



# **UEDiag User's Guide**

## **7400/3400/8400 Series Adapters and Adapters based on 57xxx Controllers**

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# Preface

## Intended Audience

This document is for administrators who want to use the UEDiag utility.

## What Is in This Guide

The following information are included in this guide:

- [“Introduction” on page 1](#)
- [“Operating Environment” on page 2](#)
- [“Command Line Options List” on page 5](#)

## Related Materials

For information about downloading documentation from the QLogic Web site, see [“Downloading Updates” on page vii](#).

## Documentation Conventions

This guide uses the following documentation conventions:

- **NOTE** provides additional information.
- Text in [blue](#) font indicates a hyperlink (jump) to a figure, table, or section in this guide, and links to Web sites are shown in [underlined blue](#). For example:
  - ❑ [Table 9-2](#) lists problems related to the user interface and remote agent.
  - ❑ See [“Installation Checklist” on page 6](#).
  - ❑ For more information, visit [www.qlogic.com](http://www.qlogic.com).
- Text in **bold** font indicates user interface elements such as a menu items, buttons, check boxes, or column headings. For example:
  - ❑ Click **Start**, point to **Programs**, point to **Accessories**, and then click **Command Prompt**.
  - ❑ Under **Notification Options**, select the **Warning Alarms** check box.

- Text in `Courier` font indicates a file name, directory path, or command line text. For example:
  - To return to the root directory from anywhere in the file structure:  
Type `cd /root` and press ENTER.
  - Enter the following command: `sh ./install.bin`
- Key names and key strokes are indicated with UPPERCASE:
  - Press CTRL+P.
  - Press the UP ARROW key.
- Text in *italics* indicates terms, emphasis, variables, or document titles. For example:
  - For a complete listing of license agreements, refer to the *QLogic Software End User License Agreement*.
  - What are *shortcut keys*?
  - To enter the date type *mm/dd/yyyy* (where *mm* is the month, *dd* is the day, and *yyyy* is the year).
- Topic titles between quotation marks identify related topics either within this manual or in the online help, which is also referred to as *the help system* throughout this document.
- Command line interface (CLI) command syntax conventions include the following:
  - Plain text indicates items that you must type as shown. For example:
    - `qauccli -pr nic -ei`
  - `< >` (angle brackets) indicate a variable whose value you must specify. For example:
    - `<serial_number>`

---

**NOTE**

For CLI commands only, variable names are always indicated using angle brackets instead of *italics*.

---

- `[ ]` (square brackets) indicate an optional parameter. For example:
  - `[<file_name>]` means specify a file name, or omit it to select the default file name.

- ❑ | (vertical bar) indicates mutually exclusive options; select one option only. For example:
  - on|off
  - 1|2|3|4
- ❑ ... (ellipsis) indicates that the preceding item may be repeated. For example:
  - x . . . means *one* or more instances of x.
  - [ x . . . ] means *zero* or more instances of x.
- ❑ ( ) (parentheses) and { } (braces) are used to avoid logical ambiguity. For example:
  - a|b c is ambiguous
  - { (a|b) c } means a or b, followed by c
  - { a | (b c) } means either a, or b c

## Technical Support

Customers should contact their authorized maintenance provider for technical support of their QLogic products. QLogic-direct customers may contact QLogic Technical Support; others will be redirected to their authorized maintenance provider. Visit the QLogic support Web site listed in [Contact Information](#) for the latest firmware and software updates.

For details about available service plans, or for information about renewing and extending your service, visit the Service Program Web page at <http://www.qlogic.com/Support/Pages/ServicePrograms.aspx>.

## Downloading Updates

The QLogic Web site provides periodic updates to product firmware, software, and documentation.

### To download firmware, software, and documentation:

1. Go to the QLogic Downloads and Documentation page: [driverdownloads.qlogic.com](http://driverdownloads.qlogic.com).
2. Type the QLogic model name in the search box.
3. In the search results list, locate and select the firmware, software, or documentation for your product.
4. View the product details Web page to ensure that you have the correct firmware, software, or documentation. For additional information, click **Read Me** and **Release Notes** under Support Files.
5. Click **Download Now**.

6. Save the file to your computer.
7. If you have downloaded firmware, software, drivers, or boot code, follow the installation instructions in the *Readme* file.

Instead of typing a model name in the search box, you can perform a guided search as follows:

1. Click the product type tab: **Adapters, Switches, Routers, or ASICs**.
2. Click the corresponding button to search by model or operating system.
3. Click an item in each selection column to define the search, and then click **Go**.
4. Locate the firmware, software, or document you need, and then click the item's name or icon to download or open the item.

## Training

QLogic Global Training maintains a Web site at [www.qlogictraining.com](http://www.qlogictraining.com) offering online and instructor-led training for all QLogic products. In addition, sales and technical professionals may obtain Associate and Specialist-level certifications to qualify for additional benefits from QLogic.

## Contact Information

QLogic Technical Support for products under warranty is available during local standard working hours excluding QLogic Observed Holidays. For customers with extended service, consult your plan for available hours. For Support phone numbers, see the Contact Support link at [support.qlogic.com](http://support.qlogic.com).

### Support Headquarters

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### QLogic Web Site

[www.qlogic.com](http://www.qlogic.com)

### Technical Support Web Site

[support.qlogic.com](http://support.qlogic.com)

### Technical Support E-mail

[support@qlogic.com](mailto:support@qlogic.com)

### Technical Training E-mail

[training@qlogic.com](mailto:training@qlogic.com)

## Knowledge Database

The QLogic knowledge database is an extensive collection of QLogic product information that you can search for specific solutions. QLogic is constantly adding to the collection of information in the database to provide answers to your most urgent questions. Access the database from the QLogic Support Center: [support.qlogic.com](http://support.qlogic.com).



# 1 Introduction

UEDiag is a DOS-based utility which can be used to run a series of diagnostics tests. This document provides information on how to use the UEDiag utility.

The UEDiag program can be controlled via commands entered at the DOS prompt. Running the UEDiag program without any parameters will run a series of tests verifying the functionality of the devices in the system.

# 2 Operating Environment

This section provides the following information about the UEDiag utility:

- [UEDiag Utility Operating Environment Overview](#)
- [Installing the ANSLSYS Driver](#)
- [Installing the HIMEM.SYS Driver](#)

## UEDiag Utility Operating Environment Overview

The UEDiag utility operates in an MS-DOS environment. It includes a DOS extender (PMODE/W) that is embedded into the executable and provides access to memory above 1MB.

OS: MS-DOS 6.22

### Input File List

The following files should be found in the same location of the **UEDiag.exe**:

- everest.rdf
- everst2.rdf
- everst3.rdf
- everst3b.rdf
- evrst15.rdf
- ipblocks.rdf
- uniblock.rdf
- uniregs.rdf
- uediag.exe

## Installing Additional Drivers

### Installing the ANSLSYS Driver

Use the following procedure to install the ANSLSYS driver:

1. Place the **ANSI.SYS** file in a directory (C:\DOS).
2. Add a line in the config.sys file:

```
DEVICEHIGH=C:\DOS\ANSI.SYS
```

---

#### NOTE

The ANSI driver allows the Manufacturing Mode tests to display the results in Red/Green colors for Fail/Pass status. Note that the eDiag utility will run correctly even without the ANSI driver installed.

---

### Installing the HIMEM.SYS Driver

Use the following procedure to install the HIMEM.SYS driver:

1. Place HIMEM.SYS file in a directory (C:\DOS).
2. Add a line in the config.sys file:

```
DEVICE=C:\DOS\HIMEM.SYS
```

---

#### NOTE

The HIMEM driver is required for the TCP/IP offload engine test D7 to pass.

---

# 3 Command Line Options List

This section provides the following information about the UEDiag utility:

- [Command Line Options List](#)
- [Command Line Options–Usage](#)

## Command Line Options List

Table 3-1 shows the command line options list for the UEDiag utility:

**Table 3-1. UEDiag Command Line Options List**

Function	Description
-I <iteration#>	Specify how many iterations tests need to run.
-ver	Display information on UEiag version.
-log <logfile>	Log the tests' execution into the specified file.
-help	Print out this screen.
-dev <device#>	Select device number, tests will be running on.
-c <device#>	Similar to <b>-dev</b> (for backward compatibility).
-wol <1 0>	enable(1)/disable(0) magic pkt wol.
-mba <1 0>	enable(1)/disable(0) mba.
-mfw <1 0>	enable(1)/disable(0) management firmware.
-mbap <n>	MBA boot protocol: PXE(0), RPL(1), BOOTP(2), iSCSI_boot(3).
-mbav <1 0>	enable(1)/disable(0) MBA VLAN.
-mbavval <n>	MBA VLAN value (< 65536).
-t <grps/tests>	Disable certain tests/groups (for example: -t a11).
-T <grps/tests>	Enable certain tests/groups (for example: -T a11).
-cof	Allow tests to continue tests on failure.
-fbc <bc_image>	Specify the bin file for combined boot code.
-fbc1 <bc1_image>	Specify the bin file for boot code 1.
-fbc2 <bc2_image>	Specify the bin file for boot code 2.
-fl2b <l2b_image>	Specify the bin file for L2B firmware.
-fipmi <ipmi_image>	Specify the bin file for IPMI firmware.
-fump <ump_image>	Specify the bin file for universal management port firm-ware.
-fmba <mba_image>	Specify the bin file for MBA.
-fib <ib_image>	Specify the bin file for iSCSI boot.

**Table 3-1. UEDiag Command Line Options List**

Function	Description
-fibc	Program iSCSI configuration block 0, used with <b>-fib &lt;ib_image&gt;</b> only.
-fibc2	Program iSCSI configuration block 1, used with <b>-fib &lt;ib_image&gt;</b> only.
-fibp	Program iSCSI configuration software, used with <b>-fib &lt;ib_image&gt;</b> only.
-F	Force to upgrade image without checking version
-ffeb <fcoe_file>	Program Fibre Channel over Ethernet boot.
-ffebc <fcoe_file>	Program Fibre Channel over Ethernet boot and config block <b>FEB_CFG</b> .
-ffebp <fcoe_file>	Program Fibre Channel over Ethernet boot and config program <b>FEB_CPRG</b> .
-ffebcp <fcoe_file>	Program Fibre Channel over Ethernet boot, config block ( <b>FEB_CFG</b> ) and config program ( <b>FEB_CPRG</b> ).
-dcbx <1 0>	enable(1)/disable(0) <b>dcbx</b> .
-fmfw <mfw_image>	Specify the bin file for MFW.

## Command Line Options–Usage

### -I

**Command:** -I

**Description:** Specify how many iterations test need to run.

**Syntax:** -I<value>  
<value>: number of iterations.

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -I 5
```

Run default diagnostic tests 5 times on every device in the system.

### -ver

**Command:** -ver

**Description:** Display information on UEDiag version then exits.

**Syntax:** -ver

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -ver
```

Display the UEDiag version, copyright and device information.

### -log

**Command:** -log

**Description:** Log the tests execution into the specified file.

**Syntax:** -log <logfile>

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -log output.txt
```

Save all displayable output into **output.txt**.



## **-help**

**Command:** `-help`

**Description:** Displays the help options.

**Syntax:** `-help`

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -help
```

Display all UEDiag's commands with description to screen.

## **-dev**

**Command:** `-dev`

**Description:** Select device number where the tests will be running on.

**Syntax:** `-dev`

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -dev 1-2
```

Diagnostic run tests on device 1 and 2 installed in the system.

## **-c**

**Command:** `-c`

**Description:** Similar to `-dev` (for backward compatibility).

**Syntax:** `-c`

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -c 2
```

Diagnostic run tests on device 2 installed in the system.

## **-wol**

**Command:** `-wol`

**Description:** Enable(1)/Disable(0) magic packet wake on LAN.

**Syntax:** `-wol <1 | 0>`  
1|0: 1: enable; 0: disable.

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -wol 1 -dev 2  
Enable wake on LAN on device 2.
```

## **-mba**

**Command:** `-mba`

**Description:** Enable(1)/Disable(0) mba.

**Syntax:** `-mba <1 | 0>`  
1|0: 1: enable; 0: disable.

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -mba 1 -dev 2  
Enable MBA (pxe) on device 2.
```

## **-mfw**

**Command:** `-mfw`

**Description:** Enable(1)/Disable(0) management firmware.

**Syntax:** `-mfw <1 | 0>`  
1|0: 1: enable; 0: disable.

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -mfw 1 -dev 2  
Enable management firmware on device 2.
```

## **-mbap**

**Command:** `-mbap`

**Description:** MBA boot protocol: PXE(0), RPL(1), BOOTP(2), iSCSI\_boot(3).

**Syntax:** `-mbap <n>`  
n: PXE(0), RPL(1), BOOTP(2), iSCSI\_boot(3).

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -mbap 1 -dev 2  
Enable RPL on device 2.
```

## **-mbav**

**Command:** `-mbav`

**Description:** Enable(1)/Disable(0) MBA VLAN.

**Syntax:** `-mbav <1|0>`  
1|0: 1: enable; 0: disable.

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -mbav 1 -dev 2  
Enable MBA VLAN on dev 2.
```

## **-mbavval <n>**

**Command:** `-mbavval <n>`

**Description:** MBA VLAN value (< 65536).

**Syntax:** `-I <n>`  
n: number ranging from 1 to 65536.

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -mbavval 10 -dev 2  
Set MBA VLAN of 10 to device 2.
```

## **-t**

**Command:** `-t`

**Description:** Disable certain tests/groups (for example: `-t a11`).

**Syntax:** `-t <grps/tests>`  
grps/tests: group(s) of test or specific test(s).

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -t ab5
```

Run default diagnostic tests on installed device(s) but skip group **a** and **b5** test.

## **-T**

**Command:** `-T`

**Description:** Enable certain tests/groups (for example: `-T a11`).

**Syntax:** `-T <grps/tests>`  
grps/tests: group(s) of test or specific test(s).

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -T d3
```

Run default diagnostic tests on installed device(s) and include **D3** test.

## **-cof**

**Command:** `-cof`

**Description:** Allow to continue regression tests after test fails.

**Syntax:** `-cof`

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -cof
```

Run default diagnostic and continue even if test fails.

## **-fbc**

**Command:** `-fbc`

**Description:** Specify the bin file for combined boot code.

**Syntax:** `-fbc <bc_image>`  
bc\_image: bin file.

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -fbc bc710v40.11`  
Upgrade bootcode with bin file **bc710v40.11**.

## **-fbc1**

**Command:** `-fbc1`

**Description:** Specify the bin file for boot code 1.

**Syntax:** `-fbc1 <bc1_image>`  
bc1\_image: bc1 bin file.

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -bc1 bc1710vxx.xx`  
Upgrade bootcode with bin file **bc1710vxx.xx**.

## **-fbc2**

**Command:** `-fbc2`

**Description:** Specify the bin file for boot code 2.

**Syntax:** `-fbc2 <bc2_image>`  
bc1\_image: bc2 bin file.

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -bc1 bc2710vxx.xx`  
Upgrade bootcode with bin file **bc2710vxx.xx**.

## **-fl2b**

**Command:** `-fl2b`

**Description:** Specify the bin file for L2B firmware.

**Syntax:** `-fl2b <l2b_image>`  
l2b\_image: l2b bin file.

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -fl2b l2b.xx`  
Upgrade l2b with bin file **l2b.xx**.

## **-fipmi**

**Command:** `-fipmi`

**Description:** Specify the bin file for IPMI firmware.

**Syntax:** `-fipmi <ipmi_image>`  
ipmi\_image: ipmi bin file.

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -fipmi pt710v40.10`  
Upgrade ipmi with bin file **pt710v40.10**.

## **-fump**

**Command:** `-fump`

**Description:** Specify the bin file for UMP firmware.

**Syntax:** `-fump <ump_image>`  
ump\_image: ump bin file.

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -fump um710v40.10`  
Upgrade ump with bin file **um710v40.10**.

## **-fmba**

**Command:** **-fmba**

**Description:** Specify the bin file for MBA.

**Syntax:** **-fmba <mba\_image>**  
mba\_image: mba bin file.

**Example:** Enter the following at the DOS prompt:  
c:\uediag -fmba evmmba.nic  
Upgrade MBA with bin file **evmmba.nic**.

## **-fib**

**Command:** **-fib**

**Description:** Specify the bin file for iSCSI boot.

**Syntax:** **-fib <ib\_image>**  
ib\_image: iSCSI boot image file.

**Example:** Enter the following at the DOS prompt:  
c:\uediag -fib bnx2x\_undi\_reset.patch  
Upgrade iSCSI boot image with **bnx2x\_undi\_reset.patch**.

## **-fibc**

**Command:** **-fibc**

**Description:** Program iSCSI configuration block 0, used with **-fib** **<ib\_image>** only.

**Syntax:** **-fibc**

**Example:** Enter the following at the DOS prompt:  
c:\uediag -fib bnx2x\_undi\_reset.patch -fibc  
Program iSCSI configuration block 0, using  
**bnx2x\_undi\_reset.patch**.

## **-fibc2**

**Command:** **-fibc2**

**Description:** Program iSCSI configuration block 1, used with **-fib <ib\_image>** only.

**Syntax:** **-fibc2**

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -fib bnx2x_undi_reset.patch -fibc2
```

Program iSCSI configuration block 1, using **bnx2x\_undi\_reset.patch**.

## **-fibp**

**Command:** **-fibp**

**Description:** Program iSCSI configuration software, used **-fib <ib\_image>** only.

**Syntax:** **-fibp**

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -fib bnx2x_undi_reset.patch -fibp
```

Program iSCSI configuration software, using **bnx2x\_undi\_reset.patch**.

## **-F**

**Command:** **-F**

**Description:** Force to upgrade image without checking version.

**Syntax:** **-F**

**Example:** Enter the following at the DOS prompt:

```
c:\uediag -fbc bc710v44.4 -F
```

Upgrade bootcode with bin file **bc710v44.4**. This command line is required if an older version then the current version is needed to be programmed.



## **-ffeb**

**Command:** `-ffeb`

**Description:** Program Fibre Channel over Ethernet boot.

**Syntax:** `-ffeb <fcoe image>`

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -ffeb fcoeb.bin`

## **-ffebc**

**Command:** `-ffebc`

**Description:** Program Fibre Channel over Ethernet boot and Fibre Channel over Ethernet config block (FEB\_CFG).

**Syntax:** `-ffebc <fcoe image>`

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -ffebc fcoeb.bin`

## **-ffebp**

**Command:** `-ffebp`

**Description:** Program Fibre Channel over Ethernet boot and Fibre Channel over Ethernet config program (FEB\_CPRG).

**Syntax:** `-ffebp <fcoe image>`

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -ffebp fcoeb.bin`

## **-ffebcp**

**Command:** **-ffebcp**

**Description:** Program Fibre Channel over Ethernet boot, Fibre Channel over Ethernet config block (FEB\_CFG) and Fibre Channel over Ethernet config program (FEB\_CPRG).

**Syntax:** **-ffebcp <fcoe image>**

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -ffebcp fcoeb.bin`

## **-dcbx**

**Command:** **-dcbx**

**Description:** Enable(1)/Disable(0) dcbx.

**Syntax:** **-dcbx <1|0>**  
1|0: 1: enable; 0: disable.

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -dcbx 1 -dev 2`  
Enable data center bridging exchange on device 2.

## **-fmfw**

**Command:** **-fmfw**

**Description:** Specify the bin file for MFW.

**Syntax:** **-fmfw <mfw\_image>**  
mfw\_image: bin file.

**Example:** Enter the following at the DOS prompt:  
`c:\uediag -fmfw mf712v70.38`  
Upgrade MFW with bin file **mf712v70.38**.





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