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Subscriber Networks

Explorer® 8450DVB™ HD Set-Top and IP Media Server

Description

The Explorer® 8450DVB™ High-Definition (HD) Set-Top and IP Media Server offers subscribers the latest enhancements in cable television viewing. It combines multiple compelling video services into one integrated unit. This multi-tuner PVR features MPEG-4 part 10 / H.264 SD/HD capability and features a robust interactive capability that uses the Euro-DOCSIS 2.0-compliant cable modem. This combination allows you to grow your subscriber base, increase customer satisfaction, and boost existing revenue streams. Consumers will get a rich home entertainment experience with eye-popping HD picture clarity, the movie theatre experience of surround sound, personalized recording with PVR control, and the convenience of on-demand services.

The 8450DVB can be configured as an IP multi-room media server. When configured this way, the server becomes the centerpiece of the in-home video distribution network, which is capable of receiving both DVB-C and IP video signals as well as distributing stereo content to other compatible set-tops within the home network.

The 8450DVB offers a range of middleware, conditional-access, and application options. In addition, the set-top can be configured with unique features such as a third video tuner, a dedicated Ethernet output for Multi-Room™ capability, and hard drive storage expansion through either USB or Serial ATA (SATA) outputs. The set-top is compliant with DVB-C, MPEG-2, and MPEG-4 part 10 standards and supports PAL video formats.

Features

The Explorer 8450DVB HD Set-Top and IP Media Server provides the features that your subscribers want and that you want to provide:

- Record up to three programs simultaneously while watching one of the programs in progress or a previously recorded program from the hard drive
- Provides two H.264 standard-definition (SD) decoders or one H.264 HD decoder to watch two H.264 programs at the same time in SD or a single H.264 program in HD
- Store programs on other devices using optional USB 2.0 or SATA ports
- Use dual SCART outputs to connect to TVs and VCRs
- Use the optical digital audio output to connect easily to high-end audio equipment
- Connect an HDTV to the set-top through the HDMI™ connector
- Supports multiple picture formats (576i, 576p, 720p, or 1080i) to allow optimum picture performance with both standard TVs and HDTVs
- Pause live television in SD and HD, MPEG-2 and MPEG-4 Part 10 (H.264)

Specifications

Processor and Hardware Specifications	
PVR with 160 GB Hard Disk Drive (other options include 80 GB, 250 GB, and 320 GB hard drives)	• Allows up to 80 hours* of MPEG-2 SD programs or up to 30 hours of MPEG-4 Part 10 HD programs to be recorded and stored using PVR functions • Gives subscribers complete control to watch, pause, rewind, replay, and fast-forward live programs using the remote control *The total program hours that can be stored depends upon the format and data rate of the programming source*
Powerful 32-bit Super-Scaler RISC Processor	Delivers fast tuning changes and on-screen response times
Configurable Memory Sizes	• Up to 32 MB flash memory • Up to 128 MB applications memory • Up to 128 MB video decoding memory • Up to 128 KB NVM
Powerful Graphics Engine	• Support for ARGB formats including ARGB1555, ARGB4444, RGB565, RGB888, ARGB8565, ARGB8888 • Enables high-resolution graphics up to 720 x 576 (PAL) while simultaneously scaling video • Includes hardware zoom in/out and bit-Blitter (BLT) functions for image manipulation and transition effects
Communications Protocols Specifications	
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 • 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
Multi-Format Audio Decoder	Enables tuning of digital audio MPEG-1 layer I/II, MP3, MPEG-2 layer II, MPEG-2 AAC, AAC-SBR and AC3 Dolby® Digital; MPEG-4 AAC+SBR 2-channel/5.1 channel, Dolby Digital EX, Pro Logic® II, MLP and DTS audio formats **Note:** *Some audio formats require additional licensing fees.*
Configurable Digital Service Tuners (True Picture-In-Picture) (Third Video Tuner Optional)	Allows MPEG-2 and MPEG-4 Part 10 channels to be tuned and displayed.
Independent Euro-DOCSIS 2.0 Cable Modem with 200 MHz Processor (Optional)	• Allows IP-based, real-time, two-way communications between the 8450DVB and the headend • The cable modem has a separate processor and dedicated memory from the set-top processor and memory to achieve optimum performance without impacting set-top functions
Software Specifications	
Conditional Access System (CAS)	Compliant with DVB (ETR-289) Common Scrambling Algorithm and compliant with Nagra NASC 1.2 security levels
CGMS-A Content Protection	Provides a copy control mechanism for content on the high-definition YPbPr output
Hard Disk Drive Security	Secure content on the hard disk drive with AES or T-DES scrambling. Can also use third-party CAS for HDD security

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Software Specifications (continued)	
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, that restricts unauthorized subscribers from making analog copies of digital transmissions
Inputs and Outputs	
ISO 7816 Card Reader	Smart card slot is available in either the front panel or the rear panel to accommodate the CAS smart card
Inputs and Outputs	• IEC 60169-2 female type RF input or F connector input • TV SCART and VCR SCART outputs • Baseband audio left and right outputs • Optical digital audio output • YPbPr analog component outputs (option) • HDMI digital output • USB 2.0 output (option) • 10/100 Ethernet output for connection to cable modem CPE (option) • Second 10/100 Ethernet output for multi-room connection to other supported client set-tops (option) • SATA interface for connection to external SATA hard drives (option)
HDMI Output with HDCP Copy Protection	High-Definition Multimedia Interface (HDMI) provides uncompressed digital video and audio in a simple, user-friendly connector. HDMI combined with HDCP (High Bandwidth Digital Content Protection) provide the optimal, secure connection to an HDTV set that supports the HDMI with HDCP interface
YPbPr Analog Component Outputs (Option)	Allows quick and easy connection to most HDTV sets
USB 2.0 High-Speed Data Outputs (Option)	Provides a 480 Mbps output for connection to devices such as external hard drives
External SATA Connector (Option)	Provides a high-bandwidth connection to an external SATA hard disk drive for expanded storage space for recorded programs
In-Home Video Distribution (Option)	Provides a dedicated Ethernet output to interface with other compatible Ethernet-enabled set-tops to share IP-based content among the set-tops in the home network
RF Bypass (Option)	Allows the RF input to loop directly through to the RF output
Physical Specifications	
Product dimensions (W x D x H)	360 mm by 257 mm by 60 mm
Product weight	3.8 kg
Carton Dimensions (W x D x H)	45.1 cm x 34.3 cm x 14 cm
Internal 185 VAC to 265 VAC at 50Hz and 60Hz Power Supply with EU Plug	Compatible with most European countries. Includes a detachable power cord
Accessory Cables (Option)	SCART, RF, HDMI, analog component, or baseband cables are available as an option with the set-top

Rear Panel Connectors