



## AMI Software Utility User Guide

### Aptio 5.x DMIEDIT User Guide

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## Document Information

### Purpose

This document provides information to use the AptioV DmiEdit tools to update the SMBIOS.

### Audience

Generic BIOS Engineers, OEM Engineers, and Aptio Customers.

### Change History

Date	Revision	Description
2013-11-01	1.00	Initial document created and update content to the latest released of DmiEdit.
2014-01-24	1.01	Add a command to read/write the offset 04h of type 0.
2017-02-24	1.02	Remove DOS support. Add Windows 10 support into OS list. Add a command to read/write the offset 12h of type 3.
2017-04-28	1.03	Add answer for Windows digitally signed driver.
2017-08-03	1.04	Add note for DOS not support. Correct execution file name in OS list.

## Introduction

### Overview

**D**MIEdit stands for Desktop Management Interface Edit. It allows you to modify strings associated with SMBIOS tables. This utility works with Aptio firmware with SMBIOS support.

You can modify the following SMBIOS tables with DMIEdit:

- Bios Information (Type 0)
- System (Type 1)
- Base Board (Type 2)
- Chassis (Type 3)
- Processor Information (Type 4)
- OEM String (Type 11)
- System Configuration Options (Type 12)
- Portable Battery (Type 22)
- System Power Supply (Type 39)

**Note:** The System Firmware must support the SMBIOS specification.

### Requirements

#### Supported Operation System

**DMIEdit for Windows NT/ 2000/ XP/ PE/ Vista/ 7/ 8/ 10:**

AMIDEWIN.EXE is supported in Windows NT platform series. It requires the Windows NT platform driver amifldr32.sys.

AMIDEWIN64.EXE is supported in Windows NT 64 Bit platform series. It requires the Windows NT 64 Bit platform driver amifldr64.sys.

**DMIEdit for EFI:**

AMIDEEFI.EFI is supported in EFI shell.

AMIDEEFI64.EFI is supported in EFI64 shell.

**DMIEdit for Linux:**

amidelnx\_32 is supported in Linux 32 Bit operation system.

amidelnx\_64 is supported in Linux 64 Bit operation system.

**Note:** DOS version is stopped supporting in DMIEDIT 5.18 or later version.

## Firmware Requirements

DMI Editor (Desktop Management Interface Edit) program requires that the host system Firmware is an AMI Aptio V and above.

## Input File:

DMI Editor (Desktop Management Interface Edit) requires that an input file used.

**Note:** Creating an input file is explained in more details in Chapter *Getting Start*.

## Getting Start

### Installation

To install the DMIEdit for EFI (Desktop Management Interface Edit), copy the DMIDEEFI.EFI/ DMIDEEFIx64.EFI executable file to the hard disk drive or any other storage location of the system that will use it. In the case of MS Windows platform, make sure all the files (AMIDEWIN.EXE/ AMIDEWINx64.EXE and amifldr32.sys/ amifldr64.sys) are in the same directory.

### Command line switches

Command line switches give the users the flexibility to change individual SMBIOS table fields. If the users want to change in multiple groups at a time, then input script file (shown below) is the best method. The different command line switches are as following:

**AMIDEWIN <Command 1>**

or

**AMIDEWIN [Option 1] [Option 2]...**

#### Command

- |                       |   |
|-----------------------|---|
| ● /ALL [FileName]     | Output SMBIOS string to screen or file.   |
| ● /DMS [FileName]     | Create configuration file.                |
| ● /DUMPALL [FileName] | Output all SMBIOS data to screen or file. |
| ● /DUMP # [#] ...     | Read Type # data.                         |

#### Options

##### Part 0. System (Type 0)

- |                   |                               |
|-------------------|-------------------------------|
| ● /IVN ["String"] | Read/Write BIOS vendor name.  |
| ● /IV ["String"]  | Read/Write BIOS version.      |
| ● /ID ["String"]  | Read/Write BIOS release date. |

##### Part 1. System (Type 1)

- |                  |                                 |
|------------------|---------------------------------|
| ● /SM ["String"] | Read/Write system manufacturer. |
| ● /SP ["String"] | Read/Write system product.      |

- **/SV ["String"]** Read/Write system version.
- **/SS ["String"]** Read/Write system serial number.
- **/SU [16 Bytes]** Read/Write system UUID.
- **/SU AUTO** Generate system UUID and update automatically.
- **/SK ["String"]** Read/Write SKU number.
- **/SF ["String"]** Read/Write family name.

#### *Part 2-1 Base Board (Type 2)*

- **/BM ["String"]** Read/Write baseboard manufacturer.
- **/BP ["String"]** Read/Write baseboard product.
- **/BV ["String"]** Read/Write baseboard version.
- **/BS ["String"]** Read/Write baseboard serial number.
- **/BT ["String"]** Read/Write Asset Tag.
- **/BLC ["String"]** Read/Write location in Chassis.

#### *Part 2-2 Base Board (Type 2)*

- **/BMH [device handle#] ["String"]**  
Read/Write baseboard manufacturer with device handle number.
- **/BPH [device handle#] ["String"]**  
Read/Write baseboard product with device handle number.
- **/BVH [device handle#] ["String"]**  
Read/Write baseboard version with device handle number.
- **/BSH [device handle#] ["String"]**  
Read/Write baseboard serial number with device handle number.
- **/BTH [device handle#] ["String"]**  
Read/Write Asset Tag with device handle number.
- **/BLCH [device handle#] ["String"]**  
Read/Write location in Chassis with device handle number.

#### *Part 3-1 Chassis (Type 3)*

- **/CM ["String"]** Read/Write chassis manufacturer.
- **/CT [8-Bits value]** Read/Write chassis type.
- **/CV ["String"]** Read/Write chassis version.
- **/CS ["String"]** Read/Write chassis serial number.
- **/CA ["String"]** Read/Write chassis tag.
- **/CO [32-Bits value]** Read/Write chassis OEM-defined value.
- **/CPC [8-Bits value]** Read/Write chassis Power Cords number.
- **/CSK ["String"]** Read/Write chassis SKU Number.

#### *Part 3-2 Chassis (Type 3)*

- **/CMH [device handle#] ["String"]**  
Read/Write chassis manufacturer. with device handle number.
- **/CTH [device handle#] ["String"]**  
Read/Write chassis type. with device handle number.
- **/CVH [device handle#] ["String"]**  
Read/Write chassis version. with device handle number.
- **/CSH [device handle#] ["String"]**  
Read/Write chassis serial number with device handle number.
- **/CAH [device handle#] ["String"]**

- Read/Write chassis tag with device handle number.
- **/COH [device handle#] [32-Bits value]**  
Read/Write chassis OEM-defined value with device handle number.
- **/CPCH [device handle#] [8-Bits value]**  
Read/Write chassis Power Cords number with device handle number.
- **/CSKH [device handle#] ["String"]**  
Read/Write chassis SKU Number with device handle number.

#### *Part 4 Processor Information (Type 4)*

- **/PSN ["String"]** Read/Write Processor Information serial number.
- **/PAT ["String"]** Read/Write Processor Information asset tag.
- **/PPN ["String"]** Read/Write Processor Information part number.

#### *Part 5. OEM String (Type 11)*

- **/OS [<Number><"String">]** Read/Write #th OEM string.

#### *Part 6. OEM String (Type 12)*

- **/SCO [<Number><"String">]** Read/Write #th OEM string.

#### *Part 7. Portable Battery (Type 22)*

- **/PBL [device handle#] ["String"]**  
Read/Write Portable Battery Location.
- **/PBM [device handle#] ["String"]**  
Read/Write Portable Battery Manufacturer.
- **/PBD [device handle#] ["String"]**  
Read/Write Portable Battery Manufacturer Date.
- **/PBS [device handle#] ["String"]**  
Read/Write Portable Battery Serial Number.
- **/PBN [device handle#] ["String"]**  
Read/Write Portable Battery Device Name.
- **/PBCH [device handle#] [8-Bits value]**  
Read/Write Portable Battery Device Chemistry.
- **/PBCA [device handle#] [16-Bits value]**  
Read/Write Portable Battery Design Capacity.
- **/PBV [device handle#] [16-Bits value]**  
Read/Write Portable Battery Design Voltage.
- **/PBSV [device handle#] ["String"]**  
Read/Write Portable Battery SBDS Version Number.
- **/PBE [device handle#] [8-Bits value]**  
Read/Write Portable Battery Maximum Error.
- **/PBSN [device handle#] [16-Bits value]**  
Read/Write Portable Battery SBDS Serial Number.
- **/PBSD [device handle#] [16-Bits value]**  
Read/Write Portable Battery SBDS Manufacturer Date.
- **/PBSC [device handle#] ["String"]**  
Read/Write Portable Battery SBDS Device Chemistry.
- **/PBCM [device handle#] [8-Bits value]**  
Read/Write Portable Battery Design Capacity Multiplier.



- **/PBO [device handle#] [32-Bits value]**  
Read/Write Portable Battery OEM-Specific.

*Part 8. System Power Supply (Type 39)*

- **/PU [device handle#] [8-Bits value]**  
Read/Write Power supply unit group.
- **/PL [device handle#] ["String"]**  
Read/Write Power supply location.
- **/PD [device handle#] ["String"]**  
Read/Write Power supply device name.
- **/PM [device handle#] ["String"]**  
Read/Write Power supply manufacturer.
- **/PS [device handle#] ["String"]**  
Read/Write Power supply serial number.
- **/PT [device handle#] ["String"]**  
Read/Write Power supply asset tag number.
- **/PN [device handle#] ["String"]**  
Read/Write Power supply model part number.
- **/PR [device handle#] ["String"]**  
Read/Write Power supply revision level.
- **/PP [device handle#] [4-Bits value]**  
Read/Write Power supply max power capacity
- **/PC [device handle#] [4-Bits value]**  
Read/Write Power supply characteristics.
- **/PVH [device handle#] [4-Bits value]**  
Read/Write Power supply voltage probe handle.
- **/PDH [device handle#] [4-Bits value]**  
Read/Write Power supply cooling dev. handle.
- **/PCH [device handle#] [4-Bits value]**  
Read/Write Power supply current probe handle.

## Creating Input File (SET.DMS)

Use a text editor to create the input file. The file name must be SET.DMS. The SET.DMS input file must include at least one SMBIOS table entry. Each SMBIOS table entry contains the SMBIOS table type name followed by the strings to be edited, which is separated by <space>=<space>.

The following is an example of a SET.DMS input file:

### **[System]**

Manufacturer = AMI  
Product = Dummy  
Version = 6.22  
SerialNum = 123455  
SKU = SKU12345  
Family = Fam12345  
UUID = 0123456789ABCDEF0123456789ABCDEF

### **[BaseBoard]**

Manufacturer = AMI  
Product = Dummy  
Version = 1.22  
SerialNum = 122333

### **[Chassis]**

Manufacturer = AMI  
Version = 1.22  
SerialNum = 12222  
TagNum = 122212  
ChassisType = 83  
ChassisOEM = FFFF0000

### **[OemString]**

String = AMI  
String = http://www.ami.com  
String = xxxxx

#### **Note:**

- The DMIEdit program can fail if it encounters an error in the SET.DMS input file.
- For variable length block fields of SMBIOS tables, the value of this field should be in hexadecimal numbers, which helps in determining the length of the block. The hexadecimal digits representation is exactly the twice the actual size required to store that value. For example, the UUID has block length of 16 bytes hence the number of hexadecimal digits in the script/command line required should be 32.

## Running DMIEdit Program

For EFI shell, the argument should be as follows:

```
AMIDEEFI SET.DMS <ENTER>
```

For Windows, copy all the four files in the same folder as the input script file, open the command console prompt in the folder and type the following convention to run:

```
C:\>AMIDEWIN SET.DMS <ENTER>
```

For using Command line switches, one command line or multiple options can be used at a time:

```
C:\>AMIDEWIN /IVN AMI
```

```
C:\>AMIDEWIN /BS 1234567890
```

or

```
C:\>AMIDEWIN /IVN AMI /BS 1234567890
```

---

## Features

### Edit SMBIOS Strings

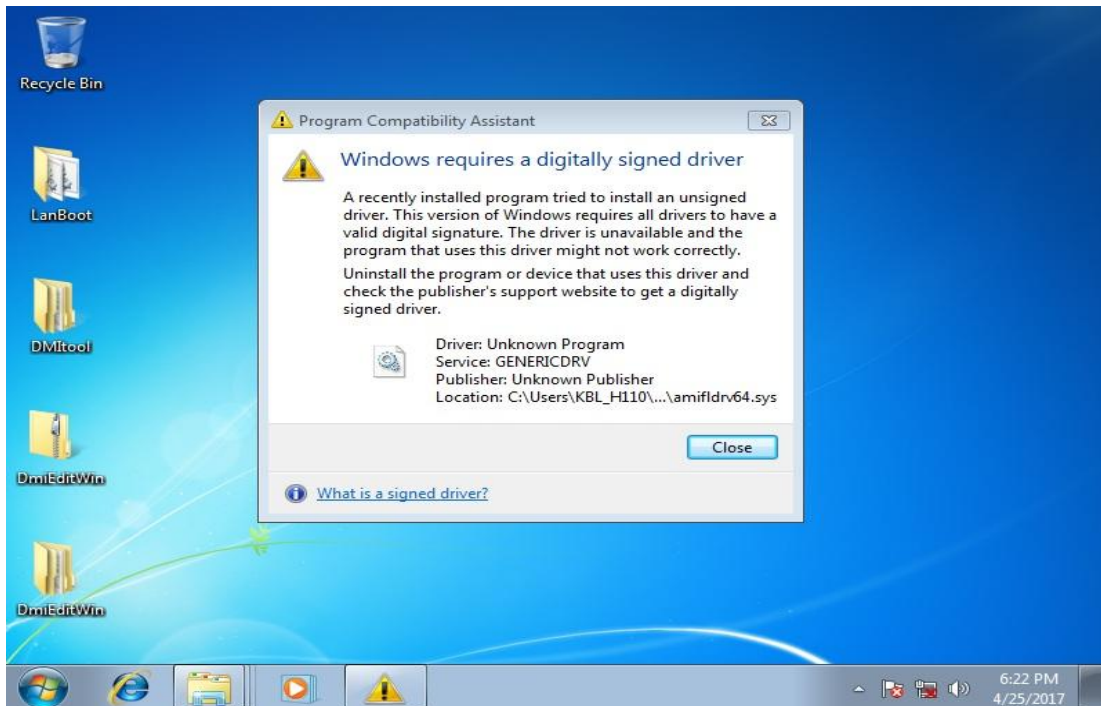
DMI Editor allows users to modify SMBIOS strings that are associated with the SMBIOS tables.

#### Edit SMBIOS Strings Process

To modify SMBIOS strings, follow the steps outlined in the table below:

Step	Description
Step 1	Flash the new Firmware.
Step 2	Boot the system in EFI shell, Linux or Windows.
Step 3	Create a SET.DMS input file as described in Chapter <i>Getting Start</i> .
Step 4	Run the DMIEdit program as described in Chapter <i>Getting Start</i> .

## Windows requires a digitally signed driver



*This issue is resolved by a security fix provided by MS. [KB3033929](#) resolves this issue. The certificate used to sign the driver is higher security and older versions of Win7 don't support it.*