

## Cisco Explorer 4642HD and 4652HD High-Definition Set-Tops

Power, flexibility, and advanced security features highlight the Cisco® Explorer® 4642HD and 4652HD High-Definition Set-Tops. Additionally, these set-tops support Multimedia over Coax Alliance (MoCA™) technology, which lets subscribers use their cable wiring for LAN connections.

The 4642HD and 4652HD set-tops support tru2way™ (formerly OCAP™). 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. The 4652HD set-top also provides analog tuning.

**Figure 1.** Cisco Explorer 4652HD 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

- *PowerKEY® Conditional Access System* secures digital services using symmetric encryption algorithm for content protection
- *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 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 3



**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
- *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 (optional)

**Figure 2.** Cisco Explorer 4652HD Front Panel (image may vary from actual product and specification)



**Table 1.** Front Panel

Feature	Description
Controls	Vol+, Vol-, Ch+ Ch-, Select, Guide, Info, Exit, Settings, IR receiver, Power
Connections	USB 2.0 host, software-controlled
Indicators	Four-segment LED digits, Power icon, Message icon, HDTV, 5.1, Auto, 1080i/p, 720i/p, 480i/p
Color	Black, grey text
Branding	Cisco, model number, provision for customer brand

**Figure 3.** Cisco Explorer 4652HD Back Panel (image may vary from actual product and specification.)



**Table 2.** Back Panel

Feature	Description
Connections In	Cable In with MoCA
Connections-Interactive	USB 2.0 Host, RJ-45 Ethernet, software controlled
Connections Out	HDMI™ (1.3) with CEC, IEEE 1394 (4-pin), L/R Audio, Baseband Video, YPbPr, IR, S-Video, Optical Digital Audio, Coaxial Digital Audio Out, RF Out, Switched Outlet, see Note 1
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, 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
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, eCM MAC Address, RF MAC Address (on bottom panel)

## Product Specifications

**Table 3.** Product Specifications

Specification	Value
<b>Tuning and Decoding</b>	
Tuning	Analog (4652HD), QAM 64 or 256, In-Band 54 MHz–1 GHz, A/V in display, QPSK out-of-band (OOB) 70–130 MHz, DOCSIS 91–867 MHz, 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	Embedded PowerKEY
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
<b>Memory/Storage</b>	
RAM	Minimum of 128 MB, see Note 2
Flash	Minimum of 32 MB
NVM	Minimum of 16 KB
<b>Processors</b>	
Application/CPU	700 MHz (approximately 1000 dMIPs)
DOCSIS	200 MHz CPU
Network	400 MHz CPU
<b>Dimensions</b>	
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)
<b>Environment Specifications</b>	
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
Storage Temperature	14° to 158°F (-10° to 70°C)
Power Dissipation	50W maximum peak, ENERGY STAR Tier 1

**Table 4.** Accessories

Specification	Value	
<b>In Carton</b>		
	Power Cord, Quick Reference Guide	
<b>Sold Separately</b>		
	License, Axiom OCAP (tru2way) Middleware, non-DVR, see Note 2	<b>Part Number</b> 4014594
	SARA Software License, 1 year term	4020466
	SARA Software License, 2 year term	4020467
	AllTouch® AT8550 Remote Control	4006369
	AllTouch AT8650 Remote Control	4016237
	RGB Adapter and Cables	749790
	IR Extender – 12 ft (3.65 m)	1001808
	IR Extender – 24 ft (7.32 m)	4006725
	Low Pass Filter, MoCA Model LPF 001	4023444

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## Ordering Information

**Table 5.** Ordering Information

Model	Description	Part Number Set-Top with PowerKEY M-Card Module
Cisco Explorer 4642HD	Cisco Explorer 4642HD High Definition Interactive Set-Top (with 512 MB)	4034487
Cisco Explorer 4652HD	Cisco Explorer 4652HD High Definition Interactive Set-Top (with 512 MB)	4024131

**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 Middleware for tru2way (formerly OCAP) support is recommended only for the 4600 models that have a minimum of 256 MB RAM.
3. 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.

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Part Number 7016860 Rev B  
November 2009