Cisco Model 4682DVB MPEG-4 HD Hybrid Interactive Set-Top with Two Video Tuners

The Cisco® 4682DVB MPEG-4 High-Definition (HD) Set-Top offers subscribers the latest enhancements in cable television viewing. This set-top incorporates MPEG-4 Part 10/H.264 SD/HD technology and features robust interactive technology using the DOCSIS® 2.0+ compliant cable modem. The 4682DVB provides consumers a rich home entertainment experience with HD picture clarity, the movie theatre experience of surround sound, and the convenience of on-demand services such as Video on Demand. With two video tuners and a rear panel USB port, the set-top allows an external USB hard drive to be connected to provide DVR (Digital Video Recorder) services.

The 4682DVB is compliant with DVB-C standards, MPEG-2 and MPEG-4 standards, supports PAL-M and NTSC video formats, and is designed in compliance with the required safety, emissions, and immunity specifications (as per the mandatory laws that may be applicable to Cisco). With its smartcard reader, the set-top is built to support renewable security.

Figure 1.   Cisco Model 4682DVB MPEG-4 HD Interactive Set-Top (image may vary from actual product and specification)

Features

- Two DVB-C video tuners and a single cable modem tuner - allows for external hard drive to be connected via USB to provide DVR functionality
- Multi-format video decoder capable of high-definition MPEG-2, MPEG-AVC/H.264 decoding. Decoder supports 480i, 480p, 576i, 576p, 720p, 1080i, and 1080p25/30 formats
- Supports multiple picture output formats (480i, 480p, 576i, 576p, 720p, 1080i, and 1080p50/60) to allow optimum picture performance with both standard TVs and HDTVs
- Embedded DOCSIS 2.0+ compliant cable modem with downstream channel bonding capability. Requires re-assignment of video tuners for channel bonding
- Connect an HDTV to the set-top through the HDMI™ connector
- Digital audio output to connect easily to high-end audio equipment
- RCA outputs to connect to standard-definition TVs or VCRs
- Dual Ethernet ports for connection to cable modem and home network
- Dual USB 2.0 ports for connectivity

Figure 2. Cisco 4682DVB MPEG-4 HD Interactive Set-Top Front Panel (image may vary from actual product and specification)

Table 1. Front Panel Features

Feature	Description
Controls	5 buttons: ON/STANDBY, CH-, CH+, VOL-, VOL+
Clock Display	4-digit, 7-segment green display
Indicators	LED indicators for Power on/standby (green/red), cable modem connection (green), message (yellow), and recording (red)
Other	ISO7816 smartcard (side of unit) IR Receiver USB 2.0 Host port

Figure 3. Cisco 4682DVB MPEG-4 HD Interactive Set-Top Back Panel (image may vary from actual product and specification)

Table 2. Back Panel Connections

Feature	Description
Connections In	Cable In (75-Ohm female F-type connector)
Connections Out	Cable Out RF bypass (75-Ohm female F-type connector), HDMI out, Analog Component (YPbPr) out, Analog Composite Video, Audio L/R out, SPDIF Digital Audio outputs (coaxial and optical), dual Ethernet 10/100T Outputs, USB 2.0 Host Port
Power Connector	DC Input Connector for external power supply

Product Specifications

Table 3. Product Specifications

Specification	Value
Audio/Video Outputs	
Inputs and Outputs	• 75-Ohm female F-type connector RF input • 75-Ohm female F-type connector RF bypass output • HDMI (with CEC) output • Analog component (YPbPr) outputs • Analog Composite Video • Audio L/R outputs • Dual Digital Audio outputs - optical and coaxial • Two 10/100BASE-T Ethernet ports • Two USB 2.0 host ports

Specification	Value
HDMI Output with HDCP Copy Protection	• HDMI provides uncompressed digital video and audio in a simple, user-friendly connector • 3DTV extensions to allow intelligent connection to a 3D HDTV • HDMI combined with HDCP (High-Bandwidth Digital Content Protection) is designed to provide the optimal, secure connection to an HDTV set that supports the HDMI with HDCP interface
USB 2.0 High-Speed Data Output (front and rear panels)	Provides a 480 Mbps output for connection to devices such as external hard drives[*] [*] USB support requires middleware and application support for functionality
Tuning and Decoding	
Multi-Format Video Decoder	• Allows decoding and presentation of audio and video in both MPEG-2 and MPEG-4 part 10 formats • SD model Formats: MPEG-2 MP@ML, MPEG-4 Part 10 MP@ Level 3.0 and HP@ Level 3.0/4.0 • HD Model Formats: MPEG-2 MP@ML and MP@HL, MPEG-4 Part 10 MP@ Level 3.0/4.0, and HP@ Level 3.0/4.0 • Decoder supports multiple picture formats, including 480i, 576i, 480p, 720p, 1080i, and 1080p25/30
Multi-Format Audio Decoder	Enables tuning of digital audio MPEG-1 layer I/II, MP3, MPEG-2 layer II, AC3 Dolby™ Digital, MPEG-4 AAC audio formats
DOCSIS 2.0+ Cable Modem	• Allows IP-based, real-time, two-way communication between the set-top and the headend • The cable modem is integrated in the SoC and has a separate processor from the set-top processor to achieve optimum performance without impacting the set-top functions • DOCSIS 2.0+ modem allows up to three tuners to be bonded together for very high-speed downstream data rates to the set-top
10/100 Ethernet Outputs	• The first Ethernet port can provide high-speed cable modem data service when connected to a PC • The second Ethernet port provides connectivity to the main processor for multi-room applications (requires middleware support)
Powerful Graphics Engine	• Enables high-resolution 1280x720 HD graphics • 3D OpenGL ES 1.0 graphics compliant core
Memory/Storage	
Memory Configuration	• Base model contains: • 2 MB NOR flash memory • 128 MB NAND flash memory • 256 MB DDR3 RAM for system and applications
Processor	
Powerful Broadcom BCM7019 Processor	• Fast CPU (1100+ DMIPS) delivers quick tuning changes and on-screen response times • Additional dedicated 600 DMIPS processor on board for cable modem functions
Data Transmission and Tuner	
Video Tuners	Two
QAM 64 and 256 ITU J 83 Annex A/B Support	DVC-C (EN 300 429) compliant for QAM delivery and demodulation
RF Loop-Through (bypass)	The RF loop-through allows the analog channels to bypass directly to the TV
Conditional Access and Security/Operation System/Application	
Smartcard	ISO7816 Smartcard reader for renewable security
Conditional Access System	Compliant with DVB (ETR 289) Common Scrambling Algorithm
Rovi™ Corporation Copy Protection (optional, requires a separate agreement between the service provider and Rovi Corporation)	Allows service providers to add another layer of copy protection software designed to restrict unauthorized subscribers from making analog copies of digital transmissions
Power Supply	
Power Supply	External 100 - 240 VAC 60 Hz power supply with integral plug
Dimensions	
Product (W x D x H)	Approximately 292 mm x 140 mm x 38 mm (11.5 in. x 5.5 in. x 1.5 in.)

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