BMX-T526

兆芯 C+系列处理器 VX11PH 南桥无风扇 Mini-ITX 系统

Quick Reference Guide

1st Ed –21 September 2020

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Part No. E2017B526A0R

FCC Statement

THIS DEVICE COMPLIES WITH PART 15 FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE.

(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

THIS EQUIPMENT HAS BEEN TESTED AND FOUND TO COMPLY WITH THE LIMITS FOR A CLASS "A" DIGITAL DEVICE, PURSUANT TO PART 15 OF THE FCC RULES.

THESE LIMITS ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST HARMFUL INTERFERENCE WHEN THE EQUIPMENT IS OPERATED IN A COMMERCIAL ENVIRONMENT. THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND, IF NOT INSTATLLED AND USED IN ACCORDANCE WITH THE INSTRUCTION MANUAL, MAY CAUSE HARMFUL INTERFERENCE TO RADIO COMMUNICATIONS.

OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE HARMFUL INTERFERENCE IN WHICH CASE THE USER WILL BE REQUIRED TO CORRECT THE INTERFERENCE AT HIS OWN EXPENSE.

A Message to the Customer

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Each and every Avalue's product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Avalue device is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Avalue has come to be known.

Your satisfaction is our primary concern. Here is a guide to Avalue's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

Technical Support

We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone. So please consult the user's manual first.

To receive the latest version of the user's manual; please visit our Web site at: http://www.avalue.com.tw/

Content

1. Get	tting Started	5
1.1	Safety Precautions	5
1.2	Packing List	5
1.3	System Specifications	6
1.4	System Overview	8
1.4.1	1 Front/Rear View	8
1.5	System Dimensions	10
2. Har	dware Configuration	11
2.1	BMX-T526 connector mapping	12
2.1.1	1 Serial port 1~6 connector (COM1~6)	12
2.1.2	2 VGA connector (VGA)	12
2.1.3	3 LVDS connector (LVDS)	13
3.BIOS	Setup	14
3.1	Introduction	15
3.2	Starting Setup	15
3.3	Using Setup	16
3.4	Getting Help	17
3.5	In Case of Problems	17
3.6	BIOS setup	18
3.6.1	1 Main Menu	18
3.0	6.1.1 System Language	
3.0	6.1.2 System Date	
3.0	6.1.3 System Time	
3.6.2	2 Advanced Menu	19
3.0	6.2.1 ACPI Settings	
3.0	6.2.2 S5 RTC Wake Settings	20
3.0	6.2.3 Trusted Computing	
3.0	6.2.4 CPU Configuration	
3.0	6.2.5 SATA Configuration	
5.0	6.2.7 U/W Monitor	23
5.0	6.2.7 I. Smort For Mode Configuration	
2.0	6.2.8 IT8528 Super IO Configuration	
3.0	6.2.8.1 Serial Port 1 Configuration	25 26
3.0	6.2.8.7 Serial Port 2 Configuration	
5.0		20

BMX-T526

3.6.2.	8.3	Serial Port 3 Configuration	27
3.6.2.	8.4	Serial Port 4 Configuration	27
3.6.2.	8.5	Serial Port 5 Configuration	
3.6.2.	8.6	Serial Port 6 Configuration	
3.6.3	Chi	pset	29
3.6.3.	1	North Bridge	29
3.6.3.	1.1	Video Configuration	
3.6.3.	1.2	PCIE Configuration	31
3.6.3.	2	South Bridge	32
3.6.3.	2.1	USB Configuration	32
3.6.3.	2.2	HDAC Configuration	
3.6.4	Boo	vt	33
3.6.4.	1	CSM16 Parameters	34
3.6.4.2	2	CSM Parameters	35
3.6.5	Sec	urity	36
3.6.5.	1	Secure Boot menu	
3.6.6	Sa	ve and exit	37
3.6.6.	1	Save Changes and Reset	
3.6.6.2	2	Discard Changes and Reset	
3.6.6.	3	Restore Defaults	
3.6.6.4	4	Launch EFI Shell from filesystem device	

1. Getting Started

1.1 Safety Precautions

Warning!



Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!



Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

1.2 Packing List

- 1 x 84W Adapte
- 1 x CN AC Power Cord



If any of the above items is damaged or missing, contact your retailer.

1.3 System Specifications

System				
Mother Board	Mini ITX Motherboard EMX-VX11P			
CPU	Onboard ZX-C Series Processor			
CPU Cooler (Type)	Fanless			
Momony	One x 204-pin DDR3 1333MHz SO-DIMM supports up to 8GB, default			
Memory	4GB			
Adapter	FSP 12V/7A 84W (ACC-ADP-084N-02R)			
Microphone/Audio	1 x Line-out, 1 x Mic-in			
Operating System	Win7, Win10, NeoKylin 7.0, 64 bit, kernel			
Operating System	3.10.0-862.9.1nd7.zx.4.X86_64			
	Storage			
Hard Disk Drive	1 x 2.5" HDD storage			
Solid State Drive	1 x 2.5" Drive Bay			
Other Storage Device	1 x mSATA supports on the 1st Mini PCIe slot			
	External I/O			
Sorial Port	6 x RS-232(Optional 2 x RS-232/422/485) for Rear Cover			
Senarron	(+ 4 x DB9 不斷孔) for Front Cover			
USB Port	3 x USB 3.0, 1 x USB 2.0 for Rear Cover			
	1 x USB 2.0 (+2 x USB 不断孔) for Front Cover			
DIO Port	16-bit GPIO (by external optional)			
Video Port	1 x HDMI, 1 x VGA			
Audio Port	1 x Line-out, 1 x Mic-in			
LAN Port	2 x Intel I210AT Gigabit Ethernet			
Wireless LAN Antenna	2 x SMA Connector (optional)			
Switch	1 x Power on/off switch			
Indicator Light	1 x HDD LED, 1 x Power LED			
Expansion Slots	1 x full size Mini PCI-e (support mSATA/PCIx1/USB 2.0 Signal/SIM)			
Others	1 x Dual Channel 18/24-bits LVDS			
	Mechanical			
Power Type	AT / ATX mode Switchable Through Jumper, default ATX Mode			
Power Connector Type	1 x Lockable DC Jack			
Power Connector Type	1 x Phoenix connector power input (+12~24V)			
Dimension	180 x 182 x 76 (L x W x H)			
Weight	2.3 kg			
Color	Black			
Fanless	Yes			

00.0	Win7, Win10, NeoKylin 7.0, 64 bit, kernel		
US Support	3.10.0-862.9.1nd7.zx.4.X86_64		
	Reliability		
EMI Test	CE/FCC Class B design compatible		
Safety	Avalue standard		
Vibration Test	Avalue standard		
Mechanical Shock Test	Avalue standard		
Drop Test	Avalue standard		
Operating Temperature	0~50°C (32~140°F), w/HDD/SSD, ambient with 0.5 m/s Air flow		
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing		
Storage Temperature	-20°C ~ 75°C (-4°F ~ 167°F)		

Ø

Note: Specifications are subject to change without notice.

1.4 System Overview

1.4.1 Front/Rear View





Connectors		
Label	Function	Note
Power	Power on button	
凤凰端子Power In put	DC power-in connector	
USB3.0	4 x USB3.0 connector	
COM1/2/3/4/5/6/7/8/9/10	Serial port connector	

	1/2/3/4/5/6/7/8/9/10	
DCIN	DC power-in connector	
HDMI	HDMI connector	
VGA	VGA connector	
LAN1/2	RJ-45 Ethernet 1/2	
LVDS1	LVDS Connector	20 x 2 wafer, pitch 1.25mm
LOUT1	Line-out audio jack	
MIC1	Mic-in audio jack	

1.5 System Dimensions











(Unit: mm)

2. Hardware Configuration

Jumper and Connector Setting

For advanced information, please refer to:

1- EMX-VX11P User's Manual

Note: If you need more information, please visit our website:

http://www.avalue.com.tw

2.1 BMX-T526 connector mapping

2.1.1 Serial port 1~6 connector (COM1~6)

() NDHI 028.820 0.68 5.0 POWER 2日間 は際 8 ø 0 @(..... 2000 10000 00 Del 2 © ___ © 10 Ô**j**ĝ Ô 00000 0000 尬 0 8 8 0 ÷ 38 00864 008.5 COMIE wre**)**Ø 0000 ·····}ô 姁 ÔĽ (OI) (Ct 10 Ц П



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

2.1.2 VGA connector (VGA)





PIN	Signal	PIN	Signal	PIN	Signal
1	RED	6	GND	11	NC
2	GREEN	7	GND	12	DDCDAT
3	BLUE	8	GND	13	HSYNC
4	NC	9	+5V	14	VSYNS
5	GND	10	GND	15	DDCCLK

2.1.3 LVDS connector (LVDS)



PIN	Signal	PIN	Signal	PIN	Signal
1	PS_ON	10	1+	19	12V
2	GND	11	1-	20	GND
3	3.3V	12	GND	21	Backlight_EN
4	5V	13	2+	22	VBRIGHT
5	GND	14	2-	23	USB_VCC
6	GND	15	3+	24	D-
7	0+	16	3-	25	D+
8	0-	17	CLK+	26	USB_GND
9	GND	18	CLK-		

Note:

This connector included LVDS, USB, 12V and 5V interfaces.





3.1 Introduction

The BIOS setup program allows users to modify the basic system configuration. In this following chapter will describe how to access the BIOS setup program and the configuration options that may be changed.

3.2 Starting Setup

The AMI BIOS[™] is immediately activated when you first power on the computer. The BIOS reads the system information contained in the NVRAM and begins the process of checking out the system and configuring it. When it finishes, the BIOS will seek an operating system on one of the disks and then launch and turn control over to the operating system.

While the BIOS is in control, the Setup program can be activated in one of two ways: By pressing or <F2> immediately after switching the system on, or By pressing the or <F2> key when the following message appears briefly at the left-top of the screen during the POST (Power On Self Test).

Press or <F2> to enter SETUP

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the "RESET" button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to.

Press F1 to Continue, DEL to enter SETUP

3.3 Using Setup

In general, you use the arrow keys to highlight items, press <Enter> to select, use the PageUp and PageDown keys to change entries, press <F1> for help and press <Esc> to quit. The following table provides more detail about how to navigate in the Setup program using the keyboard.

Button	Description
↑↓→←	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

Navigating Through The Menu Bar

Use the left and right arrow keys to choose the menu you want to be in.

Note: Some of the navigation keys differ from one screen to another.

• To Display a Sub Menu

Use the arrow keys to move the cursor to the sub menu you want. Then press <Enter>. A " \geq " pointer marks all sub menus.

3.4 Getting Help

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window press <Esc> or <Enter> key.

3.5 In Case of Problems

If, after making and saving system changes with Setup, you discover that your computer no longer is able to boot, the AMI BIOS supports an override to the NVRAM settings which resets your system to its defaults.

The best advice is to only alter settings which you thoroughly understand. To this end, we strongly recommend that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both BIOS Vendor and your systems manufacturer to provide the absolute maximum performance and reliability. Even a seemingly small change to the chipset setup has the potential for causing you to use the override.

3.6 BIOS setup

Once you enter the Aptio Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

3.6.1 Main Menu

This section allows you to record some basic hardware configurations in your computer and set the system clock.

Aptio Setup Ut Main Advanced Chipset Bo	ility – Copyright (C) 2012 American ot Security Save & Exit	n Megatrends, Inc.
BIOS Information BIOS Vendor Core Version Compliancy Project Version Build Date and Time	American Megatrends 4.6.5.4 UEFI 2.3.1; PI 1.2 1AQIL 0.11 x64 11/13/2019 11:10:51	Choose the system default language
Memory Information Total Memory BIOS Name EC 8528 Firmware	4096 MB (DDR3) MVX11POP 06	
System Language	[English]	↔: Select Screen
System Date System Time	[Wed 12/04/2019] [05:42:35]	T∔: Select Item Enter: Select +/-: Change Opt
Access Level	Administrator	F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.	1236. Copyright (C) 2012 American M	Megatrends, Inc.

3.6.1.1 System Language

This option allows choosing the system default language.

3.6.1.2 System Date

Use the system date option to set the system date. Manually enter the day, month and year.

3.6.1.3 System Time

Use the system time option to set the system time. Manually enter the hours, minutes and seconds.



Note: The BIOS setup screens shown in this chapter are for reference purposes only, and may not exactly match what you see on your screen. Visit the Avalue website (<u>www.avalue.com.tw</u>) to download the latest product and BIOS information.

3.6.2 Advanced Menu

This section allows you to configure your CPU and other system devices for basic operation through the following sub-menus.

Aptio Setup Utility – Copyright (C) 2012 American Main <mark>Advanced </mark> Chipset Boot Security Save & Exit	Megatrends, Inc.
 ACPI Settings SS RTC Wake Settings Trusted Computing CPU Configuration SATA Configuration USB Configuration H/W Monitor IT8528 Super ID Configuration 	System ACPI Parameters.
	<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. Copyright (C) 2012 American Me	egatrends, Inc.

3.6.2.1 ACPI Settings

Antio Setun Utilitu -	Conuright (C) 2012 American	Megatrends Inc
Advanced		
ACPI Settings		Enables or Disables BIOS ACPI
Enable ACPI Auto Configuration		Huto configuration.
Enable Hibernation ACPI Sleep State Lock Legacy Resources S3 Video Repost	[Enabled] [S3 only(Suspend to] [Disabled] [Disabled]	
Watch Dog ErP Function USB Standby Power Setting BWE-Dn After PWR-Fail	[Disabled] [Disabled] [Enabled] [off]	
Wake Up by Ring	[Enabled]	++: 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. Co	ppyright (C) 2012 American M	egatrends, Inc.

Item	Options	Description
Frable ACRI Auto Configuration	Disabled [Default] ,	Enables or Disables BIOS ACPI Auto
Enable ACPI Auto Configuration	Enabled	Configuration.
Enable Hibernation	Disabled Enabled [Default] ,	Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some

		OS.
ACPI Sleep State	Suspend Disabled, S3 (Suspend to RAM) [Default]	Select the highest ACPI sleep state the system will enter when the SUSPEDN button is pressed.
Lock Legacy Resources	Disabled [Default] Enabled,	Enable or Disable Lock of Legacy Resources
S3 Video Repost	Disabled [Default] Enabled,	Enable or Disable S3 Video Repost
Watch Dog	Disabled [Default] , 30 sec 40 sec 50 sec 1 min 2 min 10 min 30 min	Select WatchDog.
ErP Function	Disabled [Default] Enabled,	ErP Function (Deep S5).
USB Standby Power Setting	Disabled Enabled [Default]	Enabled/Disabled USB Standby Power during S3/S4/S5.
PWR-On After PWR-Fail	Off [Default] On Last state	AC loss resume.
Wake Up by Ring	Disabled Enabled [Default]	Wake Up by Ring from S3/S4/S5

3.6.2.2 S5 RTC Wake Settings

Advanc	Aptio Setup Utility – ed	Copyright (C) 2012 American	Megatrends, Inc.
Wake system w			Enable or disable System wake on alarm event. When enabled, System will wake on the hr::min::sec specified
			<pre>+: Select Screen 1↓: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>

Item	Options	Description
Wake system with Fixed Time	Disable [Default] Enable	Enables or Disables System wake on alarm event. When enabled, System will wake on the hr::min::sec specified

3.6.2.3 Trusted Computing

Aptio Setup Advanced	Utility – Copyright ((C) 2012 American	Megatrends, Inc.
Configuration			Enables or Disables BIOS support for security device
			OSE will not show Security Device. TCG EFI protocol and INTIA interface will not be available.
			<pre>++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.1	5.1236. Copyright (C)	2012 American Me	egatrends. Inc.

Item	Options	Description
Security Device Support	Disable [Default] Enable	Enables or Disables BIOS support for security devices. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.

3.6.2.4 CPU Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2012 American	Megatrends, Inc.
CPU Configuration		NoExecute memory protection
2HAOXIN KaiXian ZX-C+ C450001.67+G Speed (FSB 333MHz * 5): 1665MHz Core L1 Cache RAM L2 Cache RAM Microcode Revision PMON State VRM Phase	4 64 K 2048 K 20a Support 2	
Execute Disable bit		
Cx State Configuration Processor C State	[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>
Version 2.15.1236. C	opyright (C) 2012 American M	legatrends, Inc.

ltem	Options	Description	
Execute Dischle hit	Disabled	No Evenute memory protection	
Execute Disable bit	Enabled [Default] ,	NOExecute memory protection	
Dragona y C Stata	Disabled [Default]	Main quitab fan anable Dragonau C. State State gunnaut	
Processor C State	Enabled,	Main Switch for enable Processor C State State support	

3.6.2.5 SATA Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2012 American	Megatrends, Inc.
SATA Configuration		SATA Configure
SATA PortO SATA Port1	Not Present Not Present	
SATA Mode Support AHCI HIPM shortest Timer Patch HIPM for AHCI Power Mode	[AHCI] [Normal] [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. C	opyright (C) 2012American M	legatrends, Inc.

Item	Options	Description	
SATA Mada	IDE	CATA Configure	
SATA Mode	AHCI [Default]	SATA Conligue	
	Normal [Default]		
shortest Timer	Shortest	Support AHCI HIPM shortest Timer select	
	Disabled		
Datab HIDM for AHCI	Dischlad (Defeult)	In the some SATA device, system will random hang	
Patch HIPM for AHCI Disabled[Default]	during S3 resume in AHCI power mode, So BIOS can		
Power Mode	Enabled	offer patch code for AHCI power mode after S3 resume	

3.6.2.6 USB Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2012 America	n Megatrends, Inc.
USB Configuration		Enables Legacy USB support.
USB Devices: 1 Drive, 1 Keyboard, 1 Hub		support if no USB devices are connected. DISABLE option will keep USB devices available
Legacy USB Support		only for EFI applications.
USB3.0 Support	[Enabled]	
XHCI Hand-off	[Enabled]	
EHCI Hand-off	[Disabled]	
USB Mass Storage Driver Support	[Enabled]	
USB hardware delays and time-outs:		
USB transfer time-out	[20 sec]	
Device reset time-out	[20 sec]	↔: Select Screen
Device power-up delay	[Auto]	↑↓: Select Item
		Enter: Select
Mass Storage Devices:		+/-: Change Opt.
JetFlashTranscend 8GB 1100	[Auto]	F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit
Version 2 15 1236 f	onucidht (C) 2012 American	Megatrends Inc
VCI 31011 2.13.1200. U	opginght (07 2012 Hiller Itali	

Item	Options	Description	
Legacy USB Support	Enabled [Default] , Disabled Auto	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.	
USB3.0 Support	Enabled [Default] , Disabled	Enable/Disable USB3.0 (XHCI) Controller support.	
XHCI Hand-off	Enabled [Default] , Disabled	This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.	
EHCI Hand-off	Disabled [Default] , Enabled	This is a workaround for OSes without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.	
USB Mass Storage Driver Support	Disabled Enabled [Default] ,	Enable/Disable USB Mass Storage Driver Support.	
USB transfer time-out	1 sec 5 sec 10 sec 20 sec [Default] ,	The time-out value for Control, Bulk, and Interrupt transfers.	
Device reset time-out	1 sec 5 sec 10 sec 20 sec [Default] ,	USB mass storage device Start Unit command time-o	
Device power-up delay	Auto [Default] , Manual	Maximum time the device will take before it properly reports itself to the Host Controller. 'Auto' uses default value: for a Root port it is 100ms, for a Hub port the delay is taken from Hub descriptor.	
JetFlashTranscend 8GB 1100	Auto [Default] , Floppy	Mass storage device emulation type. 'Auto' enumerates devices according to their media format. Optical drives	

Forced FDD Hard Disk	are emulated as 'CDROM', drives with no media will be emulated according to a drive type.
CD-ROM	

3.6.2.7 H/W Monitor

Aptio Setup Utility – Advanced	Copyright (C) 2012 American) Megatrends, Inc.
Pc Health Status		Enable or Disable Smart Fan
Smart Fan Function • Smart Fan Mode Configuration VDDR VIN VCORE CPU Temp(degree C) CPU Fan Speed	[Enabled] : +11.548 V : +11.880 V : +0.936 V : +76 C : N/A	<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. C	opyright (C) 2012 American M	Wegatrends, Inc.

ltem	Options	Description
Smart Fan Function	Disabled Enabled [Default] ,	Enable or Disable Smart Fan

3.6.2.7.1 Smart Fan Mode Configuration

Aptio Setup Utilit Advanced	y – Copyright (C) 2012 Am	erican Megatrends, Inc.
Smart Fan Mode Configuration		CPU Smart Fan Mode Select
CPU Smart Fan Mode Fan PWM	[Manual Mode] 255	
		<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>
Version 2.15.1236	. Copyright (C) 2012 Amer	ican Megatrends, Inc.

Item	Option	Description
	Manual Mode [Default] /Mode	
	01/Mode 02/Mode 03/Mode	
	04/Mode 05/Mode 06/Mode	
CPU Smart Fan Mode	07/Mode 08/Mode 09/Mode	CPU Smart Fan Mada Salaat
	10/Mode 11/Mode 12/Mode	CFO Smart Fan Mode Select
	13/Mode 14/Mode 15/Mode	
	16/Mode 17/Mode 18/Mode	
	19/Mode 20	
Fan PWM	0-255	Fan PWM duty

3.6.2.8 IT8528 Super IO Configuration

You can use this item to set up or change the IT8528 Super IO configuration for serial ports. Please refer to 3.6.2.5.1~ 3.6.2.5.6 for more information.

		Aptio Setup Utility – Advanced	Copyright (C) 2012 American	Megatrends, Inc.
Γ	IT8528	Super IO Configuration		Set Parameters of Serial Port
	IT8528 Serial Serial	Super IO Chip Port 1 Configuration Port 2 Configuration	IT8528	
* * * *	F81216 Serial Serial Serial Serial	Second Super IO Chip Port 3 Configuration Port 4 Configuration Port 5 Configuration Port 6 Configuration	F81216 SecondIo	
				<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. C	opyright (C) 2012 American M	legatrends, Inc.

Item	Description	
Serial Port 1 Configuration	Set Parameters of Serial Port 1 (COMA).	
Serial Port 2 Configuration	Set Parameters of Serial Port 2 (COMB).	
Serial Port 3 Configuration	Set Parameters of Serial Port 3 (COMC).	
Serial Port 4 Configuration	Set Parameters of Serial Port 4 (COMD).	
Serial Port 5 Configuration	Set Parameters of Serial Port 5 (COME).	
Serial Port 6 Configuration	Set Parameters of Serial Port 6 (COMF).	

3.6.2.8.1 Serial Port 1 Configuration



Item	Option	Description
UART 232 422 485	UART 232 [Default] , UART 422,	Change the Serial Port as RS232/422/485.
	UART 485	

3.6.2.8.2 Serial Port 2 Configuration

Aptio Setup Util Advanced	ity – Copyright (C) 2012 Ame	erican Megatrends, Inc.
Serial Port 2 Configuration		Change the Serial Port as
Device Settings	I0:2F8;IRQ:3	K523274227485
UART 232 422 485		
		<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 2.15.12	36. Copyright (C) 2012 Ameri	ican Megatrends, Inc.

ltem	Option	Description
	UART 232 [Default] ,	
UART 232 422 485	UART 422,	Change the Serial Port as RS232/422/485.
	UART 485	

Serial Port 3 Configuration Device Settings IO:3E8;IRQ:11 ++: Select Screen 14: Select Item Enter: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Aptio Setup Ut. Advanced	ility – Copyright (C) 2012 Ameri	can Megatrends, Inc.
Device Settings IO:3E8;IRQ:11 ++: Select Screen 14: Select Item Enter: Select +-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Serial Port 3 Configuration		
++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit	Device Settings	IO:3E8;IRQ:11	
			++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

3.6.2.8.3 Serial Port 3 Configuration

3.6.2.8.4 Serial Port 4 Configuration

Aptio Setup Advanced	Utility – Copyright (C) 2012 America	n Megatrends, Inc.
Serial Port 4 Configuration	n	
Serial Port 4 Configuration Device Settings	n IO:2E8;IRQ:11	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.1	5.1236. Copyright (C) 2012 American	Megatrends, Inc.

3.6.2.8.5 Serial Port 5 Configuration

Aptio Setup L Advanced	Jtility – Copyright (C) 2012 America	n Megatrends, Inc.
Serial Port 5 Configuration	1	
Device Settings	IO:210;IRQ:11	
		++: 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	5.1236. Copyright (C) 2012 American	Megatrends, Inc.

3.6.2.8.6 Serial Port 6 Configuration

Aptio Setup Util Advanced	ity – Copyright (C) 2012 America	n Megatrends, Inc.
Serial Port 6 Configuration		
Serial Port 6 Configuration Device Settings	I0:218; IRQ:11	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.12	36. Copyright (C) 2012 American	Megatrends, Inc.

3.6.3 Chipset



3.6.3.1 North Bridge



3.6.3.1.1 Video Configuration

Aptio Setup Utility - Chipset	Copyright (C) 2012 American	Megatrends, Inc.
Video Configuration		Select Primary Graphics Adapter
		indep con 1
Select Display Device Control Active LVDS(DP-Ch7511) CH7511 EDID Panel Option Brightness Control Method LVDS Back Light PWM LVDS Back Light PWM Frequency	[Auto] [Enabled] [1024×768 24/1] [BIOS] [100%] [200]	
		++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.15.1236. Co	pyright (C) 2012 American M	egatrends, Inc.

Item	Option	Description
Primary Graphics Adapter	PCIE & PCI-> UMA [Default] UMA I-> PCIE & PCI	Select Primary Graphics Adapter.
Select Display Device Control	Auto [Default] MANUAL	Select Display Device Control
Active LVDS(DP-Ch7511)	Enabled [Default] , Disabled	Active Internal LVDS(eDP->Ch7511-to-LVDS)
CH7511 EDID Panel Option	1024x768 24/1 [Default] , 1280x1024 24/2 1920x1080 24/2	Port1-EDP to LVDS(Chrotel 7511) Panel EDID Option
Brightness Control Method	BIOS [Default] , BR Button VR	LVDS Brightness Control Method 1. BIOS 2.BR Button 3.VR
LVDS Back Light PWM	00% 25% 50% 75% 100% [Default] ,	Select LVDS back Light PWM duty.
LVDS Back Light PWM Frequency	200 [Default] , 300 400 500 700 1k 2k 3k 5k 10k 20k	Select LVDS back Light PWM Frequency

3.6.3.1.2 PCIE Configuration

Aptio Setup Chipset	Utility – Copyright⊣	(C) 2012 American	Megatrends, Inc.
PCIE Configuration			PCIE Target Link Speed
PCIE Target Link Speed PCIE Root Port PCIE PEG Control PCIE PEO Control(MPCIe) PCIE PEI Control(LAN1) PCIE PE2 Control(LAN2) PCIE PE3 Control(M.2)	(Auto) [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]		++: 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 Conuright (C) 2012 American Mu	evatrends Inc

ltem	Option	Description
PCIE Target Link Speed	Auto [Default]	PCIE Target Link Speed
PCIE Root Port	Disabled	PCIE Root Port
	Enabled [Default] ,	
DOIE DEC Control	Disabled	DOLE DEC Control
PCIE PEG Control	Enabled [Default] ,	
PCIE PE0 Control(mPCle)	Disabled	
	Enabled [Default] ,	PCIE PEU Control(mPCIe)
	Disabled	
PCIE PET Control(LANT)	Enabled [Default] ,	
DOIE DE2 Control(1 AN2)	Disabled	
PCIE PE2 Control(LAN2)	Enabled [Default] ,	PCIE PEZ CONTOI(LANZ)
	Disabled	
PCIE PES Control(M.2)	Enabled [Default] ,	

3.6.3.2 South Bridge

	Aptio Setup U1 Chipset	ility – Copyr:	ight (C) 20	012 American	Megatrends, Inc.
South Bridge					USB Configuration Parameters
▶ USB Configura ▶ HDAC Configur	tion ation				
					<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. Copyrig	ht (C) 2012	2 American Me	gatrends, Inc.

3.6.3.2.1 USB Configuration

A	otio Setup Ut. Chipset	ility – Copyright	(C) 2012 American	Megatrends,	Inc.
USB Configuratio	on			USB Mode Sel	ect
USB Mode Select		[Mode 2]		Mode 1:EHCI Mode 2:EHCI Mode 3:xHCI (USB2.0 devi controlled b P7"P9 contro ++: Select 3 fl: Select 1 Enter: Selec +/-: Change F1: General F2: Previous F3: Optimize F4: Save & E ESC: Exit	only mode and xHCI mode only mode and xHCI mode ce on P1°P6 y EHCI and on illed by xHCI) creen item it Opt. Help : Values d Defaults xit
	Version 2.15.	1236, Conuright (C) 2012 American M	egatrends. Tr	IC .

Item	Option	Description
USB Mode Select	Mode 1 Mode 2 [Default] Mode 3 Mode 4	USB Mode Select Mode 1:EHCI only mode Mode 2:EHCI and xHCI mode Mode 3:xHCI only mode Mode 4:EHCI and xHCI mode (USB2.0 device on P1~P6 controlled by EHCI and on P7~P9 controlled by xHCI)

Aptio Setup Ut Chipset	ility – Copyright (C) 2012 A	merican Megatrends, Inc.
HDAC Configuration		HDAC Control
DnChip HDAC Device AMP Gain Setting	(Enab Led) (19db)	
		++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

3.6.3.2.2 HDAC Configuration

Item	Option	Description
OnChin HDAC Device	Disabled	HDAC Control
Onomp nDAG Device	Enabled [Default] ,	
AMP Gain Setting	11db	
	14db	Salast AND Cain dh
	19db [Default] ,	Select AIVIP Gain db
	25db	

3.6.4 Boot

Aptio Setup Util Main Advanced Chipset Boot	ity – Copyright (C) 2012 American Security Save & Exit	n Megatrends, Inc.
Boot Configuration Setup Prompt Timeout Bootup NumLock State	5 [0n]	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting
Quiet Boot	[Disabled]	werting.
Boot Option Priorities		
Boot Option #1	[UEFI: JetFlashTrans]	
Boot Option #2	[UEFI: JetFlashTrans]	
 CSM16 Parameters CSM 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 2.15.12	36. Copyright (C) 2012 American M	legatrends, Inc.

BMX-T526

Item	Option	Description
Setup Prompt Timeout	5	Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
Bootup NumLock State	On [Default] Off	Select the Keyboard NumLock state
Qulet Boot	Disabled [Default] Enabled	Enables or disables Quiet Boot Option
Boot Option #1	Set the system boot order.	
CSM parameters	OpROM execution, boot options filter, etc.	

3.6.4.1 CSM16 Parameters

Aptio Setup Uti <mark>Boo</mark>	lity – Copyright (C) 2012 Ameri t	ican Megatrends, Inc.
CSM16 Parameters		UPON REQUEST - GA20 can be disabled using BIOS services
CSM16 Module Version	07.70	ALWAYS – do not allow disabling GA20; this option is
GateA20 Active		useful when any RT code is
Option ROM Messages	[Force BIOS]	executed above 1MB.
		++: Select Screen
		14: Select Item
		+/-: Change Opt.
		F1: General Help
		F3: Optimized Defaults
		F4: Save & Exit
		ESU: EXIT
Version 2.15.1	236. Copyright (C) 2012 America	an Megatrends, Inc.

Item	Option	Description
		UPON REQUEST- GA20 can be disabled using
Gate A20 Active	Upon Request[Default]	BIOS services. ALWAYS - do not allow disbling
GaleA20 Active	Always	GA20; this option is useful when any RT code is
		executed above 1MB.
Option BOM Massages	Force BIOS[Default]	Sat display made for Option POM
Option ROM Messages	Keep Current	Set display mode for Option ROM
		BIOS reaction on INT19 trapping by Option ROM:
INT10 Trop Booponoo	Immediate[Default]	IMMEDIATE - execute the trap right away;
IN 119 Trap Response	Postponed	POSTPONED - execute the trap during legacy
		boot.

3.6.4.2 CSM Parameters

Aptio Setup Utility – (<mark>Boot</mark>	Copyright (C) 2012 American	Megatrends, Inc.
CSM Parameters		This option controls if CSM will be launched
Launch CSM Boot option filter Launch PXE OpROM policy Launch Storage OpROM policy Launch Video OpROM policy Other PCI device ROM priority	[Enabled] [UEFI and Legacy] [Do not launch] [Legacy only] [Legacy only] [UEFI OpROM]	++: Select Screen
		<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>

Item	Option	Description
Launch CSM	Disabled	This option controls if CSM will be launched
	Enabled [Default]	·····
	UEFI and Legacy[Default]	This option controls what devices system can
Boot option filter	Legacy only	host to
	UEFI only	
Launch PXE OpROM	Do not launch [Default]	Controls the execution of UEFI and Legacy
policy	Legacy only	PXE OPROM
Launch Storage OpROM	UEFI only	Controls the execution of UEFI and Legacy
policy	Legacy only [Default]	Storage OpROM
Launch Video OpROM	UEFI only	Controls the execution of UEFI and Legacy
policy	Legacy only [Default]	Video OpROM
Other DCI device DOM		For PCI devices other than Network, Mass
priority DEFI OPROM[Default] Legacy OpROM		storage or Video defines which OpROM to
	launch	

3.6.5 Security



Administrator Password

Set setup Administrator Password

User Password

Set User Password

3.6.5.1 Secure Boot menu

Aptio Setup Ut.	ility – Copyright (C) 2012 An Security	merican Megatrends, Inc.
		Secure Boot flow control.
Platform Mode	Setup	Secure Boot can be enabled
Secure Boot	Disabled	only when 1.Platform Key(PK)
Oracina Brat Oratural		is enrolled and Platform is
Secure Boot Control	[Euspied]	2 CSM function is disabled in
Secure Boot Mode	[Standard]	Setup
 Image Execution Policy Key Management 		
		++: Select Screen
		T4: Select Item
		+/-: Change Ont
		F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		LOG. EXIL
Version 2.15.1	1236. Copunight (C) 2012 Amer	rican Megatrends. Inc.

Item	Option	Description
		Secure Boot flow control. Secure Boot can be
	Disabled	enabled only when 1.Platform Key(PK) is enrolled
Secure Boot Control	Enabled[Default],	and Platform is operating in User mode and 2
		CSM function is disabled in Setup
		Secure Boot mode selector. 'Custom' Mode
Secure Boot Mode	Standard[Default]	allows for more flexibility changing Image
	Custom	Execution policy and Secure Boot Key
		management.

3.6.6 Save and exit

Aptio Setup Utility – Copyright (C) 2012 American Main Advanced Chipset Boot Security <mark>Save & Exit</mark>	Megatrends, Inc.
Save Changes and Reset Discard Changes and Reset	Reset the system after saving the changes.
Restore Defaults	
Boot Override JetFlashTranscend 8GB 1100 UEFI: JetFlashTranscend 8GB 1100 UEFI: JetFlashTranscend 8GB 1100 Launch EFI Shell from filesystem 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 American M	egatrends, Inc.



BMX-T526

3.6.6.1 Save Changes and Reset

Reset the system after saving the changes.

3.6.6.2 Discard Changes and Reset

Reset system setup without saving any changes.

3.6.6.3 Restore Defaults

Restore/Load Default values for all the setup options.

3.6.6.4 Launch EFI Shell from filesystem device

Attempts to Launch EFI Shell application (Shell.efi) from one of the available filesystem devices.

