**PRODUCT EXTERNAL SPECIFICATION**

**of**

**Acer BIOS Configuration Tool v1.0**

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| --- | --- |
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**Version History**

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| Revision | Personnel | Date | Contents |
| 1.0 | Justin Chiu | 2016/02/05 | First Release |
| 1.0 rev2 | Justin Chiu | 2016/02/15 | Fix typo |
| 1.0 rev3 | Justin Chiu | 2016/02/16 | Fix typo example of setup date/time |
| 1.0 rev4 | Justin Chiu | 2016/03/28 | Update remark for   1. Power On by RTC Alarm Time 2. Power On by RTC Alarm Day 3. Change User Password |
| 1.0 rev5 | Justin Chiu | 2016/04/06 | Add BIOS Options “**CSM & Secure Boot”** in Page no. 10 |
| 1.0 rev6 | Justin Chiu | 2016/04/22 | Add BIOS options “TPM State” and “TPM Operation” in Page no. 10  Update format for BIOS option “Date and Time” , Please refer to WMI Spec. v4.5 RC2 |
| 1.0 rev7 | Justin Chiu | 2016/08/26 | Add BIOS options "Optimized Memory Resource for Windows 7 32-Bit" in Page no. 7, Please refer to WMI Spec. v4.6 |
| 1.0 rev8 | Gerald Hsiao | 2018/01/11 | 1. Corrected table format for Device Control, p.5 – p.7 2. Added BIOS option “Onboard Wi-Fi/ Bluetooth Module” on p.8 3. Added BIOS option “USB Device Filter” on p.11 |
| 1.0 rev9 | Gerald Hsiao | 2018/01/17 | 1. Added remark for “Onboard Wi-Fi/Bluetooth Module” and “USB Device Filter”: WMI Spec. v5.1RC1 and above |
| 1.0 rev10 | Gerald Hsiao | 2018/01/22 | 1. Added “USB Charge Function” on p.10. |

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1. Introduction

Acer BIOS configuration tool is developed for commercial customers who need it to batch/remote change PC BIOS settings. With it user can get/set current BIOS settings or default BIOS settings.

1. Key Features

* Get/Set current BIOS settings
* Get/Set default BIOS settings

1. OS and Platform Support

* OS Support: Windows PE, Windows 7, and Windows 10 x86/x64
* Project support: Projects which implement WMI Spec. v4.4 or later , vCaptain will be 1st project to support this feature.

1. Multi-Brand Support

Acer brand only

1. Language Support

Support English only

1. DPI-Awareness Support

Acer BIOS configuration tool is a console mode app , it’s not a DPI aware app .

1. User Account Support

Acer BIOS configuration tool requires to run with administrator privilege.

1. App Naming

Abct32.exe for 32 bit OS

Abct64.exe for 64 bit OS

1. Syntax of BIOS configuration tool

This chapter gives you an overview of the Acer BIOS Configuration Tool syntax. It explains how to use the configuration tool and details BIOS items which used to get/set BIOS settings for client systems.

* 1. Parameters

|  |  |  |
| --- | --- | --- |
| Parameter | Description | Example |
| N/A | List all available parameters and options | Abct64.exe |
| /? | List all available parameters and options | Abct64.exe /? |
| /h | List all available parameters and options | Abct64.exe /h |
| /password “%pwd%” | Input a correct BIOS admin password to get access permission for BIOS settings | Abct64.exe /password “1234” |
| /get | Get BIOS setting | Abct64.exe /password “1234” /get "Time"  (Get current Time) |
| /set | Set BIOS setting | Abct64.exe /password “1234” /set "Time"="12:05:00”  (Set time as 12:05:00) |
| /get-default | Get BIOS default setting | Abct64.exe /password “1234” /get-default "System Health Indicator”  (Get default setting of System Health Indicator) |
| /set-default | Set BIOS default setting | Abct64.exe /password “1234” /set-default " System Health Indicator "="1”  (Set default setting of System Health Indicator as enable) |

* 1. BIOS Item

This section list all available BIOS options which supported by Acer BIOS Configuration tool. By input correct BIOS option and setting, it can get or change current or default BIOS setting.

***Device Control***

|  |  |  |
| --- | --- | --- |
| Item | Description | Option |
| Intel Hyper-Threading | Get/Set Intel Hyper-Threading setting | 0: Disabled  1: Enabled  255: Not Supported |
| Active Processor Cores | Get/Set Active Processor Cores | 0: All cores  1: Single core  2:dual core  …  N: N cores  255: Not Supported |
| Intel EIST | Get/Set Intel EIST | 0: Disabled  1: Enabled  255: Not Supported |
| Intel Turbo Boost | Get/Set Intel Turbo Boost | 0: Disabled  1: Enabled  255: Not Supported |
| Intel AES-NI | Get/Set Intel AES-NI | 0: Disabled  1: Enabled  255: Not Supported |
| Intel VT | Get/Set Intel VT | 0: Disabled  1: Enabled  255: Not Supported |
| Intel AMT | Get/Set Intel AMT | 0: Disabled  1: Enabled  255: Not Supported |
| Intel VT-d | Get/Set Intel VT-d | 0: Disabled  1: Enabled  255: Not Supported |
| Intel TXT | Get/Set Intel TXT | 0: Disabled  1: Enabled  255: Not Supported |
| AMD NX Mode | Get/Set AMD NX Mode | 0: Disabled  1: Enabled  255: Not Supported |
| AMD SVM Mode | Get/Set AMD SVM Mode | 0: Disabled  1: Enabled  255: Not Supported |
| AMD CPB Mode | Get/Set AMD CPB Mode | 0: Disabled  1: Enabled  255: Not Supported |
| AMD Core Leveling  Mode | Get/Set AMD Core Leveling  Mode | 0: Automatic mode  1: One core per processor  2: One Compute Unit  3: One core per Compute Unit  255: Not Supported |
| DASH | Get/Set DASH | 0: Disabled  1: Enabled  255: Not Supported |
| DASH Console  Redirection | Get/Set DASH Console  Redirection | 0: Disabled  1: Enabled  255: Not Supported |
| ASF | Get/Set ASF | 0: Disabled  1: Enabled  255: Not Supported |
| System Health Indicator | Get/Set System Health Indicator | 0: Disabled  1: Enabled  255: Not Supported |
| Optimized Memory Resource for Windows 7 32-Bit | Get/Set Optimized Memory Resource for Windows 7 32-Bit | 0: Disabled  1: Enabled  255: Not Supported |

***Device Control***

|  |  |  |
| --- | --- | --- |
| Item | Description | Option |
| Onboard Graphics  Controller | Get/Set Onboard Graphics  Controller | 0: Disabled  1: Enabled  255: Not Supported |
| Onboard SATA  Controller | Get/Set Onboard SATA  Controller | 0: Disabled  1: Enabled  255: Not Supported |
| Onboard SATA Mode | Get/Set Onboard SATA Mode | 0: Native IDE  1: RAID  2: AHCI  255: Not Supported |
| Onboard Audio  Controller | Get/Set Onboard Audio  Controller | 0: Disabled  1: Enabled  255: Not Supported |
| Onboard LAN  Controller | Get/Set Onboard LAN  Controller | 0: Disabled  1: Enabled  255: Not Supported |
| Onboard LAN Option  ROM | Get/Set Onboard LAN Option  ROM | 0: Disabled  1: Enabled  255: Not Supported |
| Onboard Wi-Fi Module | Get/Set Onboard Wi-Fi Module | 0: Disabled  1: Enabled  255: Not Supported |
| Onboard Bluetooth  Module | Get/Set Onboard Bluetooth  Module | 0: Disabled  1: Enabled  255: Not Supported |
| Serial Port1 Address | Get/Set Serial Port1 Address | 0: Disabled  1: 3F8/IRQ4  2: 2F8/IRQ3  3: 3E8/IRQ4  4: 2E8/IRQ3  255: Not Supported |
| Serial Port2 Address | Get/Set Serial Port2 Address | 1: 3F8/IRQ4  2: 2F8/IRQ3  3: 3E8/IRQ4  4: 2E8/IRQ3  255: Not Supported |
| Parallel Port Address | Get/Set Parallel Port Address | 0: Disabled  1: 378  2: 278  3: 3BC  255: Not Supported |
| Parallel Port Mode | Get/Set Parallel Port Mode | 0: Normal  1: EPP  2: ECP  3: EPP+ECP  255: Not Supported |
| Onboard Wi-Fi/ Bluetooth Module  (WMI Spec. v5.1RC1 and above) | Get/Set Onboard Wi-Fi/ Bluetooth Module Mode | 0: Disabled  1: Enabled  255: Not Supported |

***IO Ports***

|  |  |  |
| --- | --- | --- |
| Item | Description | Option |
| Front USB Ports | Get/Set Front USB Ports | 0: Disabled  1: Enabled  255: Not Supported |
| Rear USB Ports | Get/Set Rear USB Ports | 0: Disabled  1: Enabled  255: Not Supported |
| Left USB Ports | Get/Set Left USB Ports | 0: Disabled  1: Enabled  255: Not Supported |
| Right USB Ports | Get/Set Right USB Ports | 0: Disabled  1: Enabled  255: Not Supported |

***Power and Event Control***

|  |  |  |
| --- | --- | --- |
| Item | Description | Option |
| Deep Power Off Mode | Get/Set Deep Power Off Mode | 0: Disabled  1: Enabled  255: Not Supported |
| Power On by RTC  Alarm | Get/Set Power On by RTC  Alarm | 0: Disabled  1: Enabled  255: Not Supported |
| Power On by RTC  Alarm Time (hh:mm:ss) | Get/Set Time of Power On by RTC  Alarm | Hh:mm:ss  Example:  Abct64.exe /password “1234” /set "Power On by RTC Alarm Time”=”12:00:00”  \*This function is available only if “Power on by RTM Alarm” is enable |
| Power On by RTC  Alarm Day | Get/Set Day of Power On by RTC  Alarm | 0: Every Day  1: 1st day for each month  2: 2nd day for each month  …  31: 31st day for each month  Example:  Abct64.exe /password “1234” /set "Power On by RTC Alarm Day”=”0”  \*This function is available only if “Power on by RTM Alarm” is enable |
| Power On by PCIE  Devices | Get/Set Power On by PCIE  Devices | 0: Disabled  1: Enabled  255: Not Supported |
| Power On by PCI  Devices | Get/Set Power On by PCI  Devices | 0: Disabled  1: Enabled  255: Not Supported |
| Power On by Onboard  LAN | Get/Set Power On by Onboard  LAN | 0: Disabled  1: Enabled  255: Not Supported |
| Power On by Monitor  Power Button | Get/Set Power On by Monitor  Power Button | 0: Disabled  1: Enabled  255: Not Supported |
| Wake Up by PS/2  KB/Mouse | Get/Set Wake Up by PS/2  KB/Mouse | 0: Disabled  1: S3  2: S4&S5  255: Not Supported |
| Wake Up by USB  KB/Mouse | Get/Set Wake Up by USB  KB/Mouse | 0: Disabled  1: S3  2: S4&S5  255: Not Supported |
| Restore On AC Power  Loss | Get/Set Restore On AC Power  Loss | 0: Off  1: On  2: Last State  255: Not Supported |
| USB Charge Function | Get/Set USB Charge Function | 0: Disabled  1: Enabled  255: Not Supported |

***Security***

|  |  |  |
| --- | --- | --- |
| Item | Description | Option |
| Change Supervisor  Password | Get/Set Change Supervisor  Password | Byte 02~13: password context in  scan code or UTF-8 (12 characters)  Example:  Abct64.exe /password “1234” /set "Change Supervisor  Password”=”1234” |
| Change User Password | Get/Set Change User Password | Byte 02~13: password context in  scan code or UTF-8 (12 characters)  Example:  Abct64.exe /password “1234” /set "Change User Password”=”1234”  \*This function is workable only if “Supervisor  Password” has been setup. |
| Security Option | Get/Set Security Option | 0: Setup  1: System  255: Not Supported |
| Intel TPM Device Selection | Get/Set TPM Device Selection , Intel Platform only | 0: dTPM  1: PTT  255: Not Supported |
| AMD TPM Device Selection | Get/Set TPM Device Selection, AMD platform only | 0: dTPM  1: fTPM  255: Not Supported |
| TPM Support | Get/Set TPM Support | 0: Disabled  1: Enabled  255: Not Supported |
| TPM State | Get/Set TPM Support | 0: Disabled  1: Enabled  255: Not Supported |
| TPM Operation | Get/Set TPM Support | 0: Disabled  1: Clear  255: Not Supported |
| Removable Device Boot | Get/Set Removable Device Boot | 0: Disabled  1: Enabled  255: Not Supported |
| BIOS Write Protect | Get/Set BIOS Write Protect | 0: Disabled  1: Enabled  255: Not Supported |
| Chassis Opened Warning | Get/Set Chassis Opened Warning | 0: Disabled  1: Enabled  2: Clear  255: Not Supported |
| CSM and Secure Boot | Get/Set CSM and Secure Boot | 0:Secure Boot: Disabled, CSM: Always  1:Secure Boot: Enabled, CSM: Never  255: Not Supported |
| USB Device Filter  (WMI Spec. v5.1RC1 and above) | Get/Set USB Device Filter | 0: All Allowed  1: Keyboard/Mouse Only  2: Read-Only  255: Not Supported |

***Post Behaviors***

|  |  |  |
| --- | --- | --- |
| Item | Description | Option |
|  |  |  |
| Launch CSM | Get/Set Launch CSM setting | 0: Never  1: Always  255: Not Supported |
| Boot Filter | Get/Set Boot Filter | 0: UEFI  1: Legacy  255: Not Supported |
| Boot Device | Get/Set 1st Boot Device,2nd Boot Device, 3rd Boot Device, 4th Boot Device | 1: Hard Disk  2: CD&DVD  3: Removable Device  4: LAN  254: Disabled  255: Not Supported  Example:  1.1st boot device is LAN, 2nd boot device is Hard Disk, and disable 3rd & 4th boot device  Abct64.exe /password “1234” /set "Boot Device”=”4”,”1”,”254”,”254” , disable boot device  2.1st boot device is LAN, 2nd boot device is Removable Device, 3rd boot device is CD&DVD and 4th boot device is Hard Disk  Abct64.exe /password “1234” /set "Boot Device”=”4”,”3”,”2”,”1” , set boot device |
| Boot Menu | Get/Set Boot Menu setting | 0: Disabled  1: Enabled  255: Not Supported |
| Fast Boot | Get/Set Fast Boot setting | 0: Disabled  1: Enabled  255: Not Supported |
| Quiet Boot | Get/Set Quiet Boot setting | 0: Disabled  1: Enabled  255: Not Supported |
| Bootup Num-Lock | Get/Set Bootup Num-Lock setting | 0: Disabled  1: Enabled  255: Not Supported |

***Date and Time***

|  |  |  |
| --- | --- | --- |
| Item | Description | Option |
| Date (mm/dd/yyyy) | Get/Set System Date | 1~31-> Date  1~12 ->Month  YYYY -> Year  Example:  Abct64.exe /password “1234” /set "Date”=”02/05/2016” |
| Time (hh:mm:ss) | Get/Set System Time | 0~59 -> Second  0~59 -> Minute  0~23-> Hour  Example:  Abct64.exe /password “1234” /set "Time”=”01:56:00” |

* 1. Return Code

|  |  |
| --- | --- |
| Code | Description |
| 0 | Success |
| 1 | Not support |
| 2 | Incorrect Password |
| 7 | Password retry count exceeded |