WEBS-21A0

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 WEBS-2190 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 may have in the box and give 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 can easily configure the 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	2017/9/25	Initial Release

Chapter 1 System Overview

1.1 Introduction

Portwell Inc., a world-leading innovator in the Industrial PC (IPC) market, announced WEBS-21A0, a fan-less intelligent embedded system featuring 15W SKUs of the 5th generation Intel[®] Core[®] processor product family (codename Broadwell). Its rugged, compact design and high performance make the WEBS-21A0, a perfect solution for applications in kiosk, digital signage, in-vehicle mobile video surveillance, medical, defense and the harsh environments of factory automation.

The new rugged WEBS-21A0 is equipped with the Portwell NANO-6050, a NANO-ITX embedded board based on the 5th generation Intel[®] Core[®] processor product family. Processors available in this product family combine low power consumption with high processing power and improved performance compared to previous generation processor. The compact WEBS-21A0 embedded system also features DDR3L SO-DIMM up to 8GB supporting 1333/1600 MT/s; two Mini DisplayPort (DP) on the rear I/O with resolution up to 4096 x 2160; one smart COM port for RS-232/422/485 selected by BIOS; one audio combo jack to support Line-out and Mic-in; and multiple storage with 2.5" HDD/SSD, mSATA device. In addition, the compact 150mm x 150mm x 63mm box, WEBS-21A0, integrates a half-size mini PCIe socket interface to support WIFI, Bluetooth, 3G functions, etc, making it an ideal solution as an IoT gateway.

The rugged, fan-less design makes the WEBS-21A0 durable in harsh environment applications, such as factory automation and industrial automation. The rugged and compact WEBS-21A0 supports a temperature range from 0°C to 50°C for harsh environment operations, while at the same time, its fan-less design ensures silent operation, reliability and low maintenance rate and costs. In addition, it has already passed a vibration test of 5Grms/ 10~500Hz and a shock test of 50G, assuring its solidity and reliability. In addition, the system accepts 12V input voltage.

With its superior processing power, high capability and support for 4K resolution (4096 x 2160), Portwell's WEBS-21A0 is indeed an ideal solution for high computing power and/or high 3D video/image applications.

1.2 Check List

The WEBS-21A0 package should cover the following basic items:

- ✓ One WEBS-21A0 Fan-less Embedded System
- ✓ One 60W AC/DC Power Adapter DC-plug with screw
- ✓ 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	NANO-6050	
System Chipset	Intel [®] Broadwell-U SoC	
CPU	Intel [®] Core [®] i5-5350U (15W) in FCBGA1168 package	
	1.8 GHz up to 2.9 GHz / 2C/4T. 3M Cache.	
	Intel [®] Core [®] i3-5010U (15W) in FCBGA1168 package	
	2.1 GHz /2C/4T. 3M Cache	
BIOS	AMI uEFI BIOS (SPI ROM)	
System Memory	One 204-pin SO-DIMM socket supports DDR3L 1333/1600	
	MT/s SDRAM up to 8GB	
Storage	1x 2.5" SATA HDD/SSD, 1x Msata	
Watchdog Timer	Programmable by embedded controller	
H/W Status Monitor	-Temperature (CPU & System)	
	-Voltage (CPU Vcore, 12V, 5V, 3.3V, 1.35V)	
Expansion	1x Half-size Mini PCIe socket	
External I/O		
Series Ports	1x RS-232/422/485 COM Port (selected by BIOS)	
Display	2x mini DP	
USB	1x USB 3.0, 2x USB 2.0 (Optional kit: additional 2x USB 3.0)	
Audio	Audio Combo Jack Lin-out/Mic-in (Realtek ALC892)	
LAN	2x Gigabit Ethernet (Intel® I218AT)	
Other	1x Antenna hole for WIFI/Bluetooth/3G module	
Power Supply Unit		
Power Supply	DC 12V	
Environment		
Operating	0°C to 50°C	
Temperature		
Storage Temperature	-20°C to 85°C	
Relative Humidity	95% @ 40℃, non-condensing	
Operating Vibration	5Grms/10~500Hz, IEC 60068-2-6	
Operating Shock	50G, 11 msec, IEC 60068-2-27	
Mechanical		
Dimension (WxDxH)	150x 150 x 63 mm; 5.9" x 5.9" x 2.5"	
Weight	2kg	
Mounting	Wall, Panel/VESA, and DIN Rail mounting	

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 NANO-6050.

2.1 HDD Installation

It's easy to install and maintenance the 2.5" HDD/SSD by just open the back cover. (The height must be less than 10mm)



2.2 Half-size Mini-PCIe Device Installation

It's easy to install and maintenance the 1x Half-size Mini-PCIe device by just open the back cover.

Step 1. Loosen the 4 screws of the back Step 2. Take out the back cover cover





Step 3. Assemble the Half-sizeStep 4. Install the SMA cable onto mainMini-PCIe card and make sure it hasconnector of modulebeen screwed





Step 4. Put the Antenna cable through Step 5. Install the Antenna the antenna hole



Step 6. Position the back cover



Step 7. Tighten the 4 screws of the back cover





2.3 mSATA Device Installation

It's easy to install and maintenance the 1x mSATA by just open the back cover.Step 1. Loosen the 4 screws of the backStep 2. Take out the back covercoverStep 2. Take out the back cover



2.4 DIN Rail Mounting Device Installation

It's easy to install and maintenance the Din Rail mounting device by just open the back cover.



2.5 AT mode setting

AT mode: Once the power supply plug in, the system starts automatically, don't need press the power button.

OFF ON	SW1	Function
1 4	1-4 ON; 2-3 ON	ATX Mode (default)
	1-4 ON; 2-3 OFF	ATX Mode
NUME OF	1-4 OFF; 2-3 ON	ATX Mode
2 3	1-4 OFF; 2-3 OFF	AT Mode

SW1: AT Mode or ATX Mode Selection

2.6 Getting Started

It is easy to get the system started.

 Step 1. Make sure the power supply (12V) is connected properly
 Step 2. Press the power button to turn on the system

 Image: the power supply (12V) is connected properly
 Step 2. Press the power button to turn on the system

2.7 I/O Interfaces

2.7.1 Front View (Standard)



2.7.2 Front View (Optional Kit: Additional 2x USB 3.0)



2.7.3 Rear View



DC in: (12V)

Using the provided DC source to connect to the system

Power Button:

Press the power button to turn ON/OFF the system

HDD LED:

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

Mini DP:

Mini DP (Display Port) display output

LAN:

Two Gigabit Ethernet (10/100/1000 Mbits/sec) LAN ports by using Intel I218AT Ethernet Controller

<u>USB 2.0:</u>

Two USB 2.0 (Universal Serial Bus) ports

<u>USB 3.0:</u>

One USB 3.0 (Universal Serial Bus) port

RS-232/422/485:

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

PIN No.	Signal Description	PIN No.	Signal Description
1	DCD#/485D-/422T-	2	RXD#/485D+/422T+
3	TXD#/422R+	4	DTR#/422R-
5	Ground	6	DSR#
7	RTS#	8	CTS#
9	RI#	10	N/C

Audio:

Combo connector for Line-Out and Min-In

Antenna Hole:

Antenna holes for Mini PCIe wireless card

Chapter 3 BIOS Setup Information

WEBS-21A0 system adopts NANO-6050 mother board. The following section describes the BIOS setup program. The BIOS setup program can be used to view and change the BIOS settings for the module. Only experienced users should change the default BIOS settings.

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 <ESC> or <DELETE> key will enter BIOS setup screen.

Press <ESC> or 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 ———				
1↓++	: Move			
Enter	: Select			
+/-	: Value			
ESC	: Exit			
F1	: General Help			
F2	: Previous Values			
F3	: Optimized Defaults			
F4	: Save & Exit Setup			
<k></k>	: Scroll help area upwards			
<m></m>	: Scroll help area downwards			
	OK			

3.2 Main

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

Project Name NAND-6050 BIOS Version & Build Date 51225T00 (12/25/2015 17:12:11) EC Version & Build Date R04.E00 Processor Information	Aptio Setup Utility – Copyright (C) 2015 American Megatrends, Inc. Main Configuration Security Boot Save & Exit				
Processor Information					
NameBroadwell ULTBrand StringIntel(R) Core(TM) i3-5010U CPU @ 2.10GHz					
Total Memory4096 MB (DDR3)Memory Frequency1600 Mhz					
PCH InformationWildcatPoint-LPNameWildcatPoint-LPPCH SKUPremium SKU(BDW-U)Stepping03/B2LAN PHY RevisionB1					
ME FW Version10.0.32.1000ME Firmware ModeNormal ModeME Firmware SKU5MB					
System Date [Sun 05/01/2016] System Time [13:49:13]					

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Feature	Description		
System Date	The date format is <day>, <month><date><year>. Use [+] or</year></date></month></day>		
System Date	 [-] to configure system Date. 		
Sustain Time	The time format is <hour><minute><second>. Use $[+]$ or</second></minute></hour>		
System Time	[-] to configure system Time.		

3.3 Configuration

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

Aptio Setup Utility – Copyright (C) 2015 An Main Configuration Security Boot Save & Exit	merican Megatrends, inc.
 CPU Configuration Chipset Configuration LAN Configuration Graphics Configuration PCI/PCIE Configuration SATA Configuration USB Configuration Power Control Configuration EC Configuration H/W Monitor Serial Port Console Redirection 	CPU Configuration Parameters
	<pre>++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.17.1246. Copyright (C) 2015 Amer	rican Megatrends, Inc.

CPU Configuration CPU Configuration Parameters

Aptio Setup Utility – Copyright (C) 2015 American Megatrends, Inc.			
CPU Configuration		Enabled for Windows XP and	
		Linux (OS optimized for	
Intel(R) Core(TM) i3-5010U CPU @ 2.	10GHz	Hyper-Threading Technology)	
CPU Signature	306d4	and Disabled for other OS (OS	
Max CPU Speed	2100 MHz	not optimized for	
Min CPU Speed	500 MHz	Hyper-Threading Technology).	
CPU Speed	2100 MHz	When Disabled only one thread	
Processor Cores	2	per enabled core is enabled.	
Intel HT Technology	Supported		
Intel VT-x Technology	Supported		
Intel SMX Technology	Not Supported		
64-bit	Supported		
EIST Technology	Supported		
CPU C3 state	Supported	++: Select Screen	
CPU C6 state	Supported	14: Select Item	
CPU C7 state	Supported	Enter: Select	
L1 Data Cacha	00 kB u 0	+/-: Change Opt.	
Li Data Cache		F1: General Help	
1.2 Cache	256 kB x 2	F2: Previous Values	
L3 Cache	3 MB	Ed: Save & Evit	
L4 Cache	Not Present	ESC: Exit	
		LOOP ENTE	
	[Enabled]		
Active Processor Cores	[A11]		
Limit CPUID Maximum	[Disabled]		
Execute Disable Bit	[Enabled]		
Intel Virtualization Technology	[Enabled]		
EIST	[Enabled]		
CPU C states	[Enabled]		
CPU C2 Percent	[Enabled]		
CPU C6 report	[Enabled]		
C6 Latencu	[Short]		
CPU C7 report	[CPU_C7s]		
C7 Latency	[Long]		
CPU C8 report	[Enabled]		
CPU C9 report	[Enabled]		
CPU C10 report	[Enabled]		
C1 state auto demotion	[Enabled]		
C3 state auto demotion	[Enabled]		
Package C state demotion	[Disabled]		
C1 state auto undemotion	[Enabled]		
US state auto undemotion	[Enabled]		
C state Pas Wake	[DISabled]		
CER Lock	[Enabled]		
Package C State limit	[AUTO]		
LakeTinu Feature	[Disabled]	-	
concerting reactine	(proported)		

Feature	Description	Options
Hyper-Threading	Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology). When Disabled only one thread per enabled core is enabled.	Disabled, ★Enabled
Active Processor Cores	Number of cores to enable in each processor package.	★All, 1
Limit CPUID Maximum	Disabled for Windows XP	★Disabled, Enabled
Execute Disable Bit	XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, RedHat Enterprise 3 Update 3.)	Disabled, ★Enabled
Intel Virtualization Technology	When enabled, a VMM can utilize the additional hardware capabilities provided by Vander pool Technology	Disabled, ★Enabled
EIST Enabled / Disabled Intel Speedstep		Disabled, ★Enabled

CPU C states	Enable or disable CPU C state	★Disabled,
(Enabled)		Enabled
Enhanced C1	Enhanced C1 state	Disabled,
state		*Enabled
CPU C3 Report	Enable/ Disable CPU C3 report to OS	Disabled,
-	· · · · ·	*Enabled
CPU C6 Report	Enable/ Disable CPU C6 report to OS	Disabled,
•	· · ·	*Enabled
C6 Latency	Configure Short/Long latency for C6	★Short,
	5 , 5 ,	Long
		Disabled,
CPU C7 report	Enable/Disable CPU C7 report to OS	CPU C7,
		★CPU C7s
C7 Latency	Configure Short/Long latency for C7	Short,
		★Long
CPU C8 report	Enable/Disable CPU C8 report to OS	Disabled,
		★Enabled
CPU C9 report	Enable/Disable CPU C9 report to OS	Disabled,
		★Enabled
CPU C10 report	Enable /Disable CDU C10 report to OS	Disabled,
		★Enabled
C1 state auto	Processor will conditionally demote C3/C6/C7	Disabled,
demotion	requests to C1 based on uncore auto-demote	★Enabled
	information	
C3 state auto	Processor will conditionally demote C6/C7 requests	Disabled,
demotion	to C3 based on uncore auto-demote information	★Enabled
Package C state	Enable Package C state demotion.	\star Disabled,
demotion		Enabled
C1 state auto	Un-demotion from Demoted C1.	Disabled,
un-demotion		★Enabled
C3 state auto	Un-demotion from Demoted C3.	Disabled,
un-demotion		★ Enabled
Package C state	Enable Package C state un-demotion.	\star Disabled,
un-demotion		Enabled
C state Pre-Wake	Enable or disable C state Pre-Wake feature.	Disabled,
		★Enabled
CFG lock	Configure MSR 0xE2[15]. CFG lock bit.	Disabled,
	5 L- <i>y</i>	★Enabled
		CO, C2, C3,
Package C State	Package C State limit	C6, C7, C7s,
limit		C8, C9, C10,
		★AUTO
LakeTinv Feature	Enable/Disable LakeTiny for C state configuration	★Disabled,
		Enabled

<u>Chipset Configuration</u> Configure Chipset feature

Aptio Setup Utility – Configuration	Copyright (C) 2015 American) Megatrends, Inc.
Chipset Configuration		Check to enable VT-d function
Total Memory DIMM#O VT-d Above 4GB MMIO BIOS assignment	4096 MB (DDR3) 4096 MB (DDR3) [Enabled] [Disabled]	on non.
Azalia Port 80h Redirection	[Enabled] [LPC Bus]	
▶ AMT Configuration		
		++: Select Screen †4: Select Item Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Feature	Description	Options
VT d	Chack to apple VT d function on MCH	Disabled,
vi-u		★Enabled
Above 4GB MMIO	Enabled/Disabled above 4GB Memory	Enabled,
BIOS assignment	MappedIO BIOS assignment.	★Disabled
Azalia	Control Detection of the Azalia device. Disabled = Azalia will be unconditionally disabled Enabled = Azalia will be unconditionally enabled	★Enabled, Disabled
Port 80h Redirection	Control where the Port 80h cycles are sent.	★LPC Bus, PCIE Bus

AMT Configuration Configure Active Management Technology Parameters

Ap Configura	tio Setup Utility – Cop tion	yright (C) 2015 Americar	Megatrends, Inc.
Intel AMT Un-Configure ME Disable ME	ם] [D [D	isabled] isabled] isabled]	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 fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

Feature	Description	Options
Intel AMT (Enable)	Enable/Disable Intel [®] 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	★Disabled, Enabled
Un-Configure ME	OEMFlag Bit 15:Un-Confugure ME without password	★Disabled, Enabled
Disable ME	Set ME to Soft Temporary Disabled.	★Disabled, Enabled

LAN Configuration Configuration On Board LAN device

Aptio Setup Utility – Configuration	Copyright (C) 2015 America	an Megatrends, Inc.
LAN Configuration		Enable or disable onboard NIC.
Intel Ethernet Controller I218-LM LAN MAC Address PCH LAN Controller Wake on LAN Launch Legacy PXE Rom Intel(R) Ethernet Connection I210	88-88-88-88-87-88 [Enabled] [Disabled] [Disable]	
Intel LAN I210 Controller Wake on LAN	[Enabled] [Disabled]	
Launch Legacy PXE Rom	[Disable]	<pre>++: Select Screen t4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

Copyright (C) egatrends

Feature	Description	Options
PCH LAN Controller	Enable or disable onboard NIC.	★Enabled, Disabled
Wake on LAN	Enable or disable integrated LAN to wake the system. (The Wake On LAN cannot be disabled if ME is on at Sx state.)	Enabled, ★Disabled
Launch Legacy PXE Rom	Launch Legacy PXE Rom. [Disable] Not launch Rom, [Enable] Force launch Rom, [Auto] Auto detect LAN cable status to Enable/Disable Rom initial	★Disable, Enable, Auto
Intel LAN I210 Controller	Enable or disable Intel LAN I210	Disabled, ★Enabled
Wake on LAN	Enable or disable integrated LAN to wake the system. (The Wale On LAN cannot be disabled if ME is on at Sx state.)	Enabled, ★Disabled
Launch Legacy PXE Rom	Launch Legacy PXE Rom. [Disable] Not launch Rom, [Enable] Force launch Rom, [Auto] Auto detect LAN cable status to Enable/Disable Rom initial	★Disable, Enable, Auto

<u>Graphics Configuration</u> Configuration graphic settings

Aptio Setup Utilit Configuration	y – Copyright (C) 2015 Ame	erican Megatrends, Inc.
Graphics Configuration		Keep IGD enabled based on the
Internal Graphics DVMT Pre-Allocated DVMT Total Gfx Mem	(Auto) [32M] [256M]	setup options.
Primary IGFX Boot Display Secondary IGFX Boot Display Active LFP	[Mini DP Port1] [Disabled] [eDP Port-A]	
▶ PTN3460 LVDS Configuration		
		<pre>++: Select Screen f4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

Feature	Description	Options
Internal	Keep IGD enabled based on the setup	★Auto, Disabled,
Graphics	options.	Enabled
DVMT Pre-Allocated	Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.	 ★32M, 64M, 96M, 128M,160M, 192M, 224M, 256M, 288M, 320M, 352M, 384M, 416M, 448M, 480M, 512M, 1024M, 2016M
DVMT Total Gfx Mem	Select DVMT5.0 Total Graphic Memory size used by the Internal Graphic Device.	128M, ★256M, MAX
Primary IGFX Boot Display	Select the Video Device which will be activated during POST. This has no effect if external graphics present. Secondary boot display selection will appear based on your selection.	★VBIOS Default, Mini DP Port1, Mini DP Port2, LVDS
Active LFP	Select the Active LFP Configuration. No LVDS: VBIOS does not enable LVDS. eDP Port-A:LFP Driven by Int-DisplayPort encoder from Port-A (eDP to PTN3460 LVDS)	No LVDS, ★eDP Port-A

PTN3460 Configuration PTN3460 LVDS help

Aptio Setup Utilit Main	y – Copyright (C) 2015 Ame	erican Megatrends, Inc.
PTN3460 LVDS Configuration Panel Profile Color depth and data format Channel Mode	[1280x1024] [VESA 24 bpp] [Dual Channel]	Select Panel Profile for current use
Clock Mode	[Even Bus]	
		++: Select Screen 11: Select Item Enter: Select +/-: Change Ont
		F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

Feature	Description	Options	
		640x480, 800x480, 800x600,	
Danal Brafila	Select Panel Profile for current	1024x768, 1280x800,	
Faller Frome	use	★1280x1024, 1366x768,	
		1440x900, 1920x1080	
Color depth and	Select color depth and data \star VESA 24 bpp, JEIDA 24 bpp,		
data format	format.	VESA and JEIDA 18 bpp	
Channel Mede	Salact LVDS Channel Mode	Single Channel,	
channel wode	Select LVDS Chainer Mode	★Dual Channel	
Clock Mode	Salact clack output for LVDS	★Even Bus, Odd Bus, Both	
Select clock output for LVDS		Buses	

PCI/PCIE Configuration PCI, PCI-X and PCI Express Settings.

Aptio Setup Utility - Configuration	- Copyright (C) 2015	American Megatrends, Inc.
PCI/PCIE Configuration		Enable or disable PCI Express Clock Gating for each root
PCI Express Clock Gating DMI Link ASPM Control DMI Link Extended Synch Control PCIE Root Port Function Swapping Subtractive Decode Subtractive Decode Port#	[Enabled] [Enabled] [Disabled] [Enabled] [Enabled] 0	por ex
Mini PCI Express Root Port		
		<pre>##: Select Screen t4: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

Feature	Description	Options
PCI Express Clock	Enable or disable PCI Express Clock Gating	Disabled,
Gating	for each root port.	★Enabled
DMI Link ASPM Control	The control of Active State Power Management on both NB side and SB side of the DMI Link.	Disabled, ★Enabled
DMI Link Extended	The control of Extended Synch on SB side	★Disabled,
Synch Control	of the DMI Link.	Enabled
PCIE Root Port	Enable or Disable PCI Express PCI Express	Disabled,
Function Swapping	Root Port Function Swapping.	★Enabled
Subtractive Decode	Enable or disable PCI Express Subtractive	★Disabled,
(Enabled)	Decode.	Enabled
Subtractive Decode	Select PCI Express Subtractive Decode	
Port#	Root Port. User to ensure port availability	

Mini PCI Express Root Port

Aptio Setup Uti Configuration	lity – Copyright (C) 2015	American Megatrends, Inc.
PCI Express Root Port ASPM PCIe Speed	[Enabled] [Disabled] [Auto]	Control the PCI Express Root Port.
		<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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Feature	Description	Options
PCI Express Root	Control the DCI Express Root Dort	Disabled,
Port	Control the PCI Express Root Port.	★Enabled
ASPM	PCI Express Active State Power Management	★Disabled, LOs,
	settings.	L1, L0sL1, Auto
PCIe Speed	Salact BCI Exprass part spaad	★Auto, Gen 1,
	Select PCI Express port speed.	Gen 2

<u>SATA Configuration</u> SATA Device Options Settings

Aptic Setup Utility Configuration	– Copyright (C) 2015 Ameri	ican Megatrends, Inc.
SATA Configuration		Identify the SATA port is connected to Solid State Drive
SATA Controller(s) SATA Mode Selection SATA Controller Speed	[Enabled] [AHCI] [Default]	or Hard Disk Drive.
Software Preserve Port 0 Hot Plug Mechanical Presence Switch External SATA	Unknown [Enabled] [Enabled] [Disabled] [Disabled]	
SATA Device Type Serial ATA Port 1(mSATA) Software Preserve Port 1 Hot Plug Mechanical Presence Switch External SATA SATA Device Type	[Hard Disk Drive] Empty Unknown [Enabled] [Enabled] [Disabled] [Disabled] [Hard Disk Drive]	<pre>++: Select Screen f4: 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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Feature	Description	Options
SATA Controller(s)	Enable or Disable SATA Device.	★Enabled, Disabled
SATA Mode	Determines how SATA controller(s)	★AHCI
Selection	operate.	
SATA Controller	Indicates the maximum speed the SATA	★Default, Gen1,
Speed	controller can support.	Gen2, Gen3
Port 0	Enable or Disable SATA Port	Disabled, ★Enabled
Hot plug (Enabled)	Designates this port as Hot Pluggable.	★Disabled, Enabled
Machanical	Controls reporting if this port has a	
Prosonco Switch	Mechanical Presence Switch.	★Disabled, Enabled
Fresence Switch	Note: Requires hardware support.	
External SATA	External SATA Support.	★Disabled, Enabled
SATA Dovico Tupo	Identify the SATA port is connected to	\star Hard Disk Drive,
SATA Device Type	Solid State Drive or Hard Disk Drive.	Solid State Drive
Port 1	Enable or Disable SATA Port	Disabled, ★Enabled
Hot Plug	Designates this port as Hot luggable	+Disabled Enabled
(Enabled)	Designates this port as not luggable.	A Disableu, Ellableu
Mechanical	Controls reporting if this port has a	
nresence Switch	Mechanical Presence Switch.	★Disabled, Enabled
presence switch	Note: Requires hardware support.	
External SATA	External SATA Support.	★Disabled, Enabled

SATA Device Type	Identify the SATA port is Solid State Drive or Hard Di	is connected to ★Hard Disk Drive.	ive,
USB configuration USB Configuration I Aptio Se Configuration	Parameters. tup Utility – Copyright (C) 201	15 American Megatrends, Inc.	
USB Configuration USB Devices: 1 Keyboard, 1 Hu Legacy USB Support XHCI Legacy Support USB Mass Storage Drive PCH USB Configuration	b [Enabled] r Support [Enabled]	Enables Legacy USB support. AUTO option disables legacy support if no USB devices ar connected. DISABLE option wi keep USB devices available only for EFI applications. ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	re
		+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	

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Feature	Description	Options
Legacy USB Support	Enables Legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.	★Enabled, Disabled, Auto
XHCI Legacy Support	Enable/Disable XHCI Controller Legacy support.	★Enabled, Disabled
USB Mass Storage Driver Support	Enable/Disable USB Mass Storage Driver Support.	Disabled, ★Enabled

PCH USB Configuration

Aptio Setup Uti	lity – Copyright (C) 2015	American Megatrends, Inc.
Configuration		
PCH USB Configuration USB Precondition XHCI Mode BTCG	[Enabled] [Disabled] [Enabled]	Precondition work on USB host controller and root ports for faster enumeration.
EHCI1	[Enabled]	
USB Port #0 USB Port #1 USB Port #2 USB Port #3 USB Port #4 USB Port #5	(Enabled) [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]	
USB Port #6	[Enabled]	<pre>++: Select Screen f4: 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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Feature	Description	Options
USB Precondition	Precondition work on USB host controller and root ports for faster enumeration.	Disabled, ★Enabled
XHCI Mode	Mode of operation of xHCI controller.	★Smart Auto, Auto, Enabled, Disabled
BTCG	Enabling/disabling trunk clock gating.	★Enabled, Disabled
USB Port #0	Enable / Disable USB port.	Disabled, ★Enabled
USB Port #1	Enable / Disable USB port.	Disabled, ★Enabled
USB Port #2	Enable / Disable USB port.	Disabled, ★Enabled
USB Port #3	Enable / Disable USB port.	Disabled, ★Enabled
USB Port #4	Enable / Disable USB port.	Disabled, ★Enabled
USB Port #5	Enable / Disable USB port.	Disabled, ★Enabled
USB Port #6	Enable / Disable USB port.	Disabled, ★Enabled

<u>Power Control Configuration</u> System Power Control Configuration Parameters.

Aptio Setup Utilit Configuration	y – Copyright (C) 2015 Ameria	can Megatrends, Inc.
Power Control Configuration		Enable or disable System wake
Enable Hibernation	[Enabled]	[Enabled], system will wake on
ACPI Sleep State	[S3 (Suspend to RAM)]	the Hour:Min:Sec specified.
Wake on Ring	(Disabled)	[Disabled] Turn off RTC Wakeup.
RTC Wakeup	[Enabled]	
System Time	[15:47:41]	
Wake up day	0	
Wake up Time(HH:mm:ss)	[00:00:00]	
		++: Select Screen
		↑↓: Select Item
		Enter: Select
		+/-: Change Opt.
		F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit

Feature	Description	Options
Enable Hibernation	Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.	Disabled, ★Enabled
ACPI Sleep State	Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.	Suspend Disabled, ★S3(Suspend to RAM)
Wake on Ring	Enable/Disable GPIO Wake On Ring function.	★Disabled, Enabled
RTC Wakeup (Enabled)	Enable or disable System wake on alarm event. [Enabled], system will wake on the hr::min::sec specified. [Disabled] Turn off RTC Wakeup.	★Disabled, Enabled
Wake up day	Select 0 for daily system wake up 1-31 for which day of the month that you would like the system to wake up	0-31
Wake up Time (HH:mm:ss)	Use [Enter], [TAB] to select field, HH: 0-23 mm: 0-59 ss: 0-59	HH: 0-23 mm: 0-59 ss: 0-59

EC Configuration System EC Chip Parameter

EC Configuration Enab Serial Port 1 [Enabled] UART Mode [RS232] Device Settings IO=3F8h; IRQ=4; Watch Dog Timer [Enabled] Timer Unit [Second] Timer value 20	atrends, Inc.
Serial Port 1 [Enabled] UART Mode [RS232] Device Settings IO=3F8h; IRQ=4; Watch Dog Timer [Enabled] Timer Unit [Second] Timer value 20	ole or Disable Serial Port
Watch Dog Timer[Enabled]Timer Unit[Second]Timer value20	17
++:: 14:: Ente +/-: F1: F2: F3: F4:: ESC:	Select Screen Select Item er: Select : Change Opt. General Help Previous Values Optimized Defaults Save & Exit : Exit

Feature	Description	Options
Serial Port 1	Enable or Disable Serial Port (COM)	Disabled, ★Enabled
UART Mode	Set Current UART MODE RS232, RS485, RS485/RS422	★RS232, RS485 HALF DUFLEX, RS485/422 FULL DUFLEX
Watch Dog Timer (Enabled)	Enable/Disable Watch Dog Timer	★Disabled, Enabled
Timer Unit	Select Timer count unit of WDT	★Second, Minute
Timer value	Set WDT Timer value seconds/minutes	★20

H/W Monitor

Monitor hardware status

Aptio Setup Utility - Configuration	· Copyright (C) 2015 American	Megatrends, Inc.
Pc Health Status		
CPU temperature System temperature Vcore +3.3V +5V +12V +1.35V	: +60 % : +49 % : +1.617 V : +3.360 V : +5.126 V : +12.256 V : +1.383 V	
		<pre>++: Select Screen f1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

Serial Port Console Redirection

Serial Port Console Redirection

Aptio Configuration	Setup Utility -	Copyright (C) 2015 Ameri	can Megatrends, Inc.
Serial Port Console	Redirection		Console Redirection Enable or Disable.
COMO			
Console Redirection Console Redirection 	Settings	[Enabled]	
COM1(Pci Bus0,Dev0, Console Redirection	Func0) (Disabled)	Port Is Disabled	
			++: Select Screen
			T+: Select Item
			+/-: Change Opt.
			F1: General Help
			F2: Previous Values
			F4: Save & Exit
			ESC: Exit
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Feature	Description	Options
Console Redirection (Enable)	Console Redirection Enable or Disable.	★Disabled, Enabled

Console Redirection Settings

The settings specify how the host computer and remote computer (which the user is using) will exchange data. Both computers should have the same or compatible settings.

Aptio Setup Utility – Configuration	Copyright (C) 2015 American	Megatrends, Inc.
COMOConsole Redirection SettingsTerminal Type[VT10]Bits per second[1152]Data Bits[8]Parity[NoneStop Bits[1]Flow Control[NoneVT-UTF8 Combo Key Support[EnableRecorder Mode[DisaResolution 100x31[EnableLegacy OS Redirection Resolution[80x2	<pre>[VT100+] [115200] [8] [None] [1] [None] [Enabled] [Disabled] [Enabled] [80x24]</pre>	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100+: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes.
Putty KeyPad Redirection After BIOS POST	[VT100] [Always Enable]	<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>

Feature	Description	Options
Terminal Type	Emulation: ANSI: Extended ASCII char set. VT100: ASCII char set. VT100+: Extends VT100 to support color, function keys, etc. VT-UTF8: Uses UTF8 encoding to map Unicode chars onto 1 or more bytes	VT100, ★VT100+, VT-UTF8, ANSI
Bits per second	Selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.	9600, 19200, 38400, 57600, ★115200
Data Bits	Data Bits	7, ★ 8
Parity	A parity bit can be sent with the data bits to detect some transmission errors. Even: parity bit is 0 is the num of 1's in the data bits is even. Odd: parity bit is 0 if num of 1's in the data bits is odd. Mark: parity bit is always 1. Space: Parity bit is always 0. Mark and Space Parity do not allow for error detection. They can be used as an additional data bit.	★None, Even, Odd, Mark, Space

Stop Bits	Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard setting is 1 stop bit. Communication with slow devices may require more than 1 stop bit.	★1,2
Flow Control	Flow control can prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a 'stop' signal can be sent to stop the data flow. Once the buffers are empty, a 'start' signal can be sent to re-start the flow. Hardware flow control uses two wires to send start/stop signals.	
VT-UTF8 Combo Key Support	Enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals	Disabled, ★Enabled
Recorder Mode	With this mode enable only text will be sent. This is to capture Terminal data.	★Disabled, Enabled
Resolution 100x31	Enables or disables extended terminal resolution	
LegacyOSRedirectionOn Legacy OS, the Number of Rows and Columns supported redirection		★80x24, 80x25
Putty keypad Select Function Key and Key Pad on Putty.		★VT100, LINUX, XTERM6, SCO, ESCN, VT400
Redirection After BIOS POST	The Setting specify if Boot Loader is selected then Legacy console redirection is disable before booting to Legacy OS. Default value always enable which means Legacy console Redirection is enable for Legacy OS.	★Always Enable, Boot Loader

3.4 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.

Aptio Setup Utility - Main Configuration Security Boo	Copyright (C) 2015 American It Save & Exit) Megatrends, Inc.
Password Description		[Setup] check password when
If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights. The password length must be in the following range: Minimum length 3 Maximum length 20		[Power on] check password on every time system power on.
Maximum length	20	++: Select Screen ↑↓: Select Item
Password Check Mode Administrator Password User Password	[Setup]	Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

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Feature	Description	Options
Password Check Mode	[Setup] check password when enter setup screen. [Power on] check password on every time system power on.	★Setup Power On
Administrator Password	Set Administrator Password	Create New Password

3.5 Boot

Use this menu to specify the priority of boot devices.

Aptio Setup Utility – Main Configuration Security Boot	Copyright (C) 2015 American Save & Exit	Megatrends, Inc.
Boot Configuration Setup Prompt Timeout Bootup NumLock State GateA20 Active Option ROM Messages	1 [On] [Upon Request] [Keep Current]	Number of seconds to wait for setup activation key. 65535(OxFFFF) means indefinite waiting.
Storage	[Legacy]	
Full screen Logo	[Disabled]	
Post Report Summary Screen Fast Boot SATA Support VGA Support USB Support NetWork Stack Driver Support Boot option filter	[Disabled] [Disabled] [Enabled] [All Sata Devices] [EFI Driver] [Partial Initial] [Disable Link] [Legacy only]	++: Select Screen †↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values
Post Option Deignitics		F3: Optimized Defaults F4: Save & Exit
Boot Option #1	[USB MEMORY BAR 1000]	ESC: EXIL
Hard Drive BBS Priorities		

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Feature	Description	Options
Setup Prompt Timeout	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.	★1
BootupNumLock State	Select the Keyboard NumLock state	★On, off
GateA20 Active	UPON REQUEST – GA20 can be disabled using BIOS services. ALWAYS- do not allow disabling GA20; this option is useful when any RT code is execute above 1MB	★Upon Request, Always
Option ROM Messages	Set display mode for Option ROM	Force BIOS, ★Keep Current
Storage	Control the execution of UEFI and Legacy Storage OpROM	Do not launch, UEFI, ★Legacy
Full screen Logo	Enables or disables Quiet Boot option and Full screen Logo.	★Disabled, Enabled
Post Report	Post Report Support Enabled/Disabled	★Disabled, Enabled
Summary Screen	Summary Screen Support Enabled/Disabled	★Disabled, Enabled

Fast Boot (Enabled)	Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.	★Disable Link Enabled
SATA Support		Last Boot HDE Only,
VGA Support	If Auto, only install Legacy OpRom with Legacy OS and logo would NOT be shown during post. Efi driver will still be installed with EFI OS.	Auto, ★EFI Driver
USB Support	If Disabled, all USB devices will NOT be available until after OS boot. If partial Initial, USB Mass Storage and specific USB port/device will NOT be available before OS boot. If Enabled, al USB devices will be available in OS and post.	Disable Link, Ful Initial , ★Partial Initial
Network Stack Driver Support	If Disabled, Network Stack Driver will be skipped.	★Disable Link Enabled
Boot option filter	This option controls Legacy/UEFI ROMs priority	★Legacy only, UEF only
Boot Option #1	Sets the system boot order	Disabled

Hard Drive BBS Priorities

Set the order of the legacy devices in this group

	Aptio Setup Utility B	– Copyright (C) 2015 American oot	n Megatrends, Inc.
Boot Option #1 Boot Option #2		[USB MEMORY BAR 1000] [Sony Storage Media]	Sets the system boot order
			<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>

Feature	Description	Options
Boot Option #1	Sets the system boot order	
Boot Option #2	Sets the system boot order	

3.6 Exit

This menu allows you to load the BIOS default values or factory default settings



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Feature	Description	Options
Save Changes and Reset	Reset the system after saving the changes	
Discard Changes and Reset	Reset system without saving any changes.	
Restore Defaults	Restore/Load Default values for all the setup options.	
Launch EFI Shell from filesystem device	Attempts to Launch EFI Shell application (Shell.efi) from one of the available filesystem devices	Save configuration and reset? Yes, No

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: 2007, Class A EN 61000-3-2: 2006 EN 61000-3-3: 1995 + A1: 2001 + A2: 2005 EN 55024: 1998 + A1: 2001 + A2: 2003 IEC 61000-4-2: 2008 IEC 61000-4-3: 2006 + A1: 2007 IEC 61000-4-3: 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 Clear CMOS?

Answer:

You can switch off your power supply then find the JP3 to set it from 1-2 short to 2-3 short and wait 10 seconds to clean your password then set it back to 1-2 short to switch on your power supply.

JP3	:	CMOS	Setting

JP7/8	Function
1-2 Short	Normal Operation (default)
2-3 Short	Clear CMOS Contents



Q2: How to update BIOS?

Answer:

- Please visit web site of Portwell download center as below hyperlink <u>http://www.portwell.com.tw/support/download_center.php</u> Registering an account in advance is a must. (The E-Mail box should be an existing Company email address that you check regularly.) <u>http://www.portwell.com.tw/member/newmember.php</u>
- 2. Type in your User name and password and log in the download center.
- 3. Select "Search download" and type the keyword "WEBS-21A0".
- 4. Find the **"BIOS** "page and download the ROM file and flash utility.
- 5. Unzip file to bootable USB flash drive which can boot to dos mode. Then execute the **"update.bat"**.

6. Reboot the system and getting into [DOS]. Please follow the below instruction to update BIOS.



- A. "cd update" to access the root folder
- B. Key-in"update" this command to run updating procedure.

The following file is missing or corrupted: \HIMEM.EXE There is an error in your CONFIG.SYS file on line 1 The following file is missing or corrupted: \TDSK.EXE There is an error in your CONFIG.SYS file on line 2 The following file is missing or corrupted: \TDSK.EXE There is an error in your CONFIG.SYS file on line 3 Warning: the high memory area (HMA) is not available. Additional low memory (below 640K) will be used instead. Microsoft(R) Windows 98 (C)Copyright Microsoft Corp 1981-1999. C:\>cd update C:\UPDATE>update_ 8.

7. Update procedure

Updating >>DO NOT TURN OFF POWER<<
Please reset system after updating complete!
Intel (R) Flash Programming Tool. Version: 10.0.30.1054 Copyright (c) 2007 – 2014, Intel Corporation. All rights reserved.
Platform: Intel(R) Premium Express Chipset Reading HSFSTS register Flash Descriptor: Valid
Flash Devices Found W25Q128BV ID:0xEF4018 Size: 16384KB (131072Kb)
PDR Region does not exist.
<u>–</u> Erasing Flash Block [0×127000] – 7% complete.
Complete
Intel (R) Flash Programming Tool. Version: 10.0.30.1054 Copyright (c) 2007 – 2014, Intel Corporation. All rights reserved.
Platform: Intel(R) Premium Express Chipset Reading HSFSTS register Flash Descriptor: Valid
Flash Devices Found W25Q128BV ID:0xEF4018 Size: 16384KB (131072Kb)
PDR Region does not exist.
- Erasing Flash Block [0x1000000] - 100% complete. - Programming Flash [0x1000000] 16384KB of 16384KB - 100% complete. - Verifying Flash [0x1000000] 16384KB of 16384KB - 100% complete. RESULT: The data is identical.
FPT Operation Passed
C:\UPDATE\FLASH>
C:\UPDATE>
C:\UPDATE>

- 9. Power off the system (wait 10 sec) and power on again to initial the BIOS
- Press "del" key into the BIOS setup menu and switch to "Save & Exit" page then select "Restore Defaults" option and press "Yes" then select "Save Changes and Reset" to finish all BIOS update processes.

Aptio Setup Utility – Copyright (C) 2015 American Main Configuration Security Boot Save & Exit	Megatrends, Inc.
Save Changes and Reset Discard Changes and Reset Restore Defaults Boot Override Sonu Storage Media PMAP	Reset the system after saving the changes.
Launch EFI Shell from filesystem device	
	<pre>++: Select Screen f1: 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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Q3: How to install Windows 7 in WEBS-21A0?

Answer:

Windows 7 installation media does not include native driver support for USB 3.0, so during installation, when you get to the screen to select your preferred language, a keyboard or mouse connected to a USB 3.0 port does not respond. If you need the solution for this issue, please fill in the technical request form as below hyperlink and we will contact you as soon as possible.

http://www.portwell.com.tw/support/problem_report.php