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Desktop Management BIOS Specification

Version 2.0

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Document Information

The softcopy version of this specification, in Microsoft Word-for-Windows 6.0 format, is available as DMIB20.DOC via ftp://ftp.ptltd.com/pub/phoenix_docs/dmib20.doc or from the Phoenix Technologies World Wide Web site at http://www.ptltd.com/techs/specs.html.

Document Revision History

Version 2.0D	09/14/95	Initial Release of DRAFT COPY
Version 2.0M	12/12/95	Final draft released, with the following changes: - Specified that dmiStorageBase (Function 50h) and NVStorageBase (Function 55h) must be paragraph-aligned. - Added Command value to change a string to function 52h; Command enumeration values modified. - Removed redundant enumerations from Processor Family list - Corrected Memory Subsystem Example - Corrected/clarified Indexed I/O access-methods for event-log; Access Method enumeration values and Access Method Address union modified - Added clarifications to some of the event log types
Version 2.00	03/06/96	Final release, with the following changes: - Specified that all structures end with a terminating NULL, even if the formatted portion of the structure contains string-reference fields and all the string fields are set to 0. - Corrected the Memory Subsystem Example, handles are now correctly created with a 'dw'. - Fixed formatting of some bit definition fields and function examples.

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1. Overview

Desktop Management Interface (DMI) is a new method of managing computers in an enterprise. The main component of DMI is the Management Information Format Database, or MIF. This database contains all the information about the computing system and its components. Using DMI, a system administrator can obtain the types, capabilities, operational status, installation date, and other information about the system components.

The Desktop Management BIOS Specification documents a standard embedded tool-set to assist in the generation of a system MIF database.

1.1 References

Desktop Management Interface Specification, Version 1.0, April 29, 1994.
DMTF PC Systems Standard MIF Definition, Version 1.3, March 1, 1995.
DMTF Server Standard MIF Definition, Draft Version 0.3, March 1, 1995
Plug and Play BIOS Specification, Version 1.0A, May 5, 1994
PCI BIOS Specification, Version 2.1, August 26, 1994

1.2 Enhancements to the current BIOS architecture

The DMI specification requires that certain information about the System Board be made available to an applications program. For systems implementing DMI BIOS Extensions, user-defined information will be located in a series of data structures. These data structures are accessed by the method described in Section 2.

Vendors may decide to include all or any part of this information in their designs. For a complete solution that is compatible with the Service Layer distributed by the DMTF, vendors must also implement component instrumentation. This instrumentation allows the Service Layer to gain access to the information stored in the BIOS. In addition, a MIF file must be provided that describes that data that is provided by the BIOS and the method of accessing that data. As a minimum, the PC Standard System MIF provided by the DTMF can be used for this purpose.

2. Accessing DMI Information

2.1 Calling Convention

To prevent the proliferation of interfaces for accessing information embedded in the System BIOS, the Desktop Management BIOS Specification will follow the System Device Node model used by Plug and Play, and use Plug and Play BIOS functions to access DMI information. Plug and Play functions 50h-5Fh have been assigned to the DMI BIOS Interface.

Each of the DMI BIOS Plug-and-Play functions is available both in real-mode and 16-bit protected-mode. A function called in 16-bit protected-mode supports both 16-bit and 32-bit stack segments.

2.2 DMI BIOS Functions

This table defines the current DMI BIOS Functions.

DMI BIOS Function	Function Number	Description	Required/Optional
GET_DMI_INFORMATION	50h	Returns the Number of Structures, the Size of the Largest Structure, and the DMI BIOS Revision.	Required
GET_DMI_STRUCTURE	51h	Copies the information for the specified DMI Structure into the buffer specified by the caller.	Required
SET_DMI_STRUCTURE	52h	Copies the information for the specified DMI structure from the buffer specified by the caller.	Optional
GET_DMI_STRUCTURE_ CHANGE_INFO	53h	Returns the DMI Structure Change Information into a 16-byte buffer specified by the caller.	Required for Dynamic Structure-change Notification Support
DMI_CONTROL	54h	Controls a system action	Optional
GET_GPNV_INFORMATION	55h	Returns information about the *G*eneral *P*urpose *N*on-*V*olatile Storage Area	Required for GPNV Support
READ_GPNV_DATA	56h	Reads the entire specified GPNV contents into a buffer specified by the caller.	Required for GPNV Support
WRITE_GPNV_DATA	57h	Copies the contents of the user specified buffer into the GPNV. The function causes the entire specified GPNV to be updated.	Required for GPNV Support
Reserved for Future Use	58h-5Fh	Reserved, will return DMI_FUNCTION_NOT_ SUPPORTED.	Reserved

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