



## Preface

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This guide documents processes and procedures for user-level hardware troubleshooting on Cisco uBR10012 universal broadband routers that support Cisco IOS Release 12.2SC and future releases. For complete configuration instructions, please refer to the *Cisco uBR10012 Universal Broadband Router Software Configuration Guide* and the documents listed in the “[Related Documentation](#)” section on page viii.

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**Note**

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For information about troubleshooting Cisco uBR10012 universal broadband routers that support Cisco IOS Release 12.3BC and further BC releases, refer to the *Cisco uBR10012 Universal Broadband Router Troubleshooting Guide*

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## Purpose

The Cisco uBR10012 router provides data and Voice over IP (VoIP) services to cable modems (CMs) and customer premises equipment (CPE) devices over a cable TV (CATV) network, supplying high-speed Internet and voice connectivity over the coaxial cable that provides TV and other signals. Many of the Cisco uBR10012 modules are available in redundant configurations, so that the failure of one module does not affect systems operations. This guide provides troubleshooting steps for a failed component that you can take before system failure occurs and before intervention from higher level support agencies becomes necessary.

## Audience

To benefit from this guide, you must be experienced using Cisco IOS and have some responsibility for installing, configuring, or operating the Cisco uBR10012 router. Knowledge of basic cable data network operations and of the Data-Over-Cable Service Interface Specifications (DOCSIS), which define the transmission of data and other services over a coaxial cable TV network.

# Document Organization

The sections of this guide are as follows:

Chapter	Description
<a href="#">Chapter 1, “Basic Troubleshooting Tasks and Startup Issues”</a>	Basic procedures that users should perform before undertaking a detailed troubleshooting analysis of the Cisco uBR10012 router or logging a case with the Cisco Technical Assistance Center (TAC).
<a href="#">Chapter 2, “PEM Faults and Fan Assembly Failures”</a>	Methods for troubleshooting faults involving the Cisco uBR10012 Power Entry Modules (PEMs) and blower modules.
<a href="#">Chapter 3, “Troubleshooting PRE Modules”</a>	How to troubleshoot Performance Routing Engine (PRE) modules. It provides information on troubleshooting PRE fault states, the management Ethernet port, and the serial port.
<a href="#">Chapter 4, “Troubleshooting Line Cards and Interface Modules”</a>	Troubleshooting faults for cable interface line cards, TCC+ card, DTCC card, HHGE line card, and SIP and SPA interface modules.
<a href="#">Chapter 5, “Replacing or Recovering Passwords”</a>	How to recover a lost enable or console login password, and how to replace a lost enable secret password on the Cisco uBR10012 router.
<a href="#">Appendix A, “Recommended Tools and Test Equipment”</a>	A list of basic tools and test equipment necessary to perform maintenance and troubleshooting tasks on the Cisco uBR10012 router.

## Related Documentation

When troubleshooting the Cisco uBR10012 router, you should use the *Cisco uBR10012 Universal Broadband Router Troubleshooting Guide* with the following documents:

- [Cross-Platform Release Notes for Cisco Universal Broadband Routers in Cisco IOS Release 12.2SC](#)—Provides the most up-to-date information about software version requirements for using the router. It also provides information about bugs and workarounds. See the following URL:

[http://www.cisco.com/en/US/docs/cable/cmts/release/notes/12\\_2sc/122sc\\_cmts\\_rn.html](http://www.cisco.com/en/US/docs/cable/cmts/release/notes/12_2sc/122sc_cmts_rn.html)

- [Cisco uBR10012 Universal Broadband Router Software Configuration Guide](#)—Contains detailed information on the configuration and administration of the Cisco uBR10012 router. See the following URL:

<http://www.cisco.com/en/US/docs/cable/cmts/ubr10012/configuration/guide/scg.html>

- [Cisco uBR10012 Universal Broadband Router Hardware Installation Guide](#)—Contains information about the hardware of the Cisco uBR10012 router, how to install the router, connect its cables, and start the system up for the first time. See the following URL:

<http://www.cisco.com/en/US/docs/cable/cmts/ubr10012/installation/guide/hig.html>

For more information about the IOS software that runs on the Cisco uBR10012 router, see the Cisco IOS command reference books and configuration guides:

- [Cisco Broadband Cable Command Reference Guide](#)—Describes the cable specific commands used on the Cisco uBR10012 router. See the following URL:

[http://www.cisco.com/en/US/docs/ios/cable/command/reference/cbl\\_book.html](http://www.cisco.com/en/US/docs/ios/cable/command/reference/cbl_book.html)

- [Cisco IOS Release 12.2 Configuration Guides and Command References](#)—Describes the commands and configuration used in Cisco IOS Release 12.2. See the following URL:

[http://www.cisco.com/en/US/docs/ios/12\\_2/ip/configuration/guide/fipr\\_c.html](http://www.cisco.com/en/US/docs/ios/12_2/ip/configuration/guide/fipr_c.html)

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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