



# Release Notes for Cisco uMG9820 QAM Gateway, Release 1.0

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**February 25, 2004**

These release notes described the features and hardware and software requirements for Release 1.0 of the Cisco uMG9820 QAM Gateway.

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**Tip**

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Use this document online. This document provides hyperlinks to related documents and websites.

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## Document History

Document Version	Date	Notes
1	02/25/2004	This document was first published.



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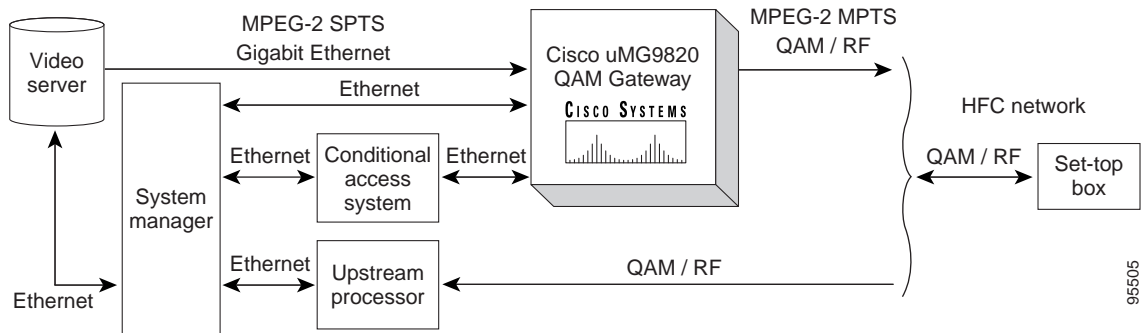
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# Product Description

The Cisco uMG9820 QAM Gateway receives MPEG-2 Single Program Transport Streams (SPTSs) encapsulated in UDP/IP datagrams over Gigabit Ethernet (GE). The MPEG-2 SPTS packets are processed and remultiplexing into MPEG-2 Multi Program Transport Streams (MPTSs). The MPTS packets are in turn routed to QAM/RF cards for distribution over the CATV network to downstream connected set-top boxes (STB). (See [Figure 1](#).) The QAM cards accept up to four MPTSs, and output up to four QAM-modulated and RF-upconverted signals. The modulation is 256QAM; there are two RF ports per QAM card, and two QAM channels per port.

**Figure 1** Typical VOD Network using the Cisco uMG9820 QAM Gateway



The Cisco uMG9820 incorporates a number of standard network protocols for management and control, including SNMP for management and configuration, TFTP for firmware upgrades, DHCP for dynamic address assignment, and Telnet for command-line configuration options.

# System Requirements

This section describes system requirements for the Cisco uMG9820 QAM Gateway, Release 1.0.

## Hardware Supported

Table 1 shows hardware compatible with the Cisco uMG9820 QAM Gateway.

*Table 1 Hardware Compatibility*

	Product Number	Description	Notes
uMG9820 QAM Gateway	uMG9820-SYS-AC	Minimum Configuration	<ul style="list-style-type: none"> <li>• 2 QAM cards</li> <li>• 1 processor card</li> <li>• 2 power supplies</li> <li>• 1 chassis</li> </ul>
QAM Card	uMG9820-QC42B	Cisco uMG9820 QAM Gateway QAM Card	2 additional QAM cards can be added to the minimum configuration.
	uMG9820-QC42B=	Cisco uMG9820 QAM Gateway QAM Card (spare)	
Processor Card	uMG9820-PROC=	Cisco uMG9820 QAM Gateway Processor Card (spare)	
Power Supply	PWR-uMG9820-AC=	Cisco uMG9820 QAM Gateway Power Supply (spare)	
Fan Assembly	uMG9820-FAN=	Cisco uMG9820 QAM Gateway Fan Assembly (spare)	
SFPs	GLC-SX-MM=	1000BASE-SX SFP	
	GLC-LX-SM=	1000BASE-LX SFP	
	CWDM-SFP-XXXX=	Cisco CWDM SFP	XXXX=wavelength

## Software Supported

The Cisco uMG9820 QAM Module currently supports only Release 1.1.9. The image for this release (umg9820-119-1.tar.qz) is posted on Cisco.com at the following URL:

<http://www.cisco.com/cgi-bin/tablebuild.pl/umg9820>

## Determining the Software Version

To determine the version of software running on a Cisco uMG9820, log in to the QAM Gateway and enter the **show version EXEC** command:

```
umg9820> show version
```

```
Shell v1.1.9
```

```
Compiled 21-Nov-03 17:53 by root on beren 2.4.18-3 unknown
```

## New and Changed Information

This is the initial release of the Cisco uMG9820 QAM Gateway.

## New MIBs

The following new MIB is supported:

CISCO-VIDEO-NETWORK-MIB

To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL:

<http://www.cisco.com/go/mibs>

## Limitations and Restrictions

### Gigabit Ethernet and Fast Ethernet Ports

- Gigabit Ethernet (GE) ports do not respond to pings, but do respond to ARP requests.
- GE ports do not respond to a request to start a Telnet session. However, the Fast Ethernet (FE) network management system (NMS) port, Fast Ethernet 0/1, is fully functional and will respond.
- Subnetting is not currently supported on GE and FE interfaces.

### CAS (Conditional Access System)

The CAS port (FastEthernet 0/2) is not fully functional. It only supports only pings and ARP requests.

## Caveats

The following are the key caveats for the Cisco uMG9820 QAM Gateway. Workarounds are provided where applicable.

### Open Caveats

This section describes possible unexpected behavior by Software Release 1.1.9 running on Release 1.0 of the Cisco uMG9820.

- CSCec12620

Currently, it is not possible to copy a configuration file directly into the startup config from a TFTP server. The following message appears:

```
% Importing to startup-config not supported.  
% Try importing to running-config and then copying  
% running-config to startup-config.
```

- CSCec12631  
It is not possible to set the severity of messages logged to the console.
- CSCec51044  
The user can set the logging severity level, but the result of the command is not displayed in the running configuration and is therefore not remembered following a power cycle.
- CSCec54541  
SNMP: When the CLI is used to set the “systemName” parameter, the hostname is not updated.
- CSCec55019  
Following a short (about one second) loss of a link on Gigabit Ethernet 1, it takes about 30 seconds to recover.
- CSCec55061  
Alarms indicating link loss on Gigabit Ethernet 2 is not reported to the command line.
- CSCec57857  
SNMP: After the trap configuration is changed to version 1, the Cisco uMG9820 still reports version 2c traps until the system is reloaded.
- CSCec57963  
SNMP: The RFC 1213 interface index entry “ifLastChange” currently is not supported.
- CSCec57973  
SNMP: The RFC 1213 interface index entry “ifInUnknownprotos” currently is not supported.
- CSCec61294  
Network jitter above 70 milliseconds causes audio/video anomalies.
- CSCec84570  
The MPEG analyzer indicates that each audio stream in a program is missing a packet when the stream starts. These continuity count errors occur within the first second only.
- CSCec84636, CSCec87430  
The audio may be garbled for the first 5–10 seconds when a stream starts. It may also be garbled for 5–10 seconds after returning to normal “Play” mode from “Pause,” “Fast Forward,” and “Rewind.”
- CSCec87469  
With an nCube server, occasionally there is no audio when exiting trick modes.  
In about one in 15 times when an nCube server is used, the audio part of the stream is muted after returning to “Play” from “Pause,” “FF,” and “RW” modes.
- CSCed01156  
The inactive timeout is used to indicate that no IP packets for a given session have been received for the timeout period (the default is 100 milliseconds). This is the first timeout that occurs when IP packets for a session are stopped. This timeout currently is not configurable by the user.
- CSCed01458  
The current configuration of the session timeouts (“inactive,” “active,” and “queued”) is not stored in the running configuration, and is therefore not remembered following a power cycle. To see these timeouts, use the command **show int g0/1 video psi**.

- CSCed01480

TSID numbers are limited to the range 1–32767. The range should be 1–65535. The TSID is a two-byte unsigned integer that uniquely identifies an MPEG-2 transport stream. It is included in the PAT (program association table).
- CSCed15566

When using a Kasenna VoD server, a QAM channel is oversubscribed with only 10 3.7224 Mbps streams. The maximum bandwidth for 256QAM is limited to 37.6 Mbps in the Cisco uMG9820 QAM Gateway. The bursty streams from a Kasenna server cause an error in the bit-rate calculation, which results in a “QAM is oversubscribed” error. If a Kasenna server is used, do not use more than nine 3.75-Mbps streams per QAM channel.
- CSCed29522

When the **enable password** command is used, a password does not appear in the running configuration, and a password is not required to enter enable mode.
- CSCed66558

Currently, UDP port mapping is constrained to the default UDP port mapping.
- CSCed72975

When using the TAB key to complete **running-config** or **startup-config** in a **copy** command, the TAB key does not autocomplete the name of the first configuration file. This does not affect normal operation.
- CSCed76018

GE and FE interfaces are listed twice in configuration files. GE and FE configuration commands are divided between both instances. However, while cosmetically incorrect, this does not affect operation. All the configuration commands for the GE and FE ports are listed in the configuration files before the QAM interface configurations are listed.
- CSCed76020

The current maximum network jitter limit is not stored in the running configuration, and is therefore not remembered following a power cycle. The default is 100 milliseconds. If network jitter for the specified session exceeds this limit, an error message is generated. To see this limit, use the command **show int g0/1 video**.
- CSCed79795

In personal video recorder (PVR) mode, occasionally when a video stream is resumed after a “Rewind,” the stream will have a large number of PCR errors, and no audio will be played on the Motorola DCT-2000. Also, occasionally during PVR mode, video is not displayed on some monitors.
- CSCed79801

On some monitors, when a session starts up (either initially or following a link failure), the video loses color or colors shift for the first 10–15 seconds. This does not happen with all video monitors.
- CSCed79828

Counters for “Continuity Errors,” “Jitter Underflow,” and “Jitter Overflow,” as displayed by the command **show int g0/1 video session UDP\_port\_number**, are not operational.

# Related Documentation

## Platform-Specific Documents

Following are documents containing information specific to the Cisco uMG9820 QAM Gateway. You can access the URLs listed for each document on Cisco.com on the World Wide Web.

- *Quick Start Guide—Rack-Mounting the Cisco uMG9820 QAM Gateway*  
<http://www.cisco.com/univercd/cc/td/doc/product/cable/vod/umg9820/9820rkmt.htm>
- *Cisco uMG9820 QAM Gateway Installation and Configuration Guide*  
<http://www.cisco.com/univercd/cc/td/doc/product/cable/vod/umg9820/9820icg/index.htm>
- *Cisco uMG9820 QAM Gateway Regulatory Compliance and Safety Information*  
<http://www.cisco.com/univercd/cc/td/doc/product/cable/vod/umg9820/9820rcsi.htm>
- *Removing and Replacing a Processor Card in the Cisco uMG9820 QAM Gateway*  
<http://www.cisco.com/univercd/cc/td/doc/product/cable/vod/umg9820/20profu.htm>
- *Removing and Replacing a QAM in the Cisco uMG9820 QAM Gateway*  
<http://www.cisco.com/univercd/cc/td/doc/product/cable/vod/umg9820/20qamfru.htm>
- *Removing and Replacing a Fan Assembly in the Cisco uMG9820 QAM Gateway*  
<http://www.cisco.com/univercd/cc/td/doc/product/cable/vod/umg9820/20fanfru.htm>
- *Removing and Replacing a Power Supply in the Cisco uMG9820 QAM Gateway*  
<http://www.cisco.com/univercd/cc/td/doc/product/cable/vod/umg9820/20profu.htm>

## Solution Documentation

This document, and *Cisco Gigabit-Ethernet Optimized VoD Solution Design and Implementation Guide* are available under Cisco Gigabit-Ethernet Optimized VoD Solution, Release 1.1, at the following URL:

[http://www.cisco.com/univercd/cc/td/doc/solution/voodoos/geopt1\\_1/index.htm](http://www.cisco.com/univercd/cc/td/doc/solution/voodoos/geopt1_1/index.htm)

## Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

### Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

<http://www.cisco.com/univercd/home/home.htm>

You can access the Cisco website at this URL:

<http://www.cisco.com>

International Cisco websites can be accessed from this URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

## Ordering Documentation

You can find instructions for ordering documentation at this URL:

<http://www.cisco.com/univercd/cc/td/doc/sunblock/pdi.htm>

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Ordering tool:

<http://www.cisco.com/en/US/partner/ordering/index.shtml>

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

## Documentation Feedback

You can submit e-mail comments about technical documentation to [bug-doc@cisco.com](mailto:bug-doc@cisco.com).

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems  
Attn: Customer Document Ordering  
170 West Tasman Drive  
San Jose, CA 95134-9883

We appreciate your comments.

## Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour-a-day, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance. If you do not hold a valid Cisco service contract, please contact your reseller.

## Cisco TAC Website

The Cisco TAC website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year. The Cisco TAC website is located at this URL:

<http://www.cisco.com/tac>

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

<http://tools.cisco.com/RPF/register/register.do>



## Opening a TAC Case

Using the online TAC Case Open Tool is the fastest way to open P3 and P4 cases. (P3 and P4 cases are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using the recommended resources, your case will be assigned to a Cisco TAC engineer. The online TAC Case Open Tool is located at this URL:

<http://www.cisco.com/tac/caseopen>

For P1 or P2 cases (P1 and P2 cases are those in which your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

## TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

**Priority 1 (P1)**—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

**Priority 2 (P2)**—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

**Priority 3 (P3)**—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

**Priority 4 (P4)**—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

## Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- Cisco Marketplace provides a variety of Cisco books, reference guides, and logo merchandise. Go to this URL to visit the company store:

<http://www.cisco.com/go/marketplace/>

- The Cisco *Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the Cisco Product Catalog at this URL:

<http://cisco.com/univercd/cc/td/doc/pact/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press online at this URL:  
<http://www.ciscopress.com>
- *Packet* magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:  
<http://www.cisco.com/packet>
- *iQ Magazine* is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:  
<http://www.cisco.com/go/iqmagazine>
- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:  
<http://www.cisco.com/apt>
- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:  
<http://www.cisco.com/en/US/learning/index.html>

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