

Cisco Explorer 9800 Multi-Screen Gateway Series



The Cisco® Explorer® 9800 Multi-Screen Gateway Series provides a Videoscape-Ready solution designed to expand the entertainment experience in existing QAM networks, including viewing and distributing multiple live, on-demand, online, and recorded video content services to other QAM, IP or IP/QAM hybrid managed devices.

The 9800 Multi-Screen Gateway Series provides a powerful, flexible platform that enables customers to capitalize on existing infrastructure while providing the capability of supporting a migration to IP Video and the full Videoscape experience.

The 9800 Multi-Screen Gateway Series provides a *no-regrets* flexible hybrid front end capable of supporting up to 6 QAM video streams and an 8x4 DOCSIS® 3.0 IP video pipeline, allowing it to function in current and future HFC architectures*.

The home networking capabilities of the 9800 Multi-Screen Gateway Series are further enhanced by a dual stream HD transcoder*. When paired with a Cisco DOCSIS 3.0 residential gateway and Cisco soft clients, the 9800 Multi-Screen Gateway Series can distribute transcoded content (live, on-demand, online, or recorded) to unmanaged CE devices using the appropriate format and resolution.

The 9800 Multi-Screen Gateway Series supports Multimedia over Coax Alliance (MoCA™), Digital Living Network Alliance (DLNA®) technology, Digital Transmission Content Protection over IP (DTCP-IP), and Digital Rights Management (DRM)* to deliver multimedia content securely to IP devices in the home.

*Optional software required

Features

Flexible Front End

- 6 video stream support concurrent with 2x4 DOCSIS 3.0
- 6 video stream support concurrent with 8x4 DOCSIS 3.0 (optional)

Enables More Realistic Viewing Experience

- 1080p60 Output resolution
- Full HD 3DTV with MVC support provides 1080p60 frames-per-second for each eye (optional software)

Supports Future UI and Application Needs

- 3000 dMIPS Application Processor for high performance applications
- Graphics Processor with Open GL ES 2.0

tru2way and Network Utilization Enhancements

- Axiom DVR Middleware supports tru2way™ applications (optional software)
- Cisco Reference TV Navigator (RTN) software provides native navigator and user interface in a non-tru2way environment (optional software)
- M-Card™ Interface uses a Multi-Stream CableCARD for separable security
- DOCSIS Set-top Gateway (DSG) provides for command and control (optional software)

Transcoding Features (available on Transcoding Models with optional software)

Table 1. Dual HD Transcoding

Function	Input Format	Output Format
Real-Time HD to HD / SD transcode	HD - (H.264, MPEG-2)	HD - (H.264, MPEG-2)
	HD - (H.264, MPEG-2)	SD - (H.264, MPEG-2, MPEG-4 SP)
Real-Time Dual HD transcode	HD - (SVC base layer, MVC, 1080p60 or lower resolution H.264, MPEG-2)	<ul style="list-style-type: none"> • 1440x1080i and 480p30, or • 720p30 and 480p30, or • 720p30 and 720p30
Real-Time and faster than Real-Time SD to SD transcode	SD - (H.264, MPEG-2, MPEG-4 SP)	SD - (H.264, MPEG-2, MPEG-4 SP)

DVR and Home Networking Features

- *6 stream DVR* allows up to 6 programs to be recorded simultaneously
- *1 TB Internal Hard Drive Disk* stores up to 124 hours of HD programs or 560 hours of SD programs (base Hard Drive Disk configuration, optional Hard Drive Disk configurations available)
- *MoCA 2.0 Connection* enables an IP LAN connection over coaxial cable, which minimizes the need for new wiring in the home
Note: MoCA 2.0 certification will not be completed at the time of the 9800 Product Family launch. However, MoCA1.1 functionality will be fully certified.
- *Digital Transmission Content Protection over IP (DTCP-IP)* provides encrypted content protection, such as “copy-one-generation” or “copy-never” based upon content’s copy control information (CCI), when output through an IP connection to an authenticated device
- *Whole Home DVR* enables sharing and managing of video services throughout the home to other connected DVRs, set-tops, and consumer electronic devices using DLNA standards based connection and security technologies (optional software)
- *Personal media player* enables display of photos and playback of video and audio from DLNA standards based home network connected devices (optional software)

Panel Overview

Figure 1. Cisco Explorer 9845 Video Gateway Front Panel (image may vary from actual product and specification)



Table 2. Front Panel Features

Feature	Description
Controls	Mechanical Power button
Indicators	Four 7-segment digits, Power (icon), Message (icon), Record (icon), Home Networking (icon), HDTV, 5.1, Auto, 1080i p, 720i p, 480i p, software controlled
Color	Black finish, black lens, black buttons, gray text
Branding	Cisco, model number, provision for service provider branding, HDTV Cable

Figure 2. Cisco Explorer 9845 Video Gateway Back Panel (image may vary from actual product and specification)



Table 3. Back Panel Features

Feature	Description
Connections In	Cable In
Connections Out	HDMI™ 1.4a with CEC, YPbPr, Optical Digital Audio, Video, L/R Audio, IR, TV Cable Out (optional)
Output Resolutions	1920 x 1080p 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
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
Connections-Interactive	M-Card Interface, eSATA, USB 2.0 Host, RJ-45 Ethernet, DTCP-IP on Ethernet, Cable In with MoCA, DTCP-IP on MoCA, software controlled
Power Input	12 VDC, 3.0A External power supply
Labels	Serial Number, RF MAC Address, eCM MAC Address, Cisco, FCC, UL, Shock Warning, CATV Converter, Made In OPTIONAL (if M-Card module is included): M-Card Serial Number, M-Card MAC Address, Removal evident M-Card label
Labels-Bottom	Cisco, Model, Assembly P/N, Rev, Date, FCC, RSA

Product Specifications

Table 4. Tuning and Decoding

Feature	Description
DVR	Record up to 6 programs. Play or stream up to 8 programs. Trick modes available for all recorded and streaming content.
Picture in Picture	Digital, HD, software controlled
Tuning	1 GHz Full-Band Capture with up to 8 QAM 1024/256/128/64 N=6 for video N=2 for DOCSIS, QPSK out-of-band (OOB) 70-130 MHz, MoCA 500 MHz - 1.65 GHz
Video Decoders	Dedicated Dual HD Advanced Video Decoders, H.264/AVC up to HP@L4.2 (1080p60), MPEG-2 up to MP@HL, MPEG-4 part 2 SP and ASP, MPEG-1, single SVC, single MVC
Audio Decoder	Dedicated 1500 dMIPS DSP CPU Processor, AAC LC, AAC LC+SBR Level 2, AAC HE Level 2, AAC HE Level 4, Dolby™ Digital, Dolby Digital Plus, MPEG 1 & 2, MP3, WMA, software controlled
Conditional Access	Separable security with M-Card interface OPTIONS: PowerKEY M-Card Module, non-Cisco M-Card Module, embedded PowerKEY security
Encoders	Audio BTSC for TV Cable (RF) Output, software controlled (optional)
Graphics Engine	3 Dimensional graphics, up to 1920x1080p60 resolution, 32 bit (16 million) color, OpenGL ES2.0-compatible, software controlled
DAVIC	DAVIC 1.2, QPSK FDC at 1.5 Mbps, QPSK RDC at 1.5 Mbps, software controlled
DOCSIS	OOB and Interaction via DOCSIS 3.0, DOCSIS Set-top Gateway, Baseline Privacy Interface, software controlled

Table 5. Memory and Storage

Feature	Description
Unified RAM	1 GB DDR3 OPTIONAL: 2 GB, 3 GB
NAND Flash	256 MB OPTIONAL: 512 MB, 1 GB, 2 GB, 4 GB
CPU NVM	16 KB
Hard Drive	1 TB, Internal SATA II, 6 Gbps OPTIONAL: 500 MB, 2 TB
Boot Partition on HDD	Yes, see Note 1.
Hard Drive Expansion	External SATA III (eSATA), 6 Gbps, on rear panel, software controlled

Table 6. Silicon

Feature	Description
Main SOC	Broadcom 7425
Front End	Broadcom 3383 and/or Broadcom 3128

Table 7. Dimensions

Feature	Description
Product (HxWxD)	13.0 in. x 9.0 in x 2.25 in (330 mm x 230 mm x 57 mm)
Product Weight	6 lbs, 2.2 Kgs
Carton (HxWxD)	3 units per carton: dimensions 14.9 in x 13.2 in x 9.8 in, 108 units per pallet: dimensions 5 in x 48 in x 40 in
Total Weight	19 lbs

Table 8. Operating Conditions

Feature	Description
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
Power Dissipation	35 W maximum
ENERGY STAR	V3 Compliant

Ordering Information

Table 9. Accessories

Delivery Method	Description	Part Number
In Carton	Power Supply, Quick Reference Guide, HDMI-to-HDMI Cable	N/A
Sold Separately		
	PowerKEY® Multi-Stream CableCARD PKM803	4029532
	AllTouch AT8560 Remote Control	4016237
	HDMI-to-HDMI Cable (additional or replacement)	1002048
	YPbPr and L/R Cable Set	1000944
	IR Extender (3.5 mm)—12 ft	1004648

Table 10. Gateways

Model	Description	Part Number
Explorer 9845HDC	9845HDC, 1 GB DRAM, 1TB HDD, 6 QAM video streams shared with DOCSIS 3.0, Transcoding, Gigabit Ethernet, MoCA 2.0, PowerKEY M-Card	CBLSTB-4042148-K9
Explorer 9865HDC	9865HDC, 1 GB DRAM, 1TB HDD, 6 QAM video streams AND 8x4 DOCSIS 3.0, Transcoding, Gigabit Ethernet, MoCA 2.0, PowerKEY M-Card, capacitive touch buttons	CBLSTB-4043034-K9
Explorer 9865HD	9865HD, 1 GB DRAM, 1TB HDD, 6 QAM video streams AND DOCSIS 3.0, Transcoding, Gigabit Ethernet, MoCA 2.0, Embedded PowerKEY	CBLSTB-4042150-K9

The models listed above include either a PowerKEY M-Card Module or Embedded PowerKEY. Contact your account representative for information to order the gateway with an alternate M-Card Module.

Note:

Boot Partition provides space on the hard drive for storing the gateway's core software. Additional non-core application storage space may be made available on the hard drive. The Boot Partition is analogous to a portion of the role traditional flash memory serves on non-hard drive gateways.

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For More Information

Read more about the [Cisco Explorer 9800 Multi-Screen Gateway Series](#), or contact your local account representative.

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