Cisco 8620DVB (CT8620) High-Definition Hybrid Set-Top

The Cisco® 8620DVB High-Definition Hybrid Set-Top for Virgin Media offers subscribers some of the latest enhancements in cable television viewing. It combines multiple compelling video services into one integrated unit. This three-video tuner digital video recorder (DVR) features MPEG-4 Part 10/H.264 standard-definition (SD) and HD capabilities and robust interactive capabilities using the DOCSIS® and EuroDOCSIS2.0+ cable modem. The Cisco 8620DVB (Figure 1) offers consumers a rich home entertainment experience with HD picture clarity, the movie theatre experience of surround sound, personalized recording with personal video recording (PVR) control, and the convenience of on-demand services such as video on demand (VoD).

The Cisco 8620DVB is compliant with DVB-C, MPEG-2, and MPEG-4 standards; supports PAL video formats; and complies with required safety, emissions, and immunity specifications (according to 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 8620DVB DVR

Note: Images in this document may vary from actual product and specification.

Features

- Multiformat video decoder capable of HD MPEG-2, MPEG-4 Advanced Video Coding (AVC), and H.264 decoding
- Support for multiple output formats (576i, 576p, 720p, 1080i, and 1080p60) to allow outstanding picture performance with both standard TVs and HDTVs
- Internal 500-GB hard disk drive
- Embedded DOCSIS and EuroDOCSIS 2.0 cable modem with support for downstream channel bonding
- Three DVB-C video tuners and separate data tuner for cable modem
- Connection from an HDTV to the set-top through the high-definition multimedia (HDMI) connector

- Digital audio output that allows easy connection to high-end audio equipment
- SCART output to connect to SD TVs or VCRs
- Ethernet port for connection to video source or connected home residential gateway
- Dual USB 2.0 ports for connectivity

Figure 2. Cisco 8620DVB DVR Front Panel

Front-Panel Features

Table 1 provides information on the features of the Cisco 8620DVB DVR front panel (Figure 2).

Table 1. Front-Panel Features

Feature	Description
Controls	10 buttons: Power, home, TV, back, increase volume, decrease volume, increase channel, decrease channel, select, and record
Indicators	7 LED indicators: Power or standby, connectivity status, remote control activity, 4 recording-in-process
Other	IR receiver

Figure 3. Cisco 8620DVB DVR Back Panel

Back-Panel Features

Table 2 provides information on the features of the Cisco 8620DVB DVR back panel (Figure 3).

Table 2. Back-Panel Features

Feature	Description
Connections In	• Cable in (75 ohm female IEC connector) • DC power
Connections out	• HDMI • TV SCART • S/PDIF digital audio (optical) • 10BASE-T and 100BASE-T Ethernet • Dual USB 2.0 host ports
Other	ISO7816 smartcard
Power switch	On or off rocker switch

Product Specifications

Table 3 provides product specifications for the Cisco 8620DVB DVR.

Table 3. Product Specifications

Specification	Value
Audio and Video Outputs	
Inputs and outputs	• 75 ohm female IEC connector RF input • HDMI output • TV SCART output • Digital audio output - optical type
HDMI 1.3a output with High-Bandwidth Digital Copy Protection (HDCP) and 3D television (3DTV) extensions	• HDMI provides uncompressed digital video and audio in a simple, user-friendly connector • HDMI combined with HDCP is designed to provide an outstanding, secure connection to an HDTV that supports the HDMI with HDCP interface • Support for 3DTV extensions from HDMI 1.4a
USB 2.0 high-speed data outputs rear panel	480-Mbps output for connection to devices such as external hard drives* * USB support requires middleware and application support for functionality.
Tuning and Decoding	
Multiformat video decoder	• Decoding and presentation of audio and video in both MPEG-2 and MPEG-4 Part 10 formats • SD formats: MPEG-2 MP@ML, MPEG-4 Part 10 MP@ Level 3.0, and HP@ Level 3.0 • HD formats: MPEG-2 MP@ML and MP@HL; MPEG-4 Part 10 MP@ Level 3.0, 4.0, and 4.1; and HP@ Level 3.0, 4.0, and 4.1 • Support for multiple decoding formats (576i, 576p, 720p, 1080i,or 1080p25) to allow exceptional picture performance with both SD TVs and HD TVs
Multiformat audio decoder	Tuning of digital audio MPEG-1 layer I and II, MP3, MPEG-2 layer II, AC3 Dolby Digital and MPEG-4 AAC audio formats
Embedded DOCSIS and EuroDOCSIS 2.0 cable modem with dedicated 324-MHz processor	• IP-based, real-time, two-way communications is supported between the set-top and the headend • The cable modem has a processor separate from the main CPU to achieve optimum performance without affecting set-top functions • Downstream channel bonding of tuners is supported to allow video over DOCSIS implementations
10BASE-T and 100BASE-T Ethernet output	The Ethernet port can provide high-speed cable modem data service when connected to a PC. The Ethernet port can also be used to provide connection to other in-home IP devices (this capability is application software dependent)
Powerful graphics engine	• OpenGL for Embedded Systems (OpenGL ES) 1.0 3D graphics engine • Support for high-resolution graphics up to 720 x 576 pixels
Memory and Storage	
DVR with 500-GB hard drive	• The 500-GB hard drive is designed to allow up to 250hours* of SD programs to be recorded and stored using DVR functions • Subscribers have complete control over watching, pausing, rewinding, replaying, and fast forwarding live programs using the remote control * The total program hours that can be stored depends on the format and data rate of the programming source.
Memory configuration	Base model contains: • 256-MB NAND flash memory for firmware • 2-MB boot flash • 512-MB RAM for system and applications • 128-KB electrically erasable programmable read-only memory (EEPROM)
Processor	
Broadcom BCM7019 system on chip with 32-bit MIPS processor	Fast main CPU (400 MHz or 1100 DMIPS) delivers quick tuning changes and on-screen response times
Data Transmission and Tuner	
QAM 64 and 256 ITU J.83 Annex A support	DVB-C (EN 300 429)-compliant for QAM delivery and demodulation

Specification	Value
Conditional Access and Security, Operation System, and Application	
Smartcard	ISO7816 Smartcard reader for renewable security
Conditional access system	• Compliant with Digital Video Broadcasting (DVB) Common Scrambling Algorithm (ETR 289) • Supports Nagravision conditional access system
Macrovision copy protection (optional; requires a separate agreement between the cable operator and Macrovision Corp.)	Allows cable service providers to add another layer of copy protection software, called Macrovision to restrict unauthorized subscribers from making analog copies of digital transmissions
Power Supply	
Power supply	External 230VAC 50 Hz power supply
Dimensions	
Product (W x D x H)	Approximately 415 mm x 245 mm x 45 mm (16.3 in. x 9.6 in. x 1.8 in.)

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