WEBS-3392

Fan-less Embedded System



User's Manual

Version 1.0

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How to Use This Manual

The manual describes how to configure your WEBS-3392 system to meet various operating requirements. It is divided into five chapters, with each chapter addressing a basic concept and operation of Fan-less Embedded System.

Chapter 1: System Overview. Present what you have in the box and give you an overview of the product specifications and basic system architecture for this fan-less embedded system.

Chapter 2: System Installation. Show the definitions and locations of all the interfaces and describe a proper installation guide so that you can easily configure your system.

Chapter 3: BIOS Setup Information. Specify the meaning of each setup parameters, how to get advanced BIOS performance and update new BIOS. In addition, POST checkpoint list will give users some guidelines of trouble-shooting.

Chapter 4: Important Instructions. Indicate some instructions which must be carefully followed when the fan-less embedded system is used.

Chapter 5: Frequent Asked Questions. Provide the answers for the most frequently asked questions.

The content of this manual is subject to change without prior notice. These changes will be incorporated in new editions of the document. The vendor may make supplement or change in the products described in this document at any time.

Revision History

Revision	Date	Details of Change(s)
V1.0	2015/5/28	Initial Release

Chapter 1 System Overview

1.1 Introduction

Portwell Inc., a world-leading innovator in the Industrial PC (IPC) market and a Premium Member of the Intel® Internet of Things (IoT) Solutions Alliance, announced WEBS-3392, a fan-less embedded system. Builds on Intel® Baytrail SoC and takes advantages of Intel® Atom \mathbb{M} E3800 Series processor technologies, especially its compact design plus low power consumption.

Portwell's WEBS-3392 is designed to be power-optimized and value-optimized. Instead of adopting a mobile CPU like a traditional embedded system, WEBS-3392 utilizes the newest Intel® Atom[™] platform including two sku of Intel® Atom[™] E3845 and Intel® Atom[™] J1900, and Intel® Baytrail SoC chipset, which is more economical compared to its mobile counterpart and provides great efficacy as well as ultra low power consumption; this makes WEBS-3392 not only competitive but outstanding in the market. The system further takes advantage of the Intel® Atom[™] processor technologies supporting dual channel DDR3L memory up to 16GB. Furthermore, the WEBS-3392 embedded system include rich I/O interfaces and fast connectivity with: three independent display (Display Port/VGA/DVI-D) interfaces, two Gigabit Ethernet ports, one RS-232/422/485 port, three RS-232 port, one USB 3.0 port, and four USB 2.0 ports. An optional wireless or 3G/GPS module can be added via a Half-size Mini-PCIe socket.

The rugged, fan-less design makes the WEBS-3392 durable in harsh environment applications, such as factory automation and industrial automation. Portwell's WEBS-3392 has already passed a vibration test of 5Grms/ 5~500Hz and a shock test of 50G, assuring its solidity and reliability. In addition, the system accepts a wide input voltage range from 12V to 24V. This power-source flexibility enables product usage in a variety of situations. Moreover, the WEBS-3392 is more than a robust and dependable embedded system with high performance and graphics efficacy. Its stylish mechanical design enhances the system's artistry. Potential applications include plant engineering, transportation & logistics, as well as display control and gateway, etc.

1.2 Check List

The WEBS-3392 package should cover the following basic items:

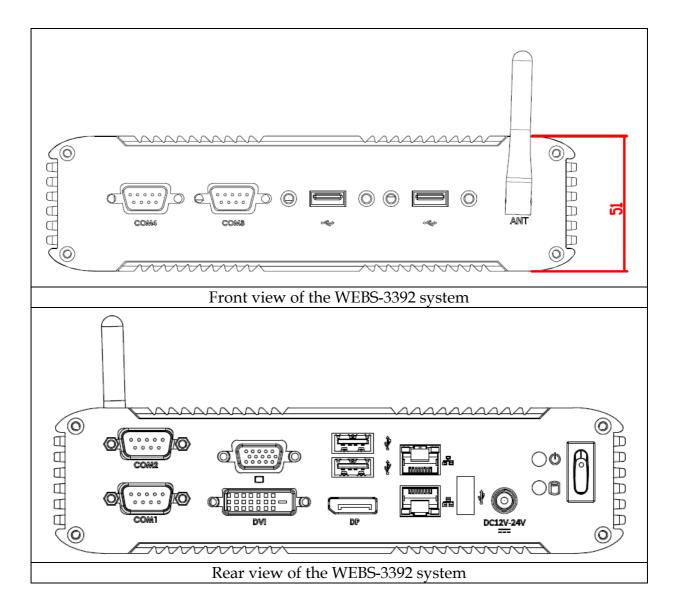
- ✓ One WEBS-3392 Fan-less Embedded System
- ✓ One 60W AC/DC Power Adapter DC-plug with screw
- ✓ One Wall Mount Kit
- ✓ Other Accessories

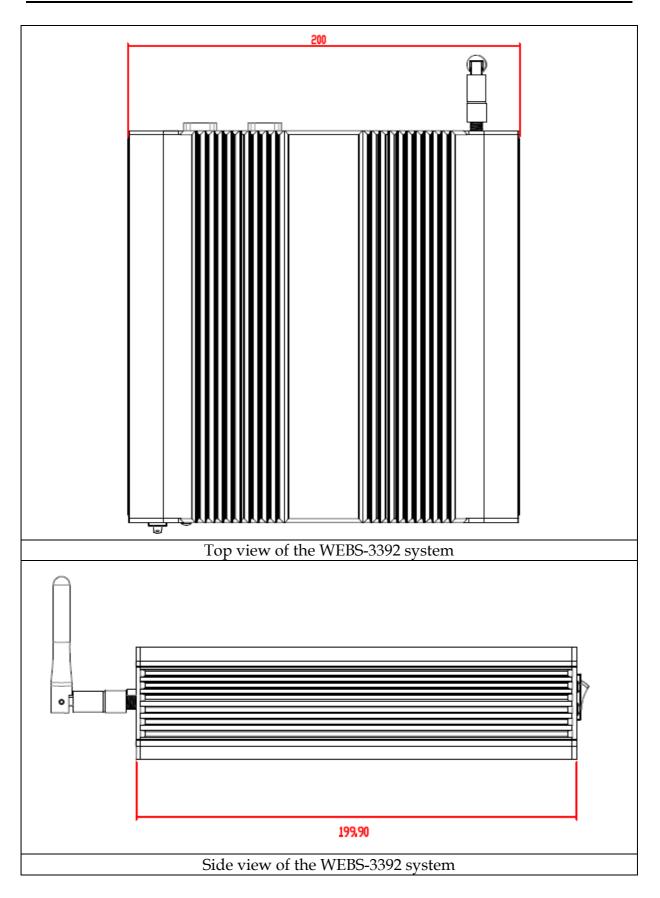
If any of these items is damaged or missing, please contact your vendor and keep all packing materials for future replacement and maintenance.

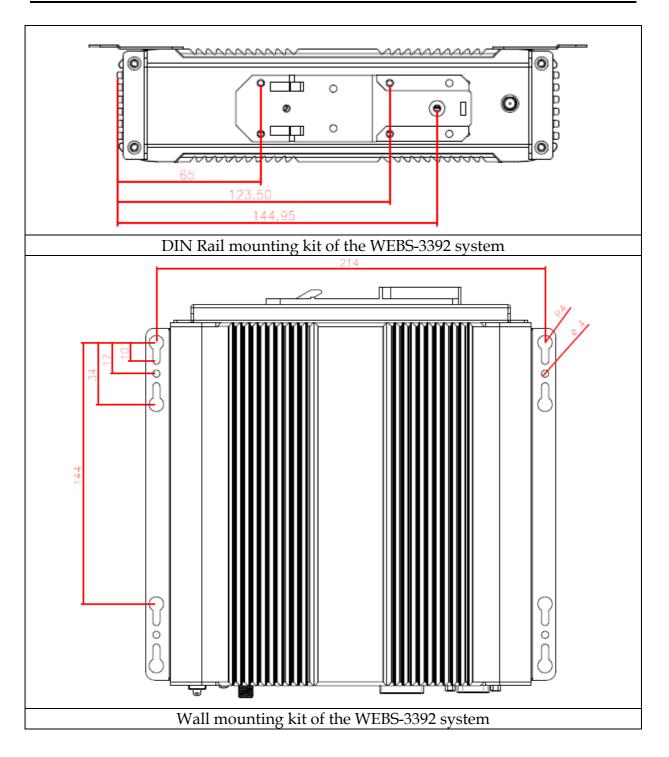
1.3 Product Specification

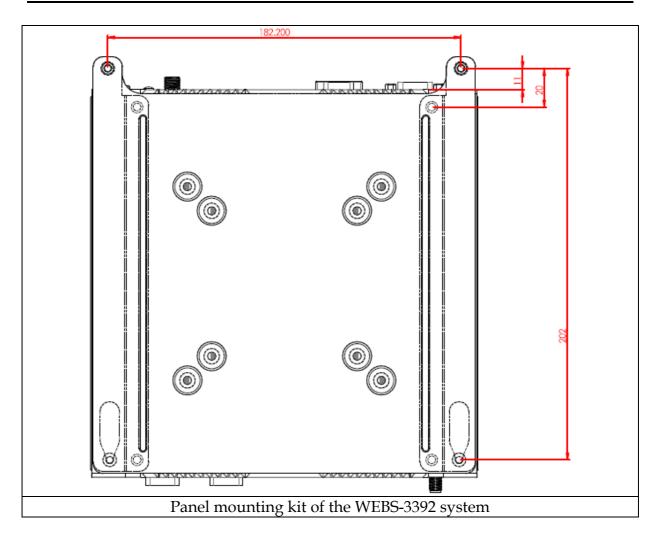
System				
M/B	WADE-8079			
System Chipset	Intel® Baytrail SoC			
CPU	Intel® Atom™ E3845 Processor.			
	1.91Ghz/4C/4T/DDR3L CPU.2M Cache.			
	Intel® Atom [™] J1900 Processor.			
	2Ghz/4C/4T/DDR3L CPU.2M Cache.			
BIOS	Phoenix(EFI) BIOS			
System Memory	Dual 240-pin SO-DIMM socket supports DDR3L 1333/1600			
	up to 16GB			
Storage	1x 2.5" SATA HDD/SSD, 1x mSATA			
Watchdog Timer	Programmable via S/W from 1 sec. to 255 sec.			
H/W Status Monitor	-Temperature (CPU & System)			
	-Voltage (CPU Vcore, VBAT, 5VSB, 12V, 5V, 3.3V)			
Expansion	-1x Half-size Mini-PCIe socket(USB+PCIe)			
	-1x Full-size Mini-PCIe socket(mSATA)			
External I/O				
Series Ports	4x COM Ports (1x RS-232/422/485 selectable by BIOS, 3x			
	RS-232)			
Display	1x DVI-D, 1x VGA, 1x DP			
USB	1x USB 3.0, 4x USB 2.0			
Audio	N/A			
LAN	2x Gigabit Ethernet (Dual Intel® I210IT)			
GPIO	N/A			
Other	-1x Antenna hole for WiFi or 3G/GPS module			
Power Supply Unit				
Power Supply	DC 12~24V			
Environment				
Operating	-10℃ to 45℃			
Temperature				
Storage Temperature	-40°C to 80°C			
Relative Humidity	95% @ 40℃, non-condensing			
Operating Vibration	5Grms/5~500Hz, IEC 60068-2-64			
Operating Shock	50G, 11 msec, IEC 60068-2-27			
Mechanical				
Dimension (WxDxH)	200 x 200 x 51 mm; 7.9" x 7.9" x 2"			
Weight	2.2kg			
Mounting	Wall, DIN Rail, Panel mounting kit			

1.4 Mechanical Dimension









Chapter 2 System Installation

This chapter provides you with instructions to set up your system. Definitions and locations of all the interfaces are described so that you can easily configure your system. For more detailed PIN assignment and jumper setting, please refer to user's manual of WADE-8079."

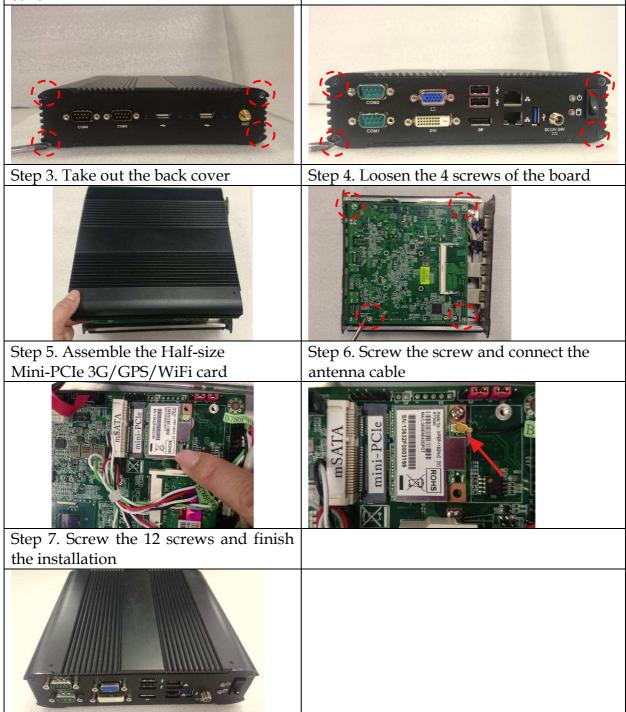
2.1 HDD Installation

WEBS-3392 supports 1x 2.5" HDD/SSD. (The height must be less than 10mm) Step 1. Loosen the 4 screws of the front | Step 2. Loosen the 4 screws of the rear cover cover Step 3. Take out the back cover Step 4. Loosen the 4 screws of the board Step 5. Install 2.5" HDD on the bracket Step 6. Screw the 12 screws and finish the installation with screws and connect the SATA data/power cable.

2.2 Half-size Mini-PCle Device Installation

It's easy to install and maintenance the 1x Half-size Mini-PCIe device.

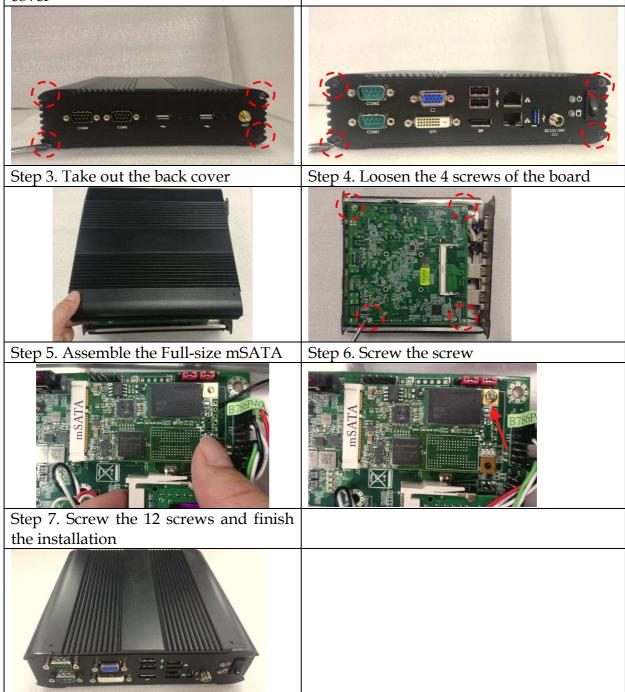
Step 1. Loosen the 4 screws of the frontStep 2. Loosen the 4 screws of the rear cover



2.3 Full-size mSATA Device Installation

It's easy to install and maintenance the 1x Full-size mSATA device.

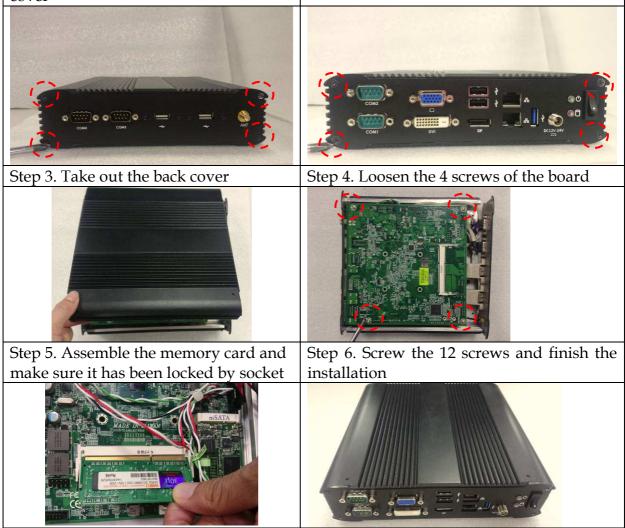
Step 1. Loosen the 4 screws of the front Step 2. Loosen the 4 screws of the rear cover cover



2.4 Memory device Installation

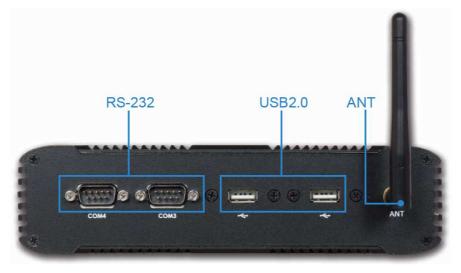
It's easy to install and maintenance the memory device.

Step 1. Loosen the 4 screws of the front Step 2. Loosen the 4 screws of the rear cover cover



2.5 I/O Interfaces

2.5.1 Front View



COM port:

• RS-232

Pin	Signal
1	DCD#
2	RXD#
3	TXD#
4	DTR#
5	GND
6	DSR#
7	RTS#
8	CTS#
9	RI#

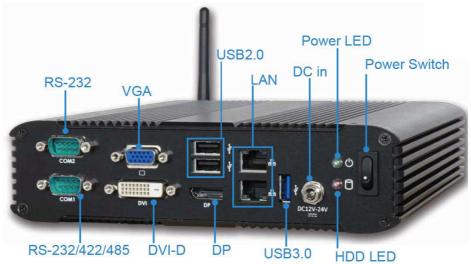
<u>USB 2.0:</u>

Support two USB (Universal Serial Bus) ports. (Two USB 2.0)

ANT hole:

Antenna hole for WiFi or 3G/GPS module

2.5.2 Rear View



COM port: ● RS-232

<u>RS-232</u>	
Pin	Signal
1	DCD#
2	RXD#
3	TXD#
4	DTR#
5	GND
6	DSR#
7	RTS#
8	CTS#
9	RI#

• RS-232/4222/485

*Note: RS-232/422/485 configuration is determined by BIOS setting. Check BIOS setting for details.

Pin	Signal
1	DCD#1/485D/422T-
2	RXD#1/485D/422T+
3	TXD#1/422R+
4	DTR#1/422R-
5	GND
6	DSR#1
7	RTS#1
8	CTS#1
9	RI#1

VGA:

VGA – CRT display output

PIN No.	Signal Description	PIN No.	Signal Description
1	Red	2	Green
3	Blue	4	NC
5	GND	6	RGND
7	GGND	8	BGND
9	KEY(+5V)	10	SGND
11	NC	12	SDA
13	H Sync	14	V Sync
15	SCL	16	

DVI-D:

DVI-D display output

PIN No.«	Signal Description.	PIN No.«	Signal Description.
1.0	TDC0-~	20	TDC0+ _{e³}
3₽	GND	4.0	GND.
5⊷	TDC1-	6⊷	TDC1+.
7₽	GND	8⊷	GND ₄ 2
9₽	TDC2-+	100	TDC2+.
11.	GND	12.0	GND.
13.0	TLC-+	14.0	TLC-++
150	VCC5+	16~	VCC5+
17.0	DDC_SC.	180	DDC_SD.
19 ₽	HPD_IN.	20~	Xç

<u>USB3.0 & USB 2.0:</u>

Support three USB (Universal Serial Bus) ports including one USB 3.0 and two USB 2.0.

DP:

DP (Display Port) display output

PIN No.	Signal Description	PIN No.	Signal Description
1	D0+	2	GND
3	D0-	4	D1+
5	GND	6	D1-
7	D2+	8	GND
9	D2-	10	D3+
11	GND	12	D3-
13	AUX_EN#	14	GND
15	AUX+	16	GND
17	AUX-	18	Hot plug
19	GND	20	VCC3

LAN:

Two Gigabit Ethernet (10/100/1000 Mbits/sec) LAN ports by using Intel WGI210IT GbE Ethernet Controller

DC in: (Wide range DC source support, 12 ~24V)

Using the provided DC source to connect to the system

Power Led:

Shows the power connection as a small blinking indicator

HDD Led:

Shows real-time read and write activity of your HDD/SSD as a small blinking indicator

Power Switch:

It is for system ON/OFF control

2.6 Getting Started

It is easy to get the system started.

Step 1. Make sure the power supplyStep 2. Press the power switch to turn(12~24V) is connected properlyon the system



Chapter 3 BIOS Setup Information

WEBS-3392 system adopts WADE-8079 mother board.WADE-8079 is equipped with the Phoenix BIOS stored in Flash ROM. These BIOS has a built-in Setup program that allows users to modify the basic system configuration easily. This type of information is stored in CMOS RAM so that it is retained during power-off periods. When system is turned on, WADE-8079 communicates with peripheral devices and checks its hardware resources against the configuration information stored in the CMOS memory. If any error is detected, or the CMOS parameters need to be initially defined, the diagnostic program will prompt the user to enter the SETUP program. Some errors are significant enough to abort the start up.

3.1 Entering Setup - Launch System Setup

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press <F2> key will enter BIOS setup screen.

Press <F2> to enter SETUP

If the message disappears before responding and still wish to enter Setup, please restart the system by turning it OFF and On or pressing the RESET button. It can be also restarted by pressing <Ctrl>, <Alt>, and <Delete> keys on keyboard simultaneously.

Press <F1> to Run General Help or Resume

The BIOS setup program provides a General Help screen. The menu can be easily called up from any menu by pressing <F1>. The Help screen lists all the possible keys to use and the selections for the highlighted item. Press <Esc> to exit the Help screen.

General Help Setup changes system behavior by modifying the BIOS configuration. Selecting incorrect values may cause system boot failure: load Setup Default values to recover. (Up/Down> arrows select fields in current menu. (PgUp/PgDn> moves to previous/next page on scrollable menus. (Home/End> moves to top/bottom item of current menu. Within a field, <F5> or <-> selects next lower value and <F6> or <+> selects next higher value. (Left/Right> arrows select menus on menu bar. (Enter> displays more options for items marked with ►. (F9> loads factory installed Setup Default values. (F1> or <Alt-N> exits Setup: in sub-menus, pressing these keys returns to the previous menu. (F1> or <Alt-N> displays General Help (this screen).

3.2 Main

Once you enter WADE-8079 Phoenix BIOS CMOS Setup Utility, a Main Menu is presented. The Main Menu allows user to select from eleven setup functions and two exit choices. Use arrow keys to switch among items and press <Enter> key to accept or bring up the sub-menu.

This setup page includes all the items in standard compatible BIOS. Use the arrow keys to highlight the item and then use the <PgUp>/<PgDn> or <+>/<-> keys to select the value or number you want in each item and press <Enter> key to certify it.

Follow command keys in CMOS Setup table to change Date, Time, Drive type, and Boot Sector Virus Protection Status.



System Date

View or set system date

The date format is <Day>, <Month> <Date> <Year>. Use [+] or [-] to configure system Date.

System Time

View or set system time

The time format is <Hour> <Minute> <Second>. Use [+] or [-] to configure system

Time.

System Information

Display System Information.

Phoenix SecureCore Technology Setup				
	System Information			
BIOS Version BIOS Build Date EC Version EC Build Date Processor Type Processor Speed System Memory Speed L2 Cache RAM Total Memory [1] [2]	40500T00 05/00/2014 40110T01 01/10/2014 Intel(R) Atom(TH) CPU E3015 @ 1.46GHz 1.473 GHz 1066 MHz 512 KB 2040 MB 2040 MB CDDR3- 1066) @ DIMMO 0 MB			
	F1 Help 1↓ Select Item +/- Change Values F9 Setup Defaults Esc Exit +→ Select Menu Enter Select > Sub-Menu F10 Save and Exit			

Boot Features Select Boot features.

Phoenix SecureCore Technology Setup						
	Boot Features		Item Specific Help			
NunLock: Tineout CSM Support Quick Boot Diagnostic Splash Screen Diagnostic Summary Screen BIOS Level USB Console Redirection Allow Hotkey in S4 resume UEFI Boot Legacy Boot Boot in Legacy Video Mode Load UPRUM	Image: Constraint of the system of the sy		Selects Power-on state for NumLock.			
F1 Esc			etup Defaults ave and Exit			

NumLock:

Selects Power-on state for NumLock Choices: On, Off.

Timeout

Number of seconds that P.O.S.T will wait for the user input before booting Choices: 0-99 seconds.

CSM Support

Compatibility Support Module that provide backward compatibility services for legacy BIOS services, like int10/int13, dependent OS.

Quick Boot

Enable/Disable quick boot Choices: Disable, Enable.

Diagnostic Splash Screen

If you select 'Enabled' the diagnostic splash screen always displays during boot. If you select 'Disabled' the diagnostic splash screen does not displays unless you press HOTKEY during boot Choices: Disable, Enable.

Diagnostic Summary Screen

Display the Diagnostic summary screen during boot Choices: Disable, Enable.

BIOS Level USB

Enable/Disable all BIOS support for USB in order to reduce boot time. Note that this will prevent using a USB keyboard in setup or a USB biometric scanner such as a finger print reader to control access to setup, but does not prevent the operating system from supporting such hardware Choices: Disable, Enable.

Console Redirection

Enable/Disable Universal Console Redirection Choices: Disable, Enable.

Allow Hotkey in S4 Resume

Enable hotkey detection when system resuming from Hibernate state Choices: Disable, Enable.

UEFI Boot

Enable the UEFI boot. Choices: Disable, Enable.

Legacy Boot

Enable the Legacy boot Choices: Disable, Enable.

Boot in Legacy Video mode

Enable to force the display adapter to switch video mode to Text mode 3 at the end of BIOS POST for non-UEFI boot mode (Legacy boot). Some legacy software, such as DUET, requires that the BIOS explicitly enter text video mode prior to boot.

Choices: Disable, Enable.

Load OPROM

Load OPROMs or demand according to the boot device. Choices: All, On demand.

3.3 Configuration

Setup Warning:

Setting items on this screen to incorrect values may cause system to malfunction! Advanced

Main Advanced C	Ph Others Security		Core Technology Setur <mark>xit</mark>)	
Setup Warning:					Item Specific Help
Setting items on this so values may cause system					Select Language
Select Language • CPU Configuration • Uncore Configuration • South Cluster Configurat • Security Configuration • SMBIOS Event Log	[<mark>]ng]ish</mark>] tion				
OS Selection	[Windows7]				
	F1 Help †4 Select Esc Exit ↔ Select	Item +/- Menu Enter			etup Defaults ave and Exit

Select Language

Select Language Choices: English, Japanese, French, Korean, Traditional Chinese, Simplified Chinese.

OS Selection

OS Selection Choices: Windows 8.x, Android, Windows 7.

CPU Configuration

Advanced	Phoenix SecureC	ore Technology Setup	
CPU C	onfiguration		Item Specific Help
Limit CPUID Maximum [Bi-directional PROCHOT# [UTX-2 [TM1 [Enable] Disable] Enable] Enable] Enable] Enable] ot Supported		Execute Disable Bit prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS
F1 Help 1↓ Esc Exit ↔	Select Item +/- Select Menu Enter	Change Values F Select ► Sub-Menu F	up Defaults e and Exit

Execute Disabled Bit

Execute Disabled Bit prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS Choices: Disable, Enable.

Limit CPUID Maximum

Disabled for Windows XP Choices: Disable, Enable.

Bi-directional PROCHOT#

When a processor thermal sensor trips (either core), the PROCHOT# will be driven. If bi-direction is enabled, external agents can drive PROCHOT# to throttle the processor Choices: Disable, Enable.

<u>VTX-2</u>

To enable or disable the VTX-2 Mode support Choices: Disable, Enable.

<u>TM1</u>

Enable/Disable TM1 Choices: Disable, Enable.

DTS

Enabled/Disable Digital Thermal Sensor Choices: Disable, Enable.

CPU Power Management

System Power Options

]	hoenix S	GecureC	ore Tech	mology Setu	ւթ	
Advanced								
	CPL	J Power Man	agement					Item Specific Help
System Power Options Intel(R) SpeedStep(tm) Boot performance mode Intel® Turbo Boost Technol C-States	C C Logy C	J Power Man Enable Jax Perforr Enable Jisable Jisable						Item Specific Help Enable processor performance states (P-States).
F4		AL 0 1	1. 7.1		0		FO 0	
F1 Esc	Help : Exit	H Seleo ↔ Seleo	t Item: t Menu:	+/- Enter	Change Select	va1ues ▶ Sub-Menu		Betup Defaults Bave and Exit

Intel® SpeedStepTM

Enable processor performance status (P-Status) Choices: Disabled, Enabled.

Boot performance mode

Select the performance state that the BIOS will set before OS handoff Choices: Max Performance, Max Battery.

Intel® Turbo Boot Technology

Enable to automatically allow processor cores to run faster than the base operation frequency if it's operating below power, current, and temperature specification limits. Choices: Disable, Enable. C-States

Enable/Disable C States

Choices: Disable, Enable.

Uncore Configuration

Advanced	Phoenix SecureCore Technology Setup	
	Uncore Configuration	Item Specific Help
GOP Configuration GOP Driver	[Enable]	Enable GOP Driver will unload VBIOS; Disable it will load VBIOS
IGD Configuration Integrated Graphics Device Primary Display RC6(Render Standby) PAUC GTI Size Aperture Size DVMT Pre-Allocated IGD Turbo Spread Spectrum clock	[Enable] [IGD] [Disable] [LITE Mode] [2MB] [512MB] [64M] [Auto] [Disable]	
IGD - LCD Control Force Lid Status BIA LCD Panel Type Panel Scaling DP LVDS Switch	[ON] [Auto] [1024 x 768] [Centering] [DP]	
F1 Esc		etup Defaults ave and Exit

GOP Driver

Enable GOP Driver will unload VBIOS; Disable it will load VBIOS Choices: Enable, Disable.

Integrated Graphic Device

Enable: Enable Integrated Graphics Device (IGD) when selected as the Primary Video Adapter. Disable: Always disable IGD Choices: Disable, Enable.

Primary Display

Select which of IGD/PCI Graphics device should be Primary Display. Or select SG for switchable / Hybrid Gfx. Choices: Auto, IGD, PCIe, SG.

RC6 (Rander Standby)

Check to enable render standby support Choices: Enable, Disable.

PAVC

Enable/Disable Protected Audio Video control. Choices: Disable, LITE Mode, SERPENT Mode.

GTT Size

Select the GTT Size Choices: 1MB, 2MB.

Aperture Size

Select the Aperture Size Choices: 128MB, 256MB, 512MB.

DVMT Pre-Allocated

Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory sized used by the Internal Graphic Device Choices: 32M, 64M, 96M, 128M, 160M, 192M, 224M, 256M, 288M, 320M, 352M, 384M,416M, 448M, 480M, 512M.

IGD Turbo

Select the IGD turbo feature, if auto selected, IGD turbo will only be enabled when SOC stepping is B0 or above. Choices: Auto, Enable, Disable.

Spread Spectrum clock

Enable clock chip Spread Spectrum feature Choices: Disable, Enable.

Force Lid States

For test: Force to set lid status as on or off Choices: OFF, ON.

BIA

Auto: GMCH use VBIOS default, Level n: Enable with selected aggressiveness level. Choices: Auto, Disable, Level 1, Level 2, Level 3, Level 4, Level 5.

LCD Panel type

Choices: 640 x 480, 800 x 600, 1025 x 768, 1280 x1024, 1400 x1050, 1600 x 1200, 1360 x768, 1680 x 1050, etc.

Panel Scaling

Select the LCD Panel scaling option used by Internal Graphic device Choices: Auto, Centering, Stretching.

DP LVDS Switch

Choices: DP, LVDS.

South Cluster Configuration

Phoenix SecureCore Technology Setup Advanced	
South Cluster Configuration	Item Specific Help
PCI Express Configuration Huse Configuration Audio Configuration SATA Drives Miscellaneous Configuration	PCI Express Configuration Settings
	Betup Defaults Bave and Exit

PCI Express Configuration PCI Express Configuration Settings

Advanced	Phoenix	SecureCore Technology Setup	
nuvanceu	PCI Express Configurati	ion	Item Specific Help
PCI Express Root Port 1 PCI Express Root Port 2	(Enable)	ion	Item Specific Help Control the PCI Express Root Port.
F1	Help 14 Select Item	•/- Change Values F9 S	etup Defaults
	c Exit ↔ Select Menu		ave and Exit

PCI Express Root Port #1 - #2

Control PCI Express root port Choices: Enable, Disable.

USB Configuration

USB Configuration settings

	Phoenix Secure	Core Technology Setup	
Advanced			
	USB Configuration		Item Specific Help
xHCI Mode XHCI Link Power Management	[<mark>Smart Auto</mark>] [Enable]		Mode of operation of xHCI controller.
EHCI Controller	[Enable]		
F1 Esc	Help 1↓ Select Item +/- Exit ↔ Select Menu Enter		etup Defaults ave and Exit

xHCI Mode

Mode of operation of xHCI controller Choices: Smart Auto, Auto, Enable, Disable.

xHCI Link Power Management

Enable/Disable xHCI Link Power Management Choices: Enable, Disable.

EHCI Controller

Control the USB EHCI (USB 2.0) function. Choices: Enable, Disable.

Audio Configuration

Audio Configuration Settings

Phoenix SecureCore Technology Setup	
Audio Configuration	Item Specific Help
Audio Controller Enable	Control Detection of the Azalia device. Disabled = Azalia will be unconditionally disabled Enabled = Azalia will be unconditionally Enabled Auto = Azalia will be enabled if present, disabled otherwise
	etup Defaults ave and Exit

Audio Controller

Control Detection of the Azalia device.

Disabled = Azalia will be unconditionally disabled.

Enabled = Azalia will be unconditionally enabled. Auto = Azalia will be enabled if present. Disable otherwise Choices: Disable, Enable.

SATA Drives

Press<Enter> to select the SATA Device Configuration Setup options.

Advanced	Phoenix SecureCore Technology Setup	
SATA	Item Specific Help	
Chipset SATA Mode SATA Port 0 Hot Plug Capability	[Chable] [Disable] [AHCI] [Enable] [Enable]	Enables or Disables the Chipset SATA Controller. The Chipset SATA controller supports the 2 black internal SATA ports (up to 36b/s supported per port).
		etup Defaults ave and Exit

Chipset SATA

Enables or Disables the Chipset SATA Controller. The Chipset SATA controller supports the 2 black internal SATA ports (up to 3 Gb/s supported per port). Choices: Enable, Disable.

SATA Test Mode

Test Mode Enable/Disable Choices: Enable, Disable.

Chipset SATA Mode

IDE: Compatibility mode disables. AHCI support: Supports advanced SATA features such as Native Command Queuing. **Warning:** OS may not boot if this setting is changed after OS install. Choices: IDE, AHCI.

Serial Port 0/1 Hot Plug Capability

If enabled, SATA port 0/1 will be reported as Hot Plug capable. Choices: Enable, Disable.

Miscellaneous Configuration

Advanced	Phoenix SecureCore Technology Setup	
Misc	Item Specific Help	
Boot Time with HPET Timer I Clock Spread Spectrum I UART Interface Selection I SMM LOCK I Pci Mmio Size I VLAN Card Presence NGFF Card Inserted I	Disable] Disable] SuperIO UARTI Enable] IZGBI INOI INOI	Enable or Disable the High Precision Event Timer
		tup Defaults ve and Exit

High Precision Timer

Enable or Disable the High Precision Event Timer. Choices: Disable, Enable.

Boot Time with HPET Timer

Boot time calculation with High Precision Event Timer enable. Choices: Disable, Enable.

Clock Spread Spectrum

Enable Clock Chip's Spread Spectrum feature. Choices: Disable, Enable.

UART Interface Selection

Select which UART interface to use. Choices: Intermal UART, SuperIO UART.

SMM LOCK

Enable/Disable SMM Lock feature. It will lock the SMRAM and unable load SMM driver any more. Choices: Disable, Enable.

Pci Mmio Size

Pci Mmio Size.

Choices: 2 GB, 1.5 GB, 1.25 GB, 1GB.

NGFF Card Inserted

Set "YES" if NGFF Card is inserted. Choices: No, Yes.

UHPAM Card Inserted

Set "YES" if UHPAM Card is inserted. Choices: No, Yes.

Security Configuration

	Phoenix SecureCore Technology Setup	
Advanced		
Sec	curity Configuration	Item Specific Help
TXE Configuration TXE FV Version TXE FV Capabilites TXE FV Features TXE FV DEM Tag TXE Firmware Mode TXE File System Integrity Value TXE TXE HMRFPO TXE Firmware Update TXE EOP Message TXE Unconfiguration Perform	1.0.2.1067 A0001040 A0001040 0000000 Normal 0 Umable Enable Enable Enable Enable	
		etup Defaults ave and Exit

TXE

Choices: Disable, Enable.

TXE HMRFPO

Choices: Disable, Enable.

TXE Firmware Update

Choices: Disable, Enable.

TXE EOP Message

Choices: Disable, Enable.

TXE Unconfiguration Perform

Choices: No, Yes.

SMBIOS Event Log

Manage SMBIOS Event Log.

	Phoenix	Secure	Core Technology Setu	ւթ	
Advanced					
	SMBIOS Event Log				Item Specific Help
Event Log Validity Event Log Capacity	Valid Space Available				Enable/Disable Event Log.
Event Log ▶ View SMBIOS event log	[<mark>Enabled</mark>]				
Mark SMBIOS events as read Clears SMBIOS events	[Enter] [Enter]				
F1 Esc	Help 1↓ Select Item Exit ↔ Select Menu		Change Values Select 🕨 Sub-Menu	F9 F10	Setup Defaults Save and Exit

Event Log

Enable/Disable Event Log. Choices: Disable, Enable.

Mark SMBIOS events as read

Mark SMBIOS events as read. Marked SMBIOS events won't be displayed. Choices: No, Yes.

Clears SMBIOS events

Clears SMBIOS events. Choices: No, Yes.

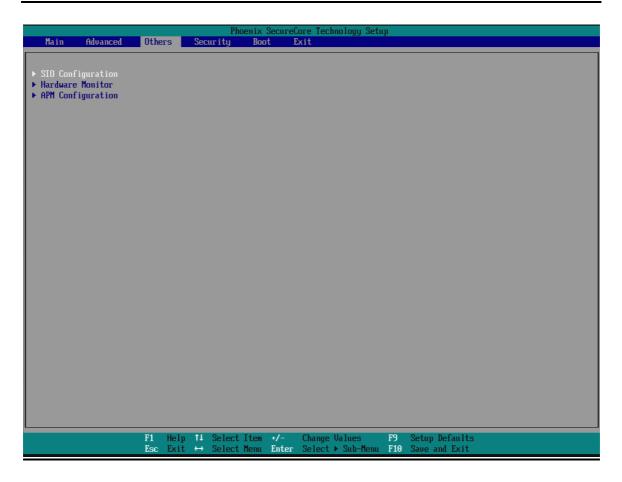
View SMBIOS event log

View SMBIOS event log

A	Idvanced				Phi	oenix	SecureO	ore Tech	nology Seti	ıp	
	avancea			-			iew SME	IOS even	t log		
							TC# JHL	103 COCI	. 109		
05/28/2014 05/28/2014 05/28/2014	07:01:43	Syste	m reco	mfig	ured						
		F1 Esc	Help Exit		Select Select		+/- Enter	Change Select	Jalues ► Sub-Menu	F9 F10	Setup Defaults Save and Exit

3.4 Other

Others



SIO Configuration

Ot	Phoenix SecureCore Technology Setup	
	SIO Configuration	Item Specific Help
Serial Port Serial Port 1 Serial Port 2 Serial Port 3 Serial Port 4	(<mark>3F8/TRQ4)</mark> 12F8/TRQ31 13E8/TRQA1 12E8/TRQB1	
COM1 Configuration Watch Dog Timer	[RS-232]	
Watch Dog Timer Select	Disablel	
Power Control	[Always On]	
F1 Es		tup Defaults ve and Exit

<u>Serial Port 1</u> Choices: Disable, 3F8/IRQ4.

<u>Serial Port 2</u> Choices: Disable, 2F8/IRQ3.

<u>Serial Port 3</u> Choices: Disable, 3F8/IRQA.

<u>Serial Port 4</u> Choices: Disable, 2F8/IRQB.

<u>COM1 Configuration</u> Select COM1 Configuration.

Choices: RS-232, RS-422, RS-485.

<u>Watch Dog Timer Select</u> Choices: Disable, 15 secs, 30 secs, 1 min, 2 mins, 3 mins.

<u>Power Control</u> Choices: Former State, Always On, Always Off.

Hardware Monitor

Oth Oth	iers	Phoenix Secure	Core Technology Setur	
		Hard	ware Monitor	
CPU Temp [32 °C] SYS Temp [29 °C] CPU Fan [N/A] System Fan [7869 RPM] UCORE [0.78 U] 3.3U [3.30 U] 5.0U [5.02 U] 12.0U [12.00 U] 1.35U [1.35 U]				
F1 Esc	Help †↓ Exit ↔	Select Item +/- Select Menu Enter	Change Values Select ► Sub-Menu	F9 Setup Defaults F10 Save and Exit

APM Configuration

	Others 1	Phoenix	SecureCore Technology Setu	up	
			APM Configuration		
Power On By RTC Alarm Onboard Lan1 Control Onboard Lan2 Control Wake on Lan1 Wake up by Ring	(Disable) Enable] Enable] Enable] Disable]				
L	F1 Help Esc Exit	14 Select Item ↔ Select Menu		F9 Setup Defaults 1 F10 Save and Exit	

Power On By RTC Alarm Choices: Disable, Enable.

<u>Wake on LAN1</u> Choices: Disable, Enable.

<u>Wake on LAN2</u> Choices: Disable, Enable.

<u>Wake on LAN1</u> Choices: Disable, Enable.

<u>Wake up by Ring</u> Choices: Disable, Enable.

3.5 Security

This section lets you set security passwords to control access to the system at boot time and/or when entering the BIOS setup program. Some systems have a single password, while many newer ones now have two: a supervisor and a user password.

Security

WEB-3392 User's Manual

Main Advanced Others	Phoenix SecureCore Techno Security Boot Exit	logy Setup
Secure Boot Activation	[Disabled]	Item Specific Help
 Secure Boot Configuration Supervisor Password is: User Password is: 	Cleared Cleared	Set or clear the Supervisor account's password.
Set Supervisor Password Supervisor Hint String	[<mark>Enter</mark>] []	
Set User Password User Hint String	[Enter] []	
Min. password length	[1]	
Authenticate User on Boot	[Disabled]	
HDD Security Status No HDD detected		
Trusted Platform Module (TPM) TPM not detected		
	lp 14 SelectItem +/- ChangeUa it ↔ SelectMenu Enter Select►S	lues F9 Setup Defaults Sub-Menu F10 Save and Exit

Set Supervisor Password

Set or clear the Supervisor account's password.

Supervisor Hint String

Press Enter to type Supervisor Hint String.

Set User Password (Show only)

Set or clear the User account' password.

Supervisor Hint String (Show only)

Press Enter to type User Hint String.

Min. password length

Set the minimum number of characters for password (1-20). Choices: 0, 1.etc

3.6 Boot

Use this menu to specify the priority of boot devices.

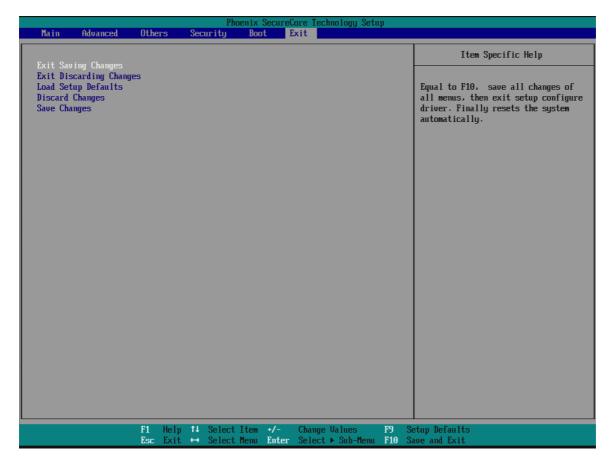
Boot

Phoenix SecureCore Technology Setup Main Advanced Others Security Boot Exit						
Boot Priority (1. USB HDD 2. USB CD: 3. USB FDD 4. ATAPI CI 5. ATA HDD 6. ATA HDD 7. PCI LAN 8. Internal	rder : : Shell			Item Specific Help Keys used to view or configure devices: 1 and 1 arrows Select a device. '*' and '-' move the device up or down. 'Shift + 1' enables or disables a device. 'Del' deletes an unprotected device.		
		elp 14 SelectIte kit ↔ SelectMem		Setup Defaults Save and Exit		

<u>Boot Priority Order</u> Keys used to view or configure devices: \uparrow and \downarrow arrows Select a device. '+' and '-'move the device up or down. 'Shift + 1' enabled or disables a device. 'Del' deletes an unprotected device.

3.7 Exit

This menu allows you to load the BIOS default values or factory default settings into the BIOS and exit the BIOS setup utility with or without changes.



Exit Saving Changes

Equal to F10, save all changes of all menus, then exit setup configure driver. Finally resets the system automatically.

Exit Discarding Changes

Equal to ESC, never save changes, then exit setup configure driver.

Load Setup Defaults

Equal to F9. Load standard default values.

Discard Changes

Load the original value of this boot time. Not the default Setup value.

Save Changes

Save all changes of all menus, but do not reset system.

Chapter 4 Important Instructions

This chapter includes instructions which must be carefully followed when the fan-less embedded system is used.

4.1 Note on the Warranty

Due to their limited service life, parts which, by their nature, are especially subject to wear are not included in the guarantee beyond the legal stipulations.

4.2 Exclusion of Accident Liability Obligation

Portwell, Inc. shall be exempt from the statutory accident liability obligation if users fail to abide by the safety instructions.

4.3 Liability Limitations / Exemption from the Warranty Obligation

In the event of damage to the system unit caused by failure to abide by the hints in this manual and on the unit (especially the safety instructions), Portwell, Inc. shall not be required to respect the warranty even during the warranty period and shall be free from the statutory accident liability obligation.

4.4 Declaration of Conformity

<u>EMC</u>

CE/FCC Class A

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This equipment may not cause harmful interference.

2. This equipment must accept any interference that may cause undesired operation.

Applicable Standards:

EN 55022:	2006 + A1: 200)7, Class A			
EN 61000-3	3-2: 2006				
EN 61000-3	3-3: 1995 + A1	: 2001 + A2: 2005			
EN 55024:	1998 + A1: 200)1 + A2: 2003			
IEC 61000-	4-2: 2008				
IEC 61000-	-4-3: 2006 + A1	: 2007			
IEC 61000-	IEC 61000-4-4: 2004				
IEC 61000-4-5: 2005					
IEC 61000-4-6: 2007					
IEC 61000-4-8: 1993 + A1: 2000					
IEC 61000-	4-11: 2004				
FCC	47	CFR	Part	15	Subpart

Chapter 5 Frequent Asked Questions

Q1: How to update the BIOS file of the WEBS-3392?

Answer:

 Please visit web site of the Portwell Download Center as below hyperlink http://www.portwell.com.tw/support/download_center.php
 Then you must register an account first. http://www.portwell.com.tw/member/newmember.php (The E-Mail box should be an existing Company email address that you check regularly.)

2. Input your User name and password to log in the download center.

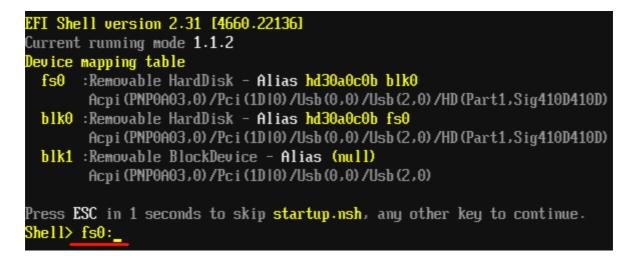
Username :					
Password :					
	New member?				
	Forget your password?				
		Login			
"WEBS-3	ne "Search download" 392". r product name or keyword to he	1	5		
	,,				
Down	nload Seach WADE-8079		5	Submit	

4. Find the **"BIOS"** page to download the ROM file and flash utility.

5. Execute the zip file to root of the bootable USB pen drive. You can get the **"Shell Flash 32.efi"**, **"temp.bin"**, **"Update.nsh"** three files.

6. Insert your USB pen drive in USB port of the WEBS-3392 system and power-on.

7. Boot to EFI-Shell mode then input the "**fs0**:" command to switch to the root of the USB pen drive.



8. Enter the folder you save update image by command [cd "folder name"], in this case is [cd update]

9. Type the "update" command to start flash BIOS processes.

```
EFI Shell version 2.31 [4660.22136]

Current running mode 1.1.2

Device mapping table

fs0 :Removable HardDisk - Alias hd30a0c0b blk0

Acpi (PNP0A03,0) /Pci (1D10) /Usb (0,0) /Usb (2,0) /HD (Part1,Sig410D410D)

blk0 :Removable HardDisk - Alias hd30a0c0b fs0

Acpi (PNP0A03,0) /Pci (1D10) /Usb (0,0) /Usb (2,0) /HD (Part1,Sig410D410D)

blk1 :Removable BlockDevice - Alias (null)

Acpi (PNP0A03,0) /Pci (1D10) /Usb (0,0) /Usb (2,0)

Press ESC in 1 seconds to skip startup.nsh, any other key to continue.

Shell> fs0:

fs0:\> cd update

fs0:\update> update____
```

10. When it finished all update processes, please reboot your system around 5 seconds.

11.

- Programming Flash [0x73A000] 4KB of 4KB - 100% complete.
- Erasing Flash Block [0x752000] - 100% complete.
- Programming Flash [0x752000] 4KB of 4KB - 100% complete.
- Erasing Flash Block [0x758000] - 100% complete.
- Programming Flash [0x758000] 4KB of 4KB - 100% complete.
- Erasing Flash Block [0x75B000] - 100% complete.
- Programming Flash [0x75B000] 4KB of 4KB - 100% complete.
- Erasing Flash Block [0x75D000] - 100% complete.
- Programming Flash [0x75D000] 4KB of 4KB - 100% complete.
- Erasing Flash Block [0x77F000] - 100% complete.
- Programming Flash [0x77F000] 124KB of 124KB - 100% complete.
- Erasing Flash Block [0x7EE000] - 100% complete.
- Programming Flash [0x7EE000] 36KB of 36KB - 100% complete.
- Verifying Flash [0x800000] 8192KB of 8192KB - 100% complete.
RESULT: The data is identical.
FPT Operation Passed
fs0:\update> _

12. Please press the "**F2**" key to BIOS setup menu to select "**Load Setup Defaults**" and then select "**Exit Saving Changes**" option to finish all BIOS flash processes.

Q2: How to install USB 3.0 Windows 7 driver of the WEBS-3392?

Answer:

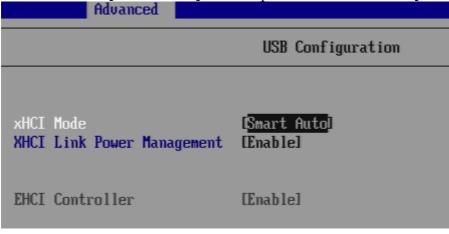
Because of the WEBS-3392 is Bay Trail platform, USB 3.0 driver need to use the other method to install USB 3.0 driver on windows 7, but windows 8 OS doesn't.

Step1. You must disable the XHCI mode and enable the EHCI Controller from BIOS setup menu before install windows 7.

Advanc	ed	
	USB Configuration	
xHCI Mode	[Disable]	
EHCI Controller	[Enable]	

Step2. After complete the Windows 7 installation then change the BIOS setting of

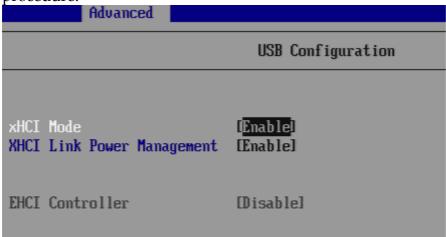
XHCI mode to [Smart Auto] and keep EHCI Controller as [Enable].



Step3. Then Boot into windows 7 and install the USB 3.0 driver.

- a 📲 Universal Serial Bus controllers
 - Intel(R) Atom(TM)/Celeron(R)/Pentium(R) Processor EHCI USB 0F34
 - --- 🟺 Intel(R) USB 3.0 eXtensible Host Controller
 - ---- 🏺 Intel(R) USB 3.0 Root Hub
 - 🏺 USB 2.0 MTT Hub
 - ---- 🏺 USB 3.0 Hub
 - 🛛 🏺 USB Composite Device 🛛
 - ... 🏺 USB Root Hub

Step4. After USB 3.0 driver installed completely, you have to change the BIOS setting of XHCI mode to [Enable] and EHCI Controller to [Disable], and then complete the procedure.



Complete the USB 3.0 driver installation.

- a 🏺 Universal Serial Bus controllers
 - ---- 🟺 Intel(R) USB 3.0 eXtensible Host Controller
 - 🛛 🏺 Intel(R) USB 3.0 Root Hub
 - 🏺 USB 2.0 MTT Hub
 - ... 🏺 USB 3.0 Hub
 - USB Composite Device

Following the above 4 steps, USB 3.0 can work properly on Windows 7 OS.