

**Communicator e3000  
MPE/iX Release 7.5 PowerPatch 1  
(Software Release C.75.01)**

**HP e3000 MPE/iX Computer Systems**

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# 1 Overview — MPE/iX Release 7.5 PowerPatch 1 (C.75.01)

This *Communicator HP e3000* provides general and detailed information on the new and enhanced functionality for the MPE/iX Release 7.5 PowerPatch 1 (C.75.01) as well as information on support, release strategy and installation prerequisites.

This *Communicator* should be used in conjunction with the *Communicators* from Release 7.5. Only information relating to the Release 7.5 PowerPatch 1 is contained in this document. If you have additional questions beyond the scope of this document, please review the information in the *Communicator* for Release 7.5. This document is available online at [www.docs.hp.com](http://www.docs.hp.com).

This MPE/iX *Communicator* describes the following:

- Ultra160 SCSIHBA (A6828A/A6829A) Support on MPE/iX
- TurboIMAGE B-Tree Behavior Clarification

## **Communicator Summary**

Following are brief descriptions of the articles and chapters.

### **Chapter 1, Overview — Communicator Summary**

This chapter provides a summary of information contained in this manual. It also provides information about obtaining MPE patches from the HP Electronic Support Center.

### **Chapter 2, Announcements**

Important announcements regarding availability of products and services are included in this chapter.

- Introducing MPE/iX Release 7.5 PowerPatch 1
- Additional Announcements from HP
- End of Support Dates
- Obtaining Software Security Patches for you HP Computer System

### **Chapter 3, Technical Articles**

This chapter contains articles about Ultra160 SCSIHBA (A6828A/A6829A) and TurboIMAGE B-Tree Usage.

## MPE/iX Patches on HP IT Resource Center

*by Patch Support Team  
Commercial Systems Division*

MPE/iX patches for MPE/iX Releases are available on the IT Resource Center (previously the HP Electronic Support Center) to all customers.

### Features and Benefits

The patch access and delivery system benefits all MPE/iX customers with:

- Improved overall communication between HP and customers.
- Provision of useful and timely information for patch justification and decision making.
- Reduced system downtime for known problems.
- Reduction of the turnaround time for patch availability and delivery.
- Close to 24\*7 access time.
- Unification of the MPE/iX and HP-UX patch delivery process.

Electronic access to patch information and delivery of patches provide three basic services:

1. Access to patch information in an automated, timely and accurate manner.
2. Electronic downloading of patch information and binaries.
3. Proactive notification of new patches via email.

### Access Method to the HP IT Resource Center

To serve customers the IT Resource Center provides World Wide Web access for downloading patches.

#### Access to World Wide Web Server (www)

World Wide Web access is the easiest, fastest, and most popular method of browsing for patch information and downloading patches. It is more reliable, especially for large patches.

- **U.S. Web accessing address:**  
*<http://us-support.external.hp.com>*
- **European Web accessing address:**  
*<http://europe-support.external.hp.com>*

## Electronic Digests

If you want to keep yourself up-to-date on the latest development of MPE/iX patches, you can sign up for the daily Security Bulletin and weekly mpeix\_patch Bulletin. Once you have subscribed to these two bulletins, you will receive these digests on a periodic basis via electronic mail. HP IT Resource Center will inform you proactively about newly developed security and GR patches. For more information, refer to the instructions on the IT Resource Center website.

## Patch Installation Tools

There are two tools available to install MPE/iX reactive patches, Patch/iX and AUTOPAT. HP recommends the use of Patch/iX for reactive patch installation. Patch/iX has many features and checks to ease and improve the installation process, including:

- A sophisticated patch qualification mechanism to ensure the integrity of your system.
- The ability to perform much of the patch installation process while your system is still up and available to users.
- An option to install a patch or set of patches using the HP Stage/iX Subsystem, which allows the application of a patch to be performed without tapes. For more information on Stage/iX, refer to the *System Software Maintenance Manual* for your release. Patch/iX instructions are also available on the following website: <http://www.docs.hp.com/mpeix/>

You should use AUTOPAT only if you are familiar with its use, and have a good understanding of MPE/iX patch management.

## Patch/iX Installation Document Retrieval

These are the steps for retrieving documents regarding Patch/iX.

1. Access the HP IT Resource Center WEB site (previously the Electronic Support Center) using the appropriate WEB address for your country.
2. Click on the link, "Individual Patches."
3. Enter: "ITRC User ID" and "password."
4. Click on the link, "MPE/iX Patches."
5. Click on the link, "MPE Patch Installation Guide."
6. Click on the link, "Use Patch/iX or AUTOPAT to install the patch."
7. Click on the link, "Patch/iX Instructions."

## Patch/iX Version Identification

To ensure you have the latest version of Patch/iX, on your system do the following:

1. `:HELLO MANAGER.SYS,INSTALL`
2. `:PATCHIX VERSION`
3. Compare this version number (for example, B.01.02) with the latest version available for your release on the HP IT Resource Center Patch/iX download page. If you are running an earlier version than is available, you should download and install the newer one from the download page.



## AUTOPAT Installation Document Retrieval

AUTOPATINST is the “DOCID” of the document with instructions to assist you in installing one or more patches needed by your MPE/iX system using the AUTOPAT installation tool.

1. Access the HP IT Resource Center WEB site (previously the Electronic Support Center) using the appropriate WEB address for your country.
2. In the Main Menu, click on the link, “Search Technical Knowledge Base.”
3. Enter: “ITRC User ID” and “password.”
4. In the Technical Knowledge Base Home page from the pull down menu, click on “Search By DOC ID” (do not Search by Keyword).
5. In the search field, enter “AUTOPATINST.”
6. Click on the “SEARCH” button.

## Create a CSLT Prior to Patch Installation

Before starting any patch application activity, you should always back up your system by creating a Custom System Load Tape and a full backup. This will allow you the flexibility of restoring your system to the previous environment. To create a CSLT, do the following:

1. Log on as `MANAGER.SYS`
2. `:SYSGEN`
3. `>TAPE`

## Disclaimer

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**CAUTION** Hewlett-Packard is not liable for errors occurring during data transmission through the Internet. HP assumes no responsibility for the use or reliability of its software on equipment that it has not furnished itself. Furthermore, for customers without a current support contract with HP, HP is not responsible for answering any questions in regard to the use of this patch delivery process.

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## 2 Announcements

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### MPE/iX Release 7.5 PowerPatch 1

MPE/iX and the e3000 have been dutifully serving HP customers for nearly 30 years. On November 14th, 2001 HP announced the end of sales for the HP e3000 and MPE/iX. That date (November 1, 2003 for end of sales) is quickly approaching and customers need to plan their final purchases accordingly. HP is pleased to announce the delivery of MPE/iX 7.5 PowerPatch 1 in April, 2003.

HP realizes that customers are planning their migration away from the e3000 and MPE/iX. We understand that it is very important for our customers to have additional time to develop and implement their migration strategy. HP recommends that customers chose the very latest in hardware and software in order to maximize the value of their current HP e3000 environment during this transition period. Thus, HP has improved the existing functionality and integrity of MPE/iX Release 7.5 with a proactive patch-set found in MPE/iX 7.5 PowerPatch 1.

The features for the MPE/iX Release 7.5, PowerPatch 1 include, but are not limited to, the following:

- Ultra160 SCSI Host Bus Adapter Card Support on MPE/iX
  - A6828A-- Single port
  - A6829A-- Dual port (N-Class only)

### Additional Announcements from HP

#### Software

Coming in the 2nd half of 2003, the MPE/iX Networking team will release a set of patches that will upgrade the functionality of the host-based DTC management platform. This upgrade will provide on MPE/iX host-based DTC Management functionality that is needed to allow customers to migrate from PC-Based management to host-based with a minimal disruption to their operations. The functionality will provide expanded X.25 and PAD switching, security and port functionality as well as support for configuring the DTC into a routeable AFCP network. Look for more details in the May/June timeframe as CSY approaches the release date of this functionality.

#### Storage

New high performance and higher capacity embedded disk drives for the HP e3000 A/N-Class are available and provide the latest storage technologies and investment protection. This allows customers to continue to run their businesses, while they transition from the HP e3000.

On March 1st 2003, HP introduced new high performance 73GB 15K rpm and new higher capacity point 146GB 10K rpm embedded disk drives for the HP e3000 A-Class systems. Additionally, new high performance 36GB and 73GB 15K rpm embedded disk drives for the HP e3000 N-Class have been introduced and are currently available.

The VA7110, which is the next generation Virtual Array enclosure that replaces the VA7100 is now available to HP e3000 customers. This product leverages the performance improvements developed from the VA7410 into a lower-cost, entry-level replacement for the VA7100.

In some cases, relative performance of the VA7110 is up to twice that of the VA7100 and scalability of this product reaches up to 45 disks from the current limit of 15. HP is pleased to announce this fully compatible replacement for the VA7100, which provides investment protection by supporting new 146 GB disk mechanisms.

Additionally, the DS2110 is a next generation SCSI JBOD enclosure that supports Ultra320 SCSI mechanisms, and is available as of April 15, 2003. This product is a fully compatible replacement for the DS2100. For additional investment protection, this product also supports existing Ultra160 SCSI mechanisms.

## **End of Support Dates**

Support for the 6.0 release ended October 31, 2002 and MPE/iX Release 6.5 will be supported until December 31, 2004. Starting today, customers who need additional time to plan and execute migrations should plan to update to the latest releases of either MPE/iX 7.0 or MPE/iX 7.5. These releases contain many performance and capacity enhancements for high-end systems and bundled tools for using the HP e3000 with the Internet. Additionally, these releases will be supported until December 31, 2006.

Customers who are planning their HP e3000 environment into the future should note that the currently supported 900 series servers running MPE/iX do not have supported peripherals available for purchase from HP. For this reason, HP recommends that customers who are planning on continuing to run and expand their HP e3000 environment, upgrade to an HP e3000 A- or N-Class system with Fiber Channel and SCSI-LVD peripherals. By upgrading to the latest hardware and software on the HP e3000, customers will be better suited for continued performance, support and success in the long term.

For a comprehensive listing of supported hardware please go to:

[http://www.hp.com/products1/mpeixservers/news\\_events/discont/servers/end\\_support.html](http://www.hp.com/products1/mpeixservers/news_events/discont/servers/end_support.html)

HP is also formalizing plans to ensure the delivery of all e3000 software products through MPE end-of-support. Besides exploring ways to improve efficiency in the distribution of MPE to our customers, our focus is to anticipate and prevent any critical disruptions in customer operations due to HPe3000 software product discontinuance.

## Obtaining Software Security Patches for your HP Computer System

Hewlett-Packard would like to make you aware of a special free service provided for all customers of HP e3000 and HP 9000 computer systems. This service gives customers a direct route to Hewlett-Packard for obtaining information relating to the security of their Hewlett-Packard Computer System(s).

Hewlett-Packard issues information on the availability of Software security patches via Security Bulletins to subscribers of the HP Security Bulletin Digest e-mail service, a part of the IT Resource Center (formerly the HP Electronic Support Center). A Hewlett-Packard support contract is NOT required to subscribe to this service to obtain information or security patches. Any purchaser of an HP e3000 or HP 9000 Computer System can make use of the HP Security Bulletin services at no charge.

Customers may also obtain information and Security Bulletin services via the World Wide Web.

A security problem is a software defect that allows unauthorized personnel to gain access to a Computer System or to circumvent any of the mechanisms that protect the confidentiality, integrity or availability of the information stored on the system. When such problems in Hewlett-Packard software are brought to the attention of the company, their resolution is given a very high priority. This resolution is usually in the form of a Security Bulletin which may explain how to correct the problem or describe how to obtain a software security patch that will correct the problem.

Hewlett-Packard has introduced this service as the primary mechanism to alert subscribers to security problems and provide corrections. Hewlett-Packard will not analyze the relevance of any security patch to any individual customer site within the scope of the HP Security Bulletin service. The responsibility for obtaining and applying security patches resides with the customer.

The remainder of this section outlines the various security related services offered by Hewlett-Packard IT Resource Center and the methods for subscribing to and retrieving information from it. It also outlines how you can inform Hewlett-Packard of potential security concerns you may have with your Hewlett-Packard Computer System.

### HP IT Resource Center Security-Related Services

HP IT Resource Center offers subscribers the following benefits:

- Receive Security Bulletins automatically when they are published.
- Retrieve the archive list of bulletins issued prior to subscription.
- Download security patches if the subscriber configuration supports it.

Remember, an HP support contract is not required to subscribe to HP Security Bulletin services.

### Subscribing to HP IT Resource Center Security Bulletin Services

Once you have placed your name on the subscriber list for future Security Bulletins (see instructions below), you will receive them via e-mail on the day they are issued by HP.

As referenced below, you can also view a list of past Security Bulletins issued in the “HP Security Bulletins Archive.”

### How to Subscribe

To subscribe to automatically receive future NEW HP Security Bulletins from the Hewlett-Packard Electronic Support Center via electronic mail, do the following (instructions subject to change without notice):

## Obtaining Software Security Patches for your HP Computer System

1. Use your browser to access the HP IT Resource Center web page at:

*http://us-support.external.hp.com*                      US, Canada, Asia-Pacific,  
and Latin-America

*http://europe-support.external.hp.com*              Europe

2. Logon with your User ID and password (or register for one). Remember to save the User ID assigned to you, and your password.
3. Once on the archive page, scroll down to find “MPE Security Bulletins”. On this page, you can subscribe to many different digest services, including the Security Bulletin Digests.

To review Security Bulletins that have already been released, click on “Search Technical Knowledge Base” on the HP Electronic Support Center home page. Near the bottom of the next page, click on “Security Bulletins” under “MPE Software”. On that next page click on “Security Bulletin Archive”.

Once in the archive page, click on “HP-UX Security Patch Matrix” to get a patch matrix of current HP-UX and BLS security patches. Updated daily, this matrix categorizes security patches by platform/OS release, and by Security Bulletin topic.

### **If You Discover a Security Problem**

To report new security vulnerabilities, send e-mail to

*security-alert@hp.com*

Please encrypt any explicit information using the security-alert PGP key, available from your local key server, or by sending a message with a -subject- (not body) of ‘get key’ (no quotes) to security-alert@hp.com.

# 3 Technical Articles

This chapter contains the following articles:

- Ultra160 SCSIHBA (A6828A/A6829A) Support on MPE/iX
- TurboIMAGE B-Tree Behavior Clarification

## Ultra160 SCSIHBA (A6828A/A6829A) Support on MPE/iX

by Jim Hawkins -- MPE/iX Lab

The A6828A and A6829A are Ultra160 LVD SCSI Host Bus Adaptor cards for use with HP e3000 A-Class and N-Class (PCI I/O) systems. These cards are being offered as “plug compatible” replacement cards for the previously available A5149A and A5150A (Ultra2 LVD HBAs) which have reached End Of Sales.

Support for these “U160” cards was offered starting with MPE/iX Release 7.5. However, problems in the interaction between U160 HBAs and some disks now make it a REQUIREMENT to have patch MPEMXE8, or superceding patches, for these cards to be supported. For customers running MPE/iX 7.5, MPEMXE8 “B” is part of the MPE/iX 7.5 PowerPatch 1 (included via MPEMXE7 “A” which supercedes MPEMXE8 “B”). In addition, a 7.0 version of MPEMXE8 is available for customers who need to purchase new LVD HBA cards for their existing A or N-Class system running MPE/iX 7.0. If at all possible MPEMXE8 (directly, via superceding patch, or PPT) should be installed before accessing any SCSI devices attached to the U160 HBAs.

### Card Details

- A6828A**      Single Port Ultra160 SCSI (PCI bus) Adapter Card. This card plugs into a PCI Bus on the system and presents a single SCSI Bus to the outside world. This SCSI Bus is capable of operating in either LVD or SE Mode. This determination is made automatically by the card based upon the devices and termination present on the Bus; there is no software control for this feature. This bus must be terminated. Depending upon the cables/connectors being used, this would typically be either a High Density (HD) 68-pin LVD/SE terminator such as C2364A or, for Very High Density (VHDCI) 68-pin LVD/SE cables, a C2370A.
- A6829A**      Dual Port Ultra160 SCSI (PCI bus) Adapter Card. (**N-Class Only**) This card plugs into a PCI Bus on the system and presents two (2) independent SCSI Buses to the outside world. These SCSI Buses are capable of operating in either LVD or SE Mode. This determination is made automatically by the card based upon the devices and termination present on the Bus; there is no software control for this feature. Each SCSI bus must be independently terminated. Depending upon the cables/connectors being used this would typically be either a High Density (HD) 68-pin LVD/SE terminator such as C2364A or, for Very High Density (VHDCI) 68-pin LVD/SE cables, a C2370A.

### Configuration

For SYSGEN/IOCONFIG configuration purposes, the commands used are identical to that used with the previous cards (“AP 0/4/0/0 A5149A”). Any device ID associated with the PCI SCSI\_DAM in IODFAULT.PUB.SYS may be used, e.g. A4800A, A5149A, A5150A, A5159A, A6828A, or A6829A are all equivalent. During initialization the PCI SCSI\_DAM queries the card for its attributes and sets proper operating characteristics independent of the configuration group values.

### Operational Note

When attached to MPE/iX Systems the “U160” cards run the SCSI bus at Ultra2 Speed (80MByte/sec) rather than U160 (160MByte/sec) due to limitations in the MPE/iX Driver. Peripherals rated to run at U160 and (future) U320 Speeds may still be connected to this card; MPE/iX simply negotiates all transfers to be done at Ultra2 speeds.



## TurboIMAGE B-Tree Behavior Clarification

*by Tien You Chen -- MPE/iX Lab*

### Possible Confusing Behavior

TurboIMAGE has supported B-Tree indices since C.07.00. Even though a user can create a B-Tree index only on the master data set's key item, s/he can perform index searches using all of its corresponding detail data set search items as well. Users can now call `DBFIND` to perform a generic key search on a master data set, then chained `DBGETs` to return all the qualified records. Confusion arises when a user calls `DBFIND` on a master data set but, before or between the chained `DBGETs` of those qualified records, s/he calls another `DBFIND` on a detail data set using a search item linked to the master currently being accessed chained. This `DBFIND` will reposition the chain pointer on the master. As a result the user may get an 'end of chain' status for the next `DBGET` to the master data set. Since these two `DBFINDs` are finding against two different data sets, the user is amazed at the interference between these two.

### What to Expect and How to Solve

Because only one `KSAM/iX` file is attached to each master data set, all B-Tree access for related detail data sets also goes, via the master data set, to the same `KSAM` file. Since there is only one logical record pointer in the `KSAM` file, a new `DBFIND`, which positions the logical record pointer, affects the current reading. In addition, the internal runtime data structure, though allocated one per data set, is still affected. Therefore, even if the second `DBFIND` on the detail data set is not a B-Tree `DBFIND`, many flags in the runtime data structure are reset. The next `DBGET` to the master data set acts as though there was no previous B-tree `DBFIND` to the master.

This combination of access methods, mixing `DBFIND/chain DBGET` to a master with `DBFIND/chain DBGET` to a detail using a path to that same master, is not common. We suggest the user call a second `DBOPEN` to handle the second `DBFIND`. However, please remember the second `DBOPEN` is needed only when calling `DBFIND` on a detail chain while still performing chained `DBGETs` on the related master data set.

