WEBS-5482-W

Fan-less Embedded System



User's Manual

Version 1.0

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Table of Contents

How to Use This Manual

Chapter 1 System Overview1-	-1
1.1 Introduction1-1.2 Check List1-1.3 Product Specification1-1.4 Mechanical Dimension1-	-1 -2 -3
Chapter 2 System Installation2-	-1
2.1 HDD Installation2-2.2 CFEX Installation2-2.3 PCIe/PCI Card Installation2-2.4 I/O Interfaces2-2.4.1 Front View2-2.4.2 Rear View2-2.5 Catting Started2-	-1 -2 -2 -4 -4 -5
2.5 Getting Started	./ _1
3.1 Entering Setup – Launch System Setup3-3.2 Main3-3.3 System Setup Utility3-3.4 Configuration3-3.5 Boot3-23.6 Security3-23.7 Exit3-2	1 -2 -3 -3 22 24 25
Chapter 4 Important Instructions4-	-1
 4.1 Note on the Warranty	·1 ·1 ·1 ·1
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How to Use This Manual

The manual describes how to configure your WEBS-5482-W 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.

Chapter 1 System Overview

1.1 Introduction

Portwell, a world-leading innovator in the industrial PC (IPC) industry and a Premier Member of the Intel® Internet of Things (IoT) Solutions Alliance, announces WEBS-5482-W, a high performance and low power intelligent Box PC. Powered by the 4th generation Intel® Core[™] ULT (ultra low TDP) SoC (system on chip) processor (formerly codenamed Haswell), this system is an ideal fan-less controller for applications in digital signage, surveillance, image processing and machine automation industries.

The Portwell WEBS-5482-W is powerful but not power hungry; it utilizes the dual-core 4th generation Intel® CoreTM processor with Intel® Turbo Boost Technology 2.0 (select CPU SKUs), Intel® Hyper-Threading Technology and Enhanced Intel SpeedStep® Technology. By adopting Intel's SoC platform, which integrates CPU and PCH into a BGA package, WEBS-5482-W is much functional compared to its previous generation. In addition, the elimination of the 2-chip platform enables a more effective thermal design for the WEBS-5482-W intelligent Box PC. Thanks to the highly reliable chassis with a thermally-enhanced ripple fin design, WEBS-5482-W can operate reliably in a temperature range from -20° C to 55° C. Plus, combining anti-vibration and shock resistance attributes, the fan-less and rugged WEBS-5482-W excels in harsh environments.

WEBS-5482-W also offers clear and concise video and graphics capabilities because it takes full advantage of the 4th generation Intel® Core[™] processor with integrated HD4400 graphics engine which outperforms its predecessor by over 20%. Product reliability and stability are definitely uncompromised; WEBS-5482-W is rated IP40 and certified by industrial product quality tests, such as an anti-vibration test of up to 5Grms and an anti-shock test of 50G. Portwell's WEBS-5482-W has proven itself to be a perfect solution for video/graphics-demanding and automation control systems.

The versatile WEBS-5482-W system supports many other important features, including up to 16GB of DDR3L memory, triple display with DVI-D, HDMI and Display Port and dual Intel® Gigabit Ethernet ports. It also offers rich compact I/O functions including 1 x SATA, 2 x USB 3.0, 2 x USB 2.0 and 4x COM ports. To enhance system flexibility, customers can further augment functions per their specific needs via two antenna interfaces and an onboard SIM card holder for WiFi or 3G/GPS module, two mini PCIe sockets and 1 x PCIe slot for expansion; one or more PCIe expansion cassettes can be offered by counterparts of WEBS-5482-W for hungry demand. A wide range of DC power input, 12V~24V, is accepted so that it can not only prevent the system from damage due to power input change, but also expands the application fields of this Box PC to the automotive industry, for example. This

power-source flexibility enables product usage in a variety of situations. Moreover, the WEBS-5482-W is more than a robust and dependable Box PC system with high performance and graphics efficacy. Its stylish mechanical design enhances the system's artistry. Potential applications include POS, kiosk and digital signage and transportation, etc.

1.2 Check List

The WEBS-5482-W package should cover the following basic items:

- ✓ One WEBS-5482-W Fan-less Embedded System
- ✓ One 96W AC/DC Power Adapter DC-plug with screw
- ✓ One Wall Mount Kit
- \checkmark 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	PEB-5731-W
System Chipset	Intel® Haswell ULT SoC
CPU	Intel® Core™ i7-4650U,
	1.7GHz, 4M L2 Cache, up to 3.3GHz, 15W TDP (2C/4T)
	Intel® Core™ i5-4300U,
	1.9GHz, 3M L2 Cache, up to 2.9GHz, 15W TDP (2C/4T)
	Intel® Core™ i3-4010U,
	1.7GHz, 3M L2 Cache, 15W TDP (2C/4T)
	Intel® Celeron 2980U,
	1.6GHz, 2M L2 Cache, 15W TDP (2C/2T)
BIOS	AMI uEFI BIOS (SPI ROM)
System Memory	Dual 204-pin SO-DIMM sockets support DDR3L 1333/1600
	up to 16GB
Storage	1x 2.5" SATA HDD/SSD, 1x CFEX, 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 Full-size Mini-PCIe socket (USB+PCIe) + SIM holder
	-1x Half-size Mini-PCIe socket (mSATA+PCIe)
	-1x PCIe x4 slot (PCIe x1 signal)
External I/O	
Series Ports	4x COM Ports
	(1x RS-232/422/485 selectable by BIOS & 3x RS-232)
Display	1x DVI-D, 1x DP, 1x HDMI
USB	2x USB 3.0, 2x USB 2.0

Audio	N/A
LAN	2x Gigabit Ethernet (Intel® WGI218LM + WGI210AT)
GPIO	N/A
Other	-2x Antenna holes for WIFI or 3G/GPS module
Power Supply Unit	
Power Supply	DC 12~24V
Environment	
Operating	20° to 55°
Temperature	-20 (10 55 (
Storage Temperature	-40°C to 80°C
Relative Humidity	95% @ 40°C, non-condensing
Operating Vibration	5Grms/5~500Hz, IEC 60068-2-64
Operating Shock	50G, 11 msec, IEC 60068-2-27
Mechanical	
Dimension (WxDxH)	255 x 187 x 86 mm; 10" x 7.3" x 3.3"
Weight	5 kg
Mounting	Wall Mount

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 PEB-5731-W.

2.1 HDD Installation

HDD cover locates at the front of the system.



2.2 CFEX Installation

CFEX is a new Compact Flash (CF) technology initiated by Portwell and adapting legacy CF type one with advanced pin definitions. This helps overcome reliability issues with standard commercial memory. CFEX also supports SATA 3.0, SPI and other extensions, and achieves a read speed of 100 to 120Mbyte/s and write speed of 45 to 75Mbyte/s. Compared with other CF devices, it falls in the same low-cost bracket as CF and CF SATA and is less expensive than CFAST.



2.3 PCIe/PCI Card Installation

Equipped with an innovative PCI/PCIe expansion module, user can easily install and replace their own expansion cards.





Add-on card dimension limitation:

Max dimension of add-on card in WEBS-5482-W is 157 x 111 mm.



2.4 I/O Interfaces

2.4.1 Front View



ANT1 & ANT2 hole:

Antenna holes for WiFi or 3G/GPS module

<u>2.5" HDD/SSD Tray:</u>

One removable 2.5" HDD/SSD trays for storage installation

2.4.2 Rear View



Power Button:

Press the power button to turn ON/OFF the system

CFEX:

CFEX is a new Compact Flash (CF) technology initiated by Portwell and adapting legacy CF type one with advanced pin definitions. This helps overcome reliability issues with standard commercial memory. CFEX also supports SATA 3.0, SPI and other extensions, and achieves a read speed of 100 to 120Mbyte/s and write speed of 45 to 75Mbyte/s. Compared with other CF devices, it falls in the same low-cost bracket as CF and CF SATA and is less expensive than CFAST.

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

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

HDD Led:

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

Reset Button:

Press the Reset button to turn reset the system

LAN:

Two Gigabit Ethernet (10/100/1000 Mbits/sec) LAN ports by using Intel WGI218LM & WGI210AT GbE Ethernet Controller

HDMI:

Type A HDMI display output

<u>DP:</u>

DP (DisplayPort) display output

DVI-D: DVI-D display output

PIN No.«	Signal Description.	PIN No.«	Signal Description.
1.0	TDC0-+2	2.0	TDC0++
3₽	GND	4₽	GND
5₽	TDC1-	6⊷	TDC1++
7₽	GND	8⊷	GND
9₽	TDC2-~	100	TDC2++
11.0	GND	12.0	GND
13.0	TLC-+	14.0	TLC-+₽
150	VCC5 _e	160	VCC5 ₄
17.0	DDC_SC.	180	DDC_SD.
19₽	HPD_IN.	20.0	X₽

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

Using the provided DC source to connect to the system

COM port:

 RS-232/422/485 - COM1
 *Note: RS-232/422/485 configuration is determined by BIOS setting. Check BIOS setting for details.

PIN No.	Signal Description
1	DCD#/DT-
2	RXD#/DT+
3	TXD#/422R+
4	DTR#/422R-
5	GND
6	DSR#
7	RTS#
8	CTS#
9	RI#

• RS-232 – COM2, COM3, COM4

PIN No.	Signal Description
1	DCD#
2	RXD#
3	TXD#
4	DTR#
5	GND
6	DSR#
7	RTS#
8	CTS#
9	RI#

2.5 Getting Started

It is easy to get the system started.



Chapter 3 BIOS Setup Information

WEBS-5482-W system adopts PEB-5731-W mother board. PEB-5731-W uses AMI BIOS structure 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, PEB-5731-W communicates with peripheral devices on the carrier board 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 key will enter BIOS setup screen.

Press 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.

3.2 Main

Use this menu for basic system configurations, such as time, date etc.

Aptio Setup Utility – Copyright (C) 2012 American Megatrends, Inc. Main Configuration Boot Security Save & Exit			
Project Name BIOS Version & Build Date EC Version & Build Date	PEB-5731-W R1.00.E2 (12/27/2014 14:00:57) 41104T00 (11/04/2014)		
Processor Information Name Brand String	Haswell ULT Intel(R) Core(TM) i5–4300U CPU @ 1.90GHz		
Total Memory Memory Frequency	8192 MB (DDR3L) 1600 Mhz		
PCH Information Name PCH SKU	LynxPoint-LP Premium SKU		
ME Firmware Mode ME FW Version ME Firmware SKU	Normal Mode 9.5.20.1742 5MB		
System Date System Time	[Mon 01/05/2015] [14:30:05]		
Access Level	Administrator		
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Build Time, Processor Brand Name, Processor Speed, Install Memory, etc

These items show the firmware and memory specifications of your system.

Build Time

The BIOS Release Date.

Processor Brand Name / Processor Speed

This value will change depend of different CPUs. And please make sure the Processor that you'll install will be compatible with PEB-5731-W User's Manual

System Date

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

System Time

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

Access Level

3.3 System Setup Utility

To enter the system setup utility, press <F1> on either the main keyboard or Console Redirection host computer's keyboard during POST.

Table 1 lists the available menus in the system setup utility. Each menu is equivalent to a functional group and consists of all correlated BIOS settings.

Tuble 1. System Setup Otinty menus		
Menu	Usage	
Main	Display a summary of the system and configure the	
	system date and time.	
	Configure the system interfaces, system	
Configuration	management, power management, thermal	
	management, and other system characteristics.	
Boot	Configure boot device priority settings.	
Security	Configure user authentication requirements.	
Save & Exit	Save changes and exit the system setup utility, or	
	restore default settings.	

Table 1. S [.]	vstem Setup	Utility	y menus
		,	

3.4 Configuration

Use this menu to set up the items of special enhanced features.

Aptio Setup Uti Main Configuration Boot Se	– Copyright (C) 2012 American Megatrends, Inc. ity Save & Exit
 CPU Configuration Chipset Configuration LAN Configuration Graphics Configuration PCI/PCIE Configuration SATA Configuration USB Configuration Power Control Configuration TPM Configuration Super IO Configuration H/W Monitor Serial Port Console Redirection 	CPU Configuration Parameters ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.13	Copyright (C) 2012 American Megatrends, Inc.

<u>CPU Configuration</u>

It is not necessary to make any change just take the default value. Here you'll see the Max Processor Speed/Processor Cores/Intel HT technology then you can adjust if you want to "disabled" the Hyper-threading.

CPU Configuration Intel(R) Core(TM) i5-4300U CPU @ 1.90GHz CPU Signature 40651 Max CPU Speed 1900 MHz Min CPU Speed 800 MHz Processor Cores 2 Intel HT Technology Supported Intel VT-x Technology Supported Intel SMX Technology Supported EIST Technology Supported EIST Technology Supported EIST Technology Supported	Aptio Setup Utilit Configuration	y – Copyright (C) 2012	American Megatrends, Inc.
Intel(R) Core(TM) i5-4300U CPU @ 1.90GHzHyper-Threading Technology)CPU Signature40651Max CPU Speed1900 MHzMin CPU Speed800 MHzProcessor Cores2Intel HT TechnologySupportedIntel SMX TechnologySupportedG4-bitSupportedEIST TechnologySupportedDD schologySupported	CPU Configuration		▲ Enabled for Windows XP and
CPU Signature40651and Disabled for other OS (OSMax CPU Speed1900 MHznot optimized forMin CPU Speed800 MHzHyper-Threading Technology).Processor Cores2When Disabled only one threadIntel HT TechnologySupportedIntel SMX TechnologySupported64-bitSupportedEIST TechnologySupported	Intel(R) Core(IM) i5-4300U CPU @	1 90GHz	Huner-Threading Technology)
Max CPU Speed1900 MHznot optimized forMin CPU Speed800 MHzHyper-Threading Technology).Processor Cores2When Disabled only one threadIntel HT TechnologySupportedIntel VT-x TechnologySupportedIntel SMX TechnologySupported64-bitSupportedEIST TechnologySupported	CPU Signature	40651	and Disabled for other OS (OS
Min CPU Speed800 MHzHyper-Threading Technology).Processor Cores2When Disabled only one thread per enabled core is enabled.Intel HT TechnologySupportedIntel VT-x TechnologySupportedIntel SMX TechnologySupported64-bitSupportedEIST TechnologySupported	Max CPU Speed	1900 MHz	not optimized for
Processor Cores2When Disabled only one thread per enabled core is enabled.Intel HT TechnologySupportedIntel VT-x TechnologySupportedIntel SMX TechnologySupported64-bitSupportedEIST TechnologySupported	Min CPU Speed	800 MHz	Hyper-Threading Technology).
Intel HT TechnologySupportedper enabled core is enabled.Intel VT-x TechnologySupportedIntel SMX TechnologySupported64-bitSupportedEIST TechnologySupportedOD schologySupported	Processor Cores	2	When Disabled only one thread
Intel VT-x Technology Supported Intel SMX Technology Supported 64-bit Supported EIST Technology Supported	Intel HT Technology	Supported	per enabled core is enabled.
Intel SMX Technology Supported 64-bit Supported EIST Technology Supported	Intel VT-x Technology	Supported	
64-bit Supported EIST Technology Supported	Intel SMX Technology	Supported	
EIST Technology Supported	64-bit	Supported	
OPU OD state	EIST Technology	Supported	
CPU U3 state Supported	CPU C3 state	Supported	
CPU C6 state Supported ++: Select Screen	CPU C6 state	Supported	++: Select Screen
CPU C7 state Supported 14: Select Item	CPU C7 state	Supported	↑↓: Select Item
Enter: Select			Enter: Select
Hyper-threading [Enabled] +/-: Change Opt.	Hyper-threading	[Enabled]	+/-: Change Opt.
Active Processor Cores [All] F1: General Help	Active Processor Cores	[A11]	F1: General Help
Intel Virtualization Technology [Enabled] F2: Previous Values	Intel Virtualization Technology	[Enabled]	F2: Previous Values
EIST [Enabled] F3: Optimized Defaults	EIST	[Enabled]	F3: Optimized Defaults
Turbo Mode [Enabled] F4: Save & Exit	Turbo Mode	[Enabled]	F4: Save & Exit
CPU C states [Enabled] ESC: Exit	CPU C states	[Enabled]	ESC: Exit
Enhanced C1 state [Enabled]	Enhanced C1 state	[Enabled]	
CPU C3 Report [Enabled]	CPU C3 Report	[Enabled]	
CPU C6 report [Enabled]	CPU C6 report	[Enabled]	•

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BIOS Item	Usage	Item-Specific Help	
Hyper-threading	-Disabled	Enabled for Windows XP /	
	-Enabled ★ Default	Linux and Disabled for other OS	
	-All 🛨 Default	Select the number of physical	
Active Processor Cores		cores to enable in each processor	
	-1	package	
		When enabled, a VMM can	
Intel Virtualization	-Disabled	utilize the additional hardware	
Technology	-Enabled ★ Default	capabilities provided by	
		Vanderpool Technology	
FICT	-Disabled	Enabled/Disabled Intel	
E131	-Enabled ★ Default	SpeedStep	
Turke Mede	-Disabled	Turbo Mode	
Turbo Mode	-Enabled ★ Default		
CDU Catalan	-Disabled	CDU Catalan	
CPU C states	-Enabled ★ Default	CPU C states	
Enhanced C1 state	-Disabled	Falser of Clarks	
Ennanced C1 state	-Enabled ★ Default	Ennanced C1 state	
CDU C2 rereart	-Disabled	CDU C2 receart	
CPU C3 report	-Enabled ★ Default	CPU C3 report	
CDU C(rereart	-Disabled	CDU C(remark	
CPU Co report	-Enabled ★ Default	Cr U Co report	

Chipset Configuration

It is not necessary to make any change just take the default value.

Aptio Setup Utilit Configuration	y – Copyright (C) 2012	American Megatrends, Inc.
Chipset Configuration		Enable or Disable the High
High Precision Timer	[Enabled]	Tree1310H Event Timer.
VT-d	[Enabled]	
Port 80h Redirection	[LPU Bus]	
 AMT Configuration Memory Configuration 		
		++: Select Screen
		I∔: Select Item Enter: Select
		+/-: Change Opt. F1: General Help
		F2: Previous Values
		F4: Save & Exit
		ESC: Exit
Version 2.15.1236	. Copyright (C) 2012 An	merican Megatrends, Inc.

BIOS Item	Usage	Item-Specific Help
	-Disabled	
Flight Precision Timer	-Enabled ★ Default	
	-Disabled	
Azalia	-Enabled ★ Default	
VT-d	-Disabled ★ Default	Enabled/Disabled VT-d
	-Enabled	function on MCH
Port 80h Redirection	-LPC Bus	
	-PCIE Bus	

AMT Configuration

Aptio Setu Configuration	p Utility – Copyright (C) 2012 Ame	rican Megatrends, Inc.
AMT Configuration Intel AMT Un-Configure ME Disable ME	[Disabled] [Disabled] [Disabled]	Enable/Disable Intel (R) Active Management Technology BIOS Extension. Note : iAMT H/W is always enabled. This option just controls the BIOS extension execution. If enabled, this requires additional firmware in the SPI device
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2	.15.1236. Copyright (C) 2012 Ameri	can Megatrends, Inc.

BIOS Item	Usage	Item-Specific Help
	-Disabled	Disables/Enabled iAMT
	-Enabled ★ Default	function
Un-Configure ME	-Disabled ★ Default	
	-Enabled	
Dischle ME	-Disabled ★ Default	
	-Enabled	

Memory Configuration

Configu	Aptio Setup Utility – Copyrig <mark>ration</mark>	nt (C) 2012 American	Megatrends, Inc.
Memory Informa	tion		
Total Memory DIMM#0 DIMM#1	8192 ME Not Pre 8192 ME	(DDR3L) esent (DDR3L)	<pre>##: Select Screen ##: Select Item Enter: Select #/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
	Version 2.15.1236. Copyright	(C) 2012 American M	egatrends, Inc.

LAN Configuration

Aptio Setup Utility – Configuration	Copyright (C) 2012 American	Megatrends, Inc.
LAN Configuration		Controls the execution of UEFI
Launch PXE OpROM policy		anu Legaly FAE Upkum
Intel(R) Ethernet Connection I218-LM Intel LAN I218 Controller Wake on LAN Intel(R) Ethernet Connection I210 Intel LAN I210 Controller Wake on LAN	[Enabled] [Disabled] [Enabled] [Disabled]	
		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.15.1236. Co	pyright (C) 2012 American M	egatrends, Inc.

BIOS Item	Usage	Item-Specific Help
Launch PXE OpROM	-Disabled ★ Default	
Policy	-Enabled	
Intel I ANI 1218 Controllor	-Disabled	Enable/Disable Intel
Intel LAN 1218 Controller	-Enabled ★ Default	LAN I218
Make on LAN	-Disabled ★ Default	
Wake on LAN	-Enabled	
Intel I ANI 1210 Controllor	-Disabled	Enable/Disable Intel
Intel LAN 1210 Controller	-Enabled ★ Default	LAN I210
Make on LAN	-Disabled ★ Default	
Wake on LAN	-Enabled	

Graphic Configuration

Aptio Setup Utility – Configuration	Copyright (C) 2012 America	an Megatrends, Inc.
Graphics Configuration Primary Display Internal Graphics Aperture Size DVMT Pre-Allocated DVMT Total Gfx Mem Primary IGFX Boot Display Secondary IGFX Boot Display	[IGFX] [Enabled] [256MB] [256M] [256M] [DVI] [DVI]	Select which of IGFX/PEG/PCI Graphics device should be Primary Display Or select SG for Switchable Gfx.
DAT DISDIAG IAbs	[1024X768]	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
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BIOS Item	Usage	Item-Specific Help
	-Auto	Select which of IGFX/PCI
	-IGFX ★ Default	Graphics should be
Primary Display	-PCIE	Primary Display or select
		Secondary Display for
		switchable Graphics
	-Auto	Keen ICD Enabled based
Internal Graphics	-Disabled	on the setup ontions
	-Enabled ★ Default	on the setup options
	-128MB	
Aperture Size	-256MB ★ Default	Select the Aperture Size
	-512MB	
	-32M	
	-64M	
	-96M	Select DVMT 5.0
	-128M	Pre-Allocated (Fixed)
DVMT Pre-Allocated	-160M	Graphics Memory size
	-192M	used by the internal
	-224M	Graphics Device
	-256M ★ Default	
	-288M	

	-320M	
	-352M	
	-384M	
	-416M	
	-448M	
	-480M	
	-512M	
	-1024M	
DVMT Total Gfx Mem	-128MB -256MB ★ Default -MAX	Select DVMT5.0 Total Graphics Memory size used by the Internal Graphics Device
Primary IGFX Boot Display	-VBIOS Default -HDMI -DVI ★ Default -DP	
Secondary IGFX Boot Display	-VBIOS Default -HDMI ★ Default -DVI -DP	
DVI Display Type	-1024x768 ★ Default -1280x1024 -1360x768 -1920x1200	

PCI/PCIE Configuration It is not necessary to make any change just take the default value.

Aptio Setup Utility – (Configuration	Copyright (C) 2012 American	Megatrends, Inc.
PCI/PCIE Configuration		Set Maximum Read Request Size
PCI Common Settings PCI Latency Timer	[32 PCI Bus Clocks]	System BIOS to select the value.
PCI Express Settings Maximum Payload Maximum Read Request	[Auto] [Auto]	
▶ PCH PCI Express Configuration		
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2 15 1236 Co	pupidht (C) 2012 American M	eratrands Inc

BIOS Item	Usage	Item-Specific Help
	-32 PCI Bus Clocks	
	-64 PCI Bus Clocks	
	-96 PCI Bus Clocks	
PCLI atongy Timor	-128 PCI Bus Clocks	
I CI Latency Timer	-160 PCI Bus Clocks	
	-192 PCI Bus Clocks	
	-224 PCI Bus Clocks	
	-248 PCI Bus Clocks	
	-Auto	
	-128 Bytes	
	-256 Bytes	
Maximum Payload	-512 Bytes	
	-1024 Bytes	
	-2048 Bytes	
	-4096 Bytes	
	-Auto	
Maximum Read Request	-128 Bytes	
	-256 Bytes	
	-512 Bytes	
	-1024 Bytes	

-2048 Bytes	
-4096 Bytes	

<u>PCH PCI Express Configuration</u> It is not necessary to make any change just take the default value.

Aptio Setup Utility – Copyright (C) 2012 American Configuration	Megatrends, Inc.
 PCH PCI Express Configuration PCI Express Root Port 1 PCI Express Root Port 2 PCIE Port 3 is LAN I210 PCI Express Root Port 4 PCIE Port 5 is LAN I218 PCI Express Root Port 6 	PCI Express Root Port 1 Settings. Port 1 (x1)
	<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
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<u>PCI Express Root Port 1/2/4/6</u> (Only take Port 1 as an example) It is not necessary to make any change just take the default value.

Aptio Setup Uti Configuration	ility – Copyright (C) 2012 Am	merican Megatrends, Inc.
PCI Express Root Port 1 ASPM PCIe Speed	(Enabled) [Disabled] [Auto]	Control the PCI Express Root Port.
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.15.1	1236. Copyright (C) 2012 Amer	ican Megatrends, Inc.

BIOS Item	Usage	Item-Specific Help
PCI Express Root Port	-Disabled	Control PCI Express root
1/2/4/6	-Enabled ★ Default	port
	-Disabled ★ Default	
	-LOS	Control PCIe Active State
ASPM	-L1	Power Management
	-L0S L1	setting
	-Auto	
	-Auto ★ Default	Salast PCIs Speed to Cop1
PCIe Speed	-Gen1	or Con?
	-Gen2	of Genz

<u>SATA Configuration</u> Determines how SATA controller (s) operate.

Aptio Setup Utility – Configuration	Copyright (C) 2012 Americar	n Megatrends, Inc.
SATA Configuration		Enable or disable SATA Device.
SATA Controller(s) SATA Mode Selection SATA Controller Speed Serial ATA Port 0 Port 0 Hot Plug External SATA SATA Device Type Device Sleep SATA DEVSLEP Idle Timeout Config Serial ATA Port 1 Port 1 Hot Plug External SATA SATA Device Type Device Sleep SATA DEVSLEP Idle Timeout Config Serial ATA Port 2 Port 2 Hot Plug	<pre>[Enabled] [AHCI] [Gen3] Empty [Enabled] [Disabled] [Disabled] [Hard Disk Drive] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled]</pre>	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
SATA DEVSLEP Idle Timeout Config Serial ATA Port 1 Port 1 Hot Plug External SATA SATA Device Type Device Sleep SATA DEVSLEP Idle Timeout Config Serial ATA Port 2 Port 2 Hot Plug	[Disabled] [Disabled] [Enabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled] [Disabled]	<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

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BIOS Item	Usage	Item-Specific Help
SATA Controllor(a)	-Enabled ★ Default	Determines how SATA
SATA Controller(s)	-Disabled	controller (s) operate
	-Disabled	
SATA Mode Selection	-IDE	Determines how SATA
SATA Mode Selection	-AHCI ★ Default	controller (s) operate
	-RAID	
	-Default	
SATA Controllor Spood	-Gen1	
SATA Controller Speed	-Gen2	
	-Gen3 ★ Default	
Port 0~3	-Disabled	
10110-5	-Enabled ★ Default	
Hot Dlug	-Disabled ★ Default	
riot riug	-Enabled	
External SATA	-Disabled ★ Default	
External SATA	-Enabled	
	-Hard Disk Drive	
SATA Device Type	-Solid State Drive ★	
	Default	

Device Sleep	-Disabled ★ Default -Enabled	
SATA DEVSLEP Idle	-Disabled ★ Default	
Timeout Configuration	-Enabled	

<u>USB Configuration</u> Configure USB controller and other advanced setting.

Aptio Setup Utility – C Configuration	Copyright (C) 2012 American	Megatrends, Inc.
USB Configuration		Enables Legacy USB support.
USB Devices: 1 Keyboard, 1 Mouse, 2 Hubs		support if no USB devices are connected. DISABLE option will keep USB devices available
Legacy USB Support	[Enabled]	only for EFI applications.
XHCI Mode	[Smart Auto]	
XHCI Hand-off	[Enabled]	
EHCI Hand-off	[Disabled]	
USB Mass Storage Driver Support	[Enabled]	
▶ PCH USB Configuration		<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.15.1236. Co	pyright (C) 2012 American M	legatrends, Inc.

BIOS Item	Usage	Item-Specific Help
		Enables Legacy USB support. AUTO option
	-Enabled ★ Default	disables legacy support if no
Legacy USB support	-Disabled	USD devices are connected.
		DISABLE option will keep
		USB devices available only
		for EFI applications.
	-Smart Auto ★ Default	
	-Auto	
XHCI Mode	-Enabled	
	-Disabled	
	Manual	
	-Enabled \bigstar Default	
	-Disabled	

ELICI Llore d. off	-Enabled	
Enci nana-on	-Disabled★ Default	
USB Mass Storage	-Enabled ★ Default	
Driver Support	-Disabled	
PCH USB Configuration	-Disabled 🛧 Default	Control each of the USB
-USB Ports per-Port 0~7	England	control each of the 0.5D
Disable	-Enabled	ports disabiling

PCH USB Configuration USB Ports per-Port 0~7

Aptio Setup Utility Configuration	– Copyright (C) 2012 Am	merican Megatrends, Inc.
PCH USB Configuration		Disable USB port.
USB Port #0 USB Port #1 USB Port #2 USB Port #3 USB Port #4 5W Resistive Touch Controller USB Port #6 USB Port #7	[Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults</pre>
		F3: Uptimized Defaults F4: Save & Exit ESC: Exit

<u>Power Control Configuration</u> It is not necessary to make any change just take the default value.

Power Control Configuration	Enabled]	Enables or Disables System ability to Hibernate (OS/S4
Enable Hibernation [Enabled]	ability to histhate (borog
	20 cm lu (Russend to 1	ISLEED STATEL IN1S ONTION MAU
ACPT Sleen State	S3 UNTUESUSOPOID THE T	he not effective with some OS
Power Loss Function	Always OFF1	be not effective with some bo.
	1100g3 011]	
Wake system with Fixed Time [Disabled]	
Wake up Day of Month 0		
Wake up hour 0		
Wake up minute 0		
Wake up second 0		
Wake on Ring [Disabled]	
		↔: Select Screen
		1↓: Select Item
		Enter: Select
		+/−: Change Opt.
		F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit

BIOS Item	Usage	Item-Specific Help		
Enable Hibernation	-Disabled	Enable or Disable		
Enable Indemation	-Enabled ★ Default	Hibernate Funtion		
		Select the highest ACPI		
A CDI Cloop State	-S3 Only	sleep state when the		
ACPI Sleep State	(Suspend to RAM)	SUSPEND button is		
		pressed		
	-Always Off ★ Default	Select AC Power state		
Power loss function	- Always On	when power is re-applied		
	-Last State	after a power failure		
		Enable or disable System		
Males graters with Final	Disabled + Default	wake on alarm event.		
Time a		When enabled, System		
Time	-Enabled	will wake on the		
		hr:min:sec specified		
	-Disabled ★ Default			
wake on King	-Enabled	N/A		

TPM Configuration

Aptio Setup Utility – Copyright (C) 2012 American Configuration	n Megatrends, Inc.
TPM Configuration Configuration Security Device Support [Disable]	Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be
Current Status Information ND Security Device Found	available.
	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1236. Copyright (C) 2012 American (Megatrends, Inc.

BIOS Item	Usage Item-Specif	
Security Device Support	-Disabled ★ Default	Enabled/Disabled TPM
	-Enabled	Function

<u>Super IO Configuration</u> Enable/Disable Watch Dog Timer

Serial Port 0~6 Configuration

Aptio Setup Utility Configuration	– Copyright (C) 2012 America	an Megatrends, Inc.
Super IO Configuration		Enable/Disable Watch Dog Timer
Watch Dog Timer Timer Unit	[Disabled] [Second]	
Serial Port 1 Device Settings RS-232/422/485 Control Option Terminal Resistor	[Enabled] IO=278h; IRQ=11; [RS-232] [OFF]	
Serial Port 2 Device Settings	[Enabled] IO=270h; IRQ=10;	
Serial Port 3 Device Settings	[Enabled] IO=268h; IRQ=11;	++: Select Screen fl: Select Item Enter: Select
Serial Port 4 Device Settings	[Enabled] IO=260h; IRQ=10;	+/-: Change Opt. F1: General Help F2: Previous Values
Serial Port 5	[Disabled]	F3: Optimized Defaults F4: Save & Exit
Serial Port 6	[Disabled]	ESC: Exit
Version 2.15.1236.	Copyright (C) 2012 American	Megatrends, Inc.

BIOS Item	Usage	Item-Specific Help
WDT Controllor	-Disable ★ Default	
WD1 Controller	-Enabled	
Timor Unit	- Second ★ Default	
	- Minute	
Timer value	20 ★ Default	
Conical Don't 1.	-Disable	Sotting Conicl Don't 1.
Serial Fort 1~6	-Enable ★ Default	Setting Serial Fort 1~6
PS 222/422/485 Control	-RS-232	
Option	-RS-422	
Option	-RS-485	

Hardware Monitor

Provide on board sensor reading information.

Aptio Setup Utility – Configuration	Copyright (C) 2012 American	Megatrends, Inc.
CPU Smart Fan Control Smart Fan Start Temperature Smart Fan Full Speed Temperature	[Disabled] 50 50	Control Which Mode for CPU Smart Fan use
CPU Temperature System Temperature CPU FAN Speed Vcore +5V +12V +1.35V	: +71 C : +50 C : N/A : +1.776 V : +5.136 V : +12.375 V : +1.392 V	
		<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.15.1236. C	opyright (C) 2012 American M	legatrends. Inc.

BIOS Item	Usage	Item-Specific Help
CPU Smart Ean Control	-Disable ★ Default	
CPU Smart Fan Control	-Enable	
Smart Fan Start	50 🛧 Dofault	Disable / Enable Smart
Temperature		Fan function
Smart Fan Full Speed	-50 🛧 Default	
Temperature		

<u>Serial Port Console Configuration</u> Configure console redirection on serial port.

Aptio Setup Utility – Configuration	Copyright (C) 2012 American	Megatrends, Inc.
Serial Port Console Redirection		Console Redirection Enable or Disable.
Serial Port 1 (Disabled) Console Redirection Console Redirection	Port Is Disabled [Disabled]	
		<pre>++: Select Screen f↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.15.1236. Co	nuright (C) 2012 American M	egatrends Inc

BIOS Item	Usage	Item-Specific Help
Serial Port 1 Console Redirection	-Disabled ★ Default -Enabled	Control Console Redirection enable/disable
Console Redirection	-Disabled ★ Default -Enabled	

3.5 Boot

Boot Priority Order: Please adjust the order depend of your needs.

Aptio Setup Utility Main Configuration Boot Secu	y – Copyright (C) 2012 Ame rity Save & Exit	rican Megatrends, Inc.
Boot Configuration		Select the keyboard NumLock state
Bootup NumLock State		
GateA20 Active	[Upon Request]	
Option ROM Messages	[Force BIOS]	
INT19 Trap Response	[Immediate]	
Launch Storage OpROM	[Disabled]	
Full Screen Logo	[Disabled]	
Post Report	[Disabled]	
Summary Screen	[Disabled]	
Fast Boot	[Disable Link]	
Boot mode select	[LEGACY]	++: Select Screen
		14: Select Item
FIXED BOOT ORDER Priorities		Enter: Select
Boot Option #1	[CD/DVD]	+/-: Change Opt.
Boot Option #2	[USB Hard Disk]	F1: General Help
Boot Option #3	[Network]	F2: Previous Values
Boot Option #4	[Hard Disk]	F3: Optimized Defaults
Boot Option #5	[Disabled]	F4: Save & Exit
Boot Option #6	[Disabled]	ESC: Exit
Boot Option #7	[Disabled]	
Version 2 15 1236	Conucidat (C) 2012 Ameri	can Megatrends Inc
VCI 310H 2.13.1230	. 0009/18/10 (0) 2012 NUICE 1	can negati chus, inc.

Boot NumLock State

Selects Power-on state for NumLock. Choices: OFF, ON.

GateA20 Active

UPON REQUEST – GA20 can be disabled using BIOS service. ALWAYS – do not allow disabling GA20; this option is useful when any RT code is executed above 1MB. Choices: Upon Request, Always.

Option ROM Messages

Set Display mode for Option ROM.

This item is used to determine the display mode when an optional ROM is initialized during POST. When set to [Force BIOS], the display mode used by AMI BIOS is used. Select [Keep Current] if you want to use the display mode of optional ROM.

Choices: Force BIOS, Keep Current.

Interrupt 19 Capture

Interrupt 19 is the software interrupt that handles the boot disk function.

When "Enabled", this BIOS feature allows the ROM BIOS of these host adaptors to "capture" Interrupt 19 during the boot process so that drives attached to these adaptors can function as bootable disks. In addition, it allows you to gain access to the host adaptor's ROM setup utility, if one is available.

When "Disabled", the ROM BIOS of these host adaptors will not be able to "capture" Interrupt 19. Therefore, you will not be able to boot operating systems from any bootable disks attached to these host adaptors. Nor will you be able to gain access to their ROM setup utilities.

Choices: Disabled, Enabled.

Launch Storage OpROM

Choices: Disabled, Enabled.

<u>Full Screen Logo</u> Choices: Disabled, Enabled.

<u>Post Report</u> Choices: Disabled, Enabled.

<u>Summary Screen</u> Choices: Disabled, Enabled.

<u>Fast Boot</u> Choices: Disabled link, Enabled.

Boot mode Select Choices: LEGACY, UEFI.

Boot Option #1 ~#7 Sets the system boot order. Choices: Built-in EFI Shell, other bootable devices, Disabled.

3.6 Security

Set or clear the Supervisor account's password.

Aptio Setup Uti Main Configuration Boot	lity – Copyright (C) 2012 American Accurity Save & Exit	n Megatrends, Inc.
Password Description		Set Administrator Password
If ONLY the Administrator's p then this only limits access only asked for when entering If ONLY the User's password i is a power on password and mu boot or enter Setup. In Setup have Administrator rights. The password length must be in the following range: Minimum length	hassword is set, to Setup and is Setup. Is set, then this list be entered to the User will 3	
Maximum length	20	++: Select Screen
		f↓: Select Item
Administrator Password		Enter: Select
user Password		+/-: Change Upt. E1: General Heln
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit
Version 2.15.1	.236. Copyright (C) 2012 American M	Megatrends, Inc.

Administrator Password

Set Setup Administrator Password

User Password

Set User password

3.7 Exit

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



Save Changes and Exit

Exit system setup after saving the changes

Discard Changes and Reset

Reset the system without saving the changes.

Restore Defaults

Restore/Load Default Values for all the setup options.

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: 20	06 + A1: 20	07, Class A			
EN 61000-3-2	2: 2006				
EN 61000-3-3	8: 1995 + A1	: 2001 + A2: 2005			
EN 55024: 19	98 + A1: 20	01 + A2: 2003			
IEC 61000-4-2	2: 2008				
IEC 61000-4-3	3: 2006 + A	1: 2007			
IEC 61000-4-4	4: 2004				
IEC 61000-4-	5: 2005				
IEC 61000-4-	6: 2007				
IEC 61000-4-6	8: 1993 + A	1: 2000			
IEC 61000-4-7	11: 2004				
FCC	47	CFR	Part	15	Subpart

Chapter 5 Frequent Asked Questions

Q1: Why the only DVI resolution option is 1024x768 under OS screen?

Answer:

It's the limitation of the PEB-5731-W board. In the BIOS or DOS, the four selections of resolution are only for BIOS or DOS setting not for OS screen. The DVI signal is converted from LVDS signal by Chrontel Ch7036-Chip. And the Chrontel Ch7036-Chip supports display resolution 1024x768 only. It's the design limitation.

Aptio Setup Utility – Copyright (C) 2012 American Megatrends, Inc. Configuration		
Graphics Configuration Primary Display Internal Graphics Aperture Size DVMT Pre-Allocated DVMT Tre-Allocated	[IGFX] [Enabled] [256MB] [256M]	Select DVI Display Type
Primary IGFX Boot Display Secondary IGFX Boot Display DVI Display Type	[256M] [OVI] DVI Display Type 1024x768 1280x1024 1360x768 1920x1080	++: Select Screen T1: Select Item
	For BIOS/DOS only	Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

$\ensuremath{\mathrm{Q2:}}$ Why cannot detect the CFEX or mSATA device in BIOS or OS?

Answer:

Solution1) Please update the BIOS to the latest version.(After version R1.00.E3)

Project Name BIDS Version & Build Date C Version & Build Date	PEB-5731-W R1.00.E3 (04/22/2015 10:58:26) 40410T00 (04/10/2014)
rocessor Information	
Name Brand String	Haswell UL⊤ Intel(R) Celeron(R) 2980U @ 1.60GHz
Fotal Memory Memory Frequency	4096 MB (DDR3L) 1333 Mhz
°CH Information Name °CH SKU	Lyn×Point-LP Premium SKU
4E Firmware Mode	NZA
1E FW Version	N/A
1E Firmware SKU	NZA
	[En] 05/15/2015]
System Time	[17:55:52]
Access Level	Administrator

WEBS-5482-W User's Manual

Solution2) In the BIOS setting: **Step1:** Set Launch Storage OpROM as Enabled.

Boot Configuration		A Contr
Bootup NumLock State		Enab
GateA20 Active	[On]	
Option ROM Messader	[Upon Request]	
INT19 Trap Response	[Force BIOS]	
the response	[Immediate]	
Launch Stonage OpRom	(Disabled)	
Full Screen Logo	[Epsh lad]	
Post Report	Launch Stonage Ospon	
Summary Screen	Disabled	1
Fast Boot	Enabled	
Boot mode select		++: Se
FIXED BOOT ORDER Priorities		t1: se
Boot Option #1	[Hard Disk: meuros	Enter:
Boot Option #2	[USB Keu]	+/-: Cl
Boot Option #3	[Network]	F1: Ger
Boot Option #4	[Disabled]	E2: Pre
Boot Option #5	[0isabled]	Ed. Sau
Boot Option #6	[Disabled]	FSC: EV
boot uption #7	[Disabled]	200. 40

Step 2: In Configuration page, please set the Port 2 (CFEX), Port3 (mSATA) as Enabled. And then save the changes and restart the system. It can detect the CFEX and mSATA properly now.

Aptio Setup Utility - Copyright (C) 2012 Ar Main Configuration Boot Security Save & Exit CPU Configuration Chipset Configuration LAN Configuration Graphics Configuration PCI/PCIE Configuration USB Configuration Power Control Configuration TPM Configuration Super IO Configuration H/W Monitor Serial Port Console Redirection

Contiguration	
Serial ATA Port 1	Empty
Port 1	[Enabled]
Hot Plug	[Disabled]
External SATA	[Disabled]
SATA Device Type	[Solid State Drive]
Device Sleep	[Disabled]
SATA DEVSLEP Idle Timeout Config	[Disabled]
Serial ATA Port 2	ECF7C-M 16GB (16.0GB)
Hot Plug	(Disabled)
External SATA	[Disabled]
SATA Device Type	[Hard Disk Drive]
Device Sleep	[Disabled]
SATA DEVSLEP Idle Timeout Config	[Disabled]
Serial ATA Port 3	mSATA mini 3ME (32.0GB) [Enabled]
Hot Plug	[Disabled]
External SATA	[Disabled]
SATA Device Type	[Hard Disk Drive]
Device Sleep	[Disabled]
SATA DEVSLEP Idle Timeout Confl&	[Disabled]