

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

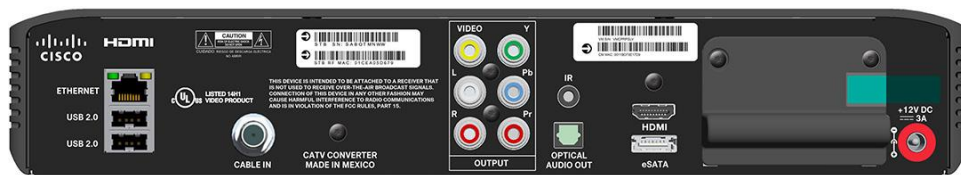
Figure 1. Cisco Explorer 9845 Video Gateway Front Panel (image may vary from actual product and specification)



**Table 2.** Front Panel Features

Feature	Description
<b>Controls</b>	Mechanical Power button
<b>Indicators</b>	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
<b>Color</b>	Black finish, black lens, black buttons, gray text
<b>Branding</b>	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
<b>Connections In</b>	Cable In
<b>Connections Out</b>	HDMI™ 1.4a with CEC, YPbPr, Optical Digital Audio, Video, L/R Audio, IR, TV Cable Out (optional)
<b>Output Resolutions</b>	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
<b>Output Control</b>	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
<b>Connections-Interactive</b>	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
<b>Power Input</b>	12 VDC, 3.0A External power supply
<b>Labels</b>	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
<b>Labels-Bottom</b>	Cisco, Model, Assembly P/N, Rev, Date, FCC, RSA

## Product Specifications

**Table 4.** Tuning and Decoding

Feature	Description
<b>DVR</b>	Record up to 6 programs. Play or stream up to 8 programs. Trick modes available for all recorded and streaming content.
<b>Picture in Picture</b>	Digital, HD, software controlled
<b>Tuning</b>	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
<b>Video Decoders</b>	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
<b>Audio Decoder</b>	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
<b>Conditional Access</b>	Separable security with M-Card interface OPTIONS: PowerKEY M-Card Module, non-Cisco M-Card Module, embedded PowerKEY security

Feature	Description
<b>Encoders</b>	Audio BTSC for TV Cable (RF) Output, software controlled (optional)
<b>Graphics Engine</b>	3 Dimensional graphics, up to 1920x1080p60 resolution, 32 bit (16 million) color, OpenGL ES2.0-compatible, software controlled
<b>DAVIC</b>	DAVIC 1.2, QPSK FDC at 1.5 Mbps, QPSK RDC at 1.5 Mbps, software controlled
<b>DOCSIS</b>	OOB and Interaction via DOCSIS 3.0, DOCSIS Set-top Gateway, Baseline Privacy Interface, software controlled

**Table 5.** Memory and Storage

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

**Table 6.** Silicon

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

**Table 7.** Dimensions

Feature	Description
<b>Product (HxWxD)</b>	13.0 in. x 9.0 in x 2.25 in (330 mm x 230 mm x 57 mm)
<b>Product Weight</b>	6 lbs, 2.2 Kgs
<b>Carton (HxWxD)</b>	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
<b>Total Weight</b>	19 lbs

**Table 8.** Operating Conditions

Feature	Description
<b>Placement</b>	Locate with at least 2 inches of open space above and on each side
<b>Room Temperature</b>	32 to 105°F (0 to 40°C) during operation
<b>Power Dissipation</b>	35 W maximum

## Ordering Information

**Table 9.** Accessories

Delivery Method	Description	Part Number
<b>In Carton</b>	Power Supply, Quick Reference Guide, HDMI-to-HDMI Cable	N/A
<b>Sold Separately</b>		
	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
<b>Explorer 9845HDC</b>	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
<b>Explorer 9865HDC</b>	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
<b>Explorer 9865HD</b>	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.

Read more about the [Cisco End-of-Life Policy](#).

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