) and standard definition (SD) decoding with HD and SD outputs and DOCSIS® 2.0 data capability.

Figure 1.   Cisco Explorer 1642HDC Front Panel (image may vary from actual product and specification)

Features

Network Utilization Enhancements

- *1 GHz Tuning* enables cable operators to expand network bandwidth to provide additional services such as VOD, tru2way, DOCSIS 2.0, and high-speed data
- *MPEG-4 (H.264)* Decoding supports compression technology that provides better video quality at approximately 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 (M-Card) for separable security
- *Axiom™ Middleware* supports tru2way applications such as Service Navigators, Games, and other future tru2way applications (optional software)
- *DSG (DOCSIS Set-top Gateway)* provides a powerful standard transport mechanism for command and control signaling between the set-top and service provider network (optional software)
- *DAVIC Receiver/Transmitter* allows IP-based, real-time, two-way communication between the set-top and the service provider network for on-demand services (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

Home Networking Features

- *USB 2.0 Connection* enables a host connection to peripheral devices such as navigation controllers, network adapters, and memory media readers
- *MoCA Connection* enables an IP LAN connection over coax cable, which minimizes the need for new wiring in the home (1642HDC)

Figure 2. Cisco Explorer 1642HDC front panel (image may vary from actual product and specification)

Table 1. Front Panel

Feature	Description
Connections	USB 2.0 host, software controlled
Controls	IR receiver, Power
Indicators	Power (1640HDC) Power, Record (1642HDC)
Color	Black, white text
Branding	Cisco, model number, provision for customer brand

Figure 3. Cisco Explorer 1642HDC Back Panel (image may vary from actual product and specification)

Table 2. Back Panel

Feature	Description
Connections In	Cable In, Power (1640HDC) Cable In with MoCA, Power (1642HDC)
Connections-Interactive	Cable In, USB 2.0 Host, RJ-45 Ethernet (1640HDC) Cable In with MoCA, USB 2.0 Host, RJ-45 Ethernet (1642HDC)
Connections Out	HDMI™ (1.3) with CEC, IEEE 1394 (4-pin), L/R Audio, Baseband Video, YPbPr, IR, S-Video Out, Optical Audio Out, Coaxial Digital Audio Out
Output Resolutions	720 x 480i 60 Hz, 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
Labels	Serial Number, eCM MAC Address, RF MAC Address, M-Card Serial Number, M-Card MAC Address

Product Specifications

Table 3. Product Specifications

Specification	Value
Tuning and Decoding	
Tuning	QAM 64 or 256, In-Band 54 MHz–1 GHz, QPSK out-of-band (OOB) 70–130 MHz, DOCSIS 91–867 MHz, A/V in display, MoCA 1.0–1.5 GHz
Video Decoders	MPEG-2 MP@ML, MP@HL (SD, 720 x 480i), MPEG-4 (H.264) up to HP@L4.0 (HD), VC1, Video Scaling, software controlled
Audio Decoders	Dolby™ Digital to 5.1, MPEG-1 and MPEG-2, Dolby Digital+, AAC, AAC+, AC3, MP3
Conditional Access	Separable security with M-Card
Graphics Engine	Up to 960 x 540 resolution, 32 bit (16 million) color
DAVIC	FDC (Forward Data Channel) 1.54 Mbps QPSK, RDC (Reverse Data Channel) 1.54 Mbps QPSK, FAT QAM Channel Downstream, software controlled
DOCSIS	OOB and interaction via DOCSIS 2.0, DOCSIS Set-top Gateway, Baseline Privacy Interface, software controlled
Memory/Storage	
RAM	Minimum of 128 MB
Flash	Minimum of 32 MB
NVM	Minimum of 16 KB
Processors	
Application/CPU	700 MHz (approximately 1000 dMIPs)
DOCSIS	333 MHz CPU
Network	400 MHz CPU
Dimensions	
Product (HxWxD)	2.25 in. x 13.75 in. x 9 in. (5.7 cm x 34.9 cm x 22.9 cm)
Product Weight	4.0 lbs (1.8 kg)
Carton (HxWxD)	Carton of 5 units = 16.5 in. x 11.25 in. x 16.5 in. (41.9 cm x 28.6 cm x 41.9 cm)
Total Weight	Carton of 5 units = 24.0 lbs (10.9 kg)
Environment Specifications	
Placement	Locate with at least 2 inches of open space above and on each side
Room Temperature	32º to 105ºF (0º to 40ºC) during operation
Storage Temperature	14º to 158ºF (-10º to 70ºC)
Power Dissipation	50W maximum peak, ENERGY STAR Tier 1

Table 4. Accessories

Specification	Value	Part Number
In Carton		
	HDMI Cable, Power Cord, Quick Reference Guide	
Sold Separately		**Part Number**
	License, Axiom OCAP (tru2way) Middleware, non-DVR	4026954
	SARA Software License	4020466
	AllTouch® AT8650 Remote Control	4016237
	RGB Adapter and Cables	749790
	IR Extender – 12 ft (3.65 m)	1004648
	USB IR Extender – 12 ft (3.65 m)	1001807
	USB IR Extender – 25 ft (7.32 m)	4006725
	Low Pass Filter, MoCA Model LPF 001	4023444

Ordering Information

Table 5.   Ordering Information

Model	Description	Part Number Set-Top with PowerKEY M-Card Module
Cisco Explorer 1640HDC	Cisco Explorer 1640HDC Digital-Only High Definition Interactive Set-Top with PowerKEY M-Card Interface (with 256 MB)	4027188
Cisco Explorer 1642HDC	Cisco Explorer 1642HDC Digital-Only High Definition Interactive Set-Top with PowerKEY M-Card Interface and MoCA (with 256 MB)	4028147
Cisco Explorer 1640HDC	Cisco Explorer 1640HDC Digital-Only High Definition Interactive Set-Top with PowerKEY M-Card Interface (with 512 MB)	4034699
Cisco Explorer 1642HDC	Cisco Explorer 1642HDC Digital-Only High Definition Interactive Set-Top with PowerKEY M-Card Interface and MoCA (with 512 MB)	4033737

Note: 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:
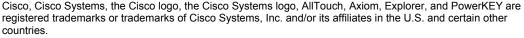
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