Intel® Pentium® and Celeron® N3000 Series SoC Processors Qseven Module

User's Manual

1st Ed – 05 November 2015

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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 EQM-BSW Qseven Module
- 1 x Driver/Utility DVD-ROM



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

1.3 Document Amendment History

Revision	Date	Ву	Comment
1 st	November 2015	Avalue	Initial Release

1.4 Manual Objectives

This manual describes in details Avalue Technology EQM-BSW QSeven Module.

We have tried to include as much information as possible but we have not duplicated information that is provided in the standard IBM Technical References, unless it proved to be necessary to aid in the understanding of this board.

We strongly recommend that you study this manual carefully before attempting to set up EQM-BSW QSeven Module or change the standard configurations. Whilst all the necessary information is available in this manual we would recommend that unless you are confident, you contact your supplier for guidance.

Please be aware that it is possible to create configurations within the CMOS RAM that make booting impossible. If this should happen, clear the CMOS settings, (see the description of the Jumper Settings for details).

If you have any suggestions or find any errors regarding this manual and want to inform us of these, please contact our Customer Service department with the relevant details.

1.5 System Specifications

System						
CPU	Intel® Atom™ Braswell Platform					
BIOS	Insyde 64M -bit SPI BIOS					
System Chipset	Braswell SoC integrated					
I/O Chipset	EC: NPCCE388NA0DX					
System Memory	Onboard DDR3L 1600, up to 4GB					
eMMC	Optional On board 4GB up to 64GB					
Watchdog Timer	Reset: 1 sec.~65535 sec. and 1 sec. step					
	Monitoring system temperature, voltage. Auto trotting control when CPU					
U/W Status Monitor	CPU temperature monitoring					
n/w Status wonitor	V-Core Voltages monitoring					
	5V Voltage monitoring					
	3 PCIe x 1 Supported*					
Expansion	1 PCIex1/1 PCIe x 2 Supported					
	*When user needs PCIe#1, 2, 3, make sure PCIe#2 is activated.					
I/O						
MIO	2 x SATA ports to baseboard					
USB	5 x USB 2.0 and 1 x USB3.0 to baseboard					
SD	SDIO Support					
eMMC	eMMC 64GB optional					
	LPC, SMBus, I2C (Chip)					
Others	UART					
	CAN Bus					
External I/O	Osavan spac 2.0 connector for expansions					
Connector						
Display						
Chipset	Braswell SoC integrated Graphics					
Posolution	HDMI :2560 x 1600 @60 Hz					
	LVDS mode: 1920 x 1080 @60Hz					
Multiple Display	HDMI (or DP) + LVDS					
LCD Interface	Dual channel 24-bit LVDS					
Audio						
Audio interface	HD audio I/F					
Ethernet						
LAN Chip	RealTek RTL8119					
Ethernet Interface	10/100/1000 Base-Tx Compatible					
Mechanical &						

Environmental			
Power Requirement	+5V		
ACPI	Single Power ATX Support S0, S3, S4, S5 ACPI 3.0 Compliant		
Power Type	Qseven Power Spec		
Operating Temp.	Standard: 0 to 60 deg C		
Storage Temp.	-20°C to 85°C		
Operating Humidity	0% ~ 90% Relative Humidity, Non-condensing		
Size (L x W)	70mm x 70mm		
Weight	0.041 lbs (0.03 Kg)		
OS Support	Windows 8.1 / Windows 7 / Linux Yocto		

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Note: Specifications are subject to change without notice.

1.6 Architecture Overview—Block Diagram

The following block diagram shows the architecture and main components of EQM-BSW QSeven Module.



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2. Hardware Configuration

2.1 Product Overview



2.2 Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip. To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.



The jumper settings are schematically depicted in this manual as follows:

0 0		1 2 3 O
Open	Closed	Closed 2-3

A pair of needle-nose pliers may be helpful when working with jumpers.

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any changes.

The following tables list the function of each of the board's jumpers and connectors.

Connectors						
Label	Function	Note				
GF1	QSeven connector					

2.3 Setting Connectors

2.3.1 QSeven connector (GF1)



*Default

Signal	PIN	PIN	Signal
GND	1	2	GND
GBE_MDI3-	3	4	GBE_MDI2-
GBE_MDI3+	5	6	GBE_MDI2+
GBE_LINK100#	7	8	GBE_LINK1000#
GBE_MDI1-	9	10	GBE_MDI0-
GBE_MDI1+	11	12	GBE_MDI0+
GBE_LINK#	13	14	GBE_ACT#
GBE_CTREF	15	16	SUS_S5#
WAKE#	17	18	SUS_S3#
SUS_STAT#	19	20	PWRBTN#
NC	21	22	NC
GND	23	24	GND
GND	25	26	PWGIN
BATLOW#	27	28	RSTBTN#
SATA0_TX+	29	30	SATA1_TX+
SATA0_TX-	31	32	SATA1_TX-
SATA_ACT#	33	34	GND
SATA0_RX+	35	36	SATA1_RX+
SATA0_RX-	37	38	SATA1_RX-

Signal	PIN	PIN	Signal
GND	39	40	GND
BIOS_DISABLE#	41	42	SDIO_CLK#
SDIO_CD#	43	44	NC
SDIO_CMD	45	46	SDIO_WP
SDIO_PWR#	47	48	SDIO_DAT1
SDIO_DAT0	49	50	SDIO_DAT3
SDIO_DAT2	51	52	NC
NC	53	54	NC
NC	55	56	RSVD56
GND	57	58	GND
HDA_SYNC	59	60	SMB_CLK
HDA_RST#	61	62	SMB_DAT
HDA_BCLK	63	64	SMB_ALERT#
HDA_SDI	65	66	I2C_CLK
HDA_SDO	67	68	I2C_DAT
THRM#	69	70	WDTRIG#
THRMTRIP#	71	72	WDOUT
GND	73	74	GND
SS_USB_TXN	75	76	SS_USB_RXN
SS_USB_TXP	77	78	SS_USB_RXP
USB_6_7_OC#	79	80	USB_4_5_OC#
NC	81	82	USB_P4-
NC	83	84	USB_P4+
USB_2_3_OC#	85	86	USB_0_1_OC#
USB_P3-	87	88	USB_P2-
USB_P3+	89	90	USB_P2+
NC	91	92	NC
USB_P1-	93	94	USB_P0-
USB_P1+	95	96	USB_P0+
GND	97	98	GND
LVDS_A0+	99	100	LVDS_B0+
LVDS_A0-	101	102	LVDS_B0-
LVDS_A1+	103	104	LVDS_B1+

Signal	PIN	PIN	Signal	Signal	PIN	PIN	Signal
LVDS_A1-	105	106	LVDS_B1-	UART_TXD	171	172	UART_RTS#
LVDS_A2+	107	108	LVDS_B2+	PCIE_TXP_3	173	174	PCIE_RXP_3
LVDS_A2-	109	110	LVDS_B2-	PCIE_TXN_3	175	176	PCIE_RXN_3
LVDS_PPEN	111	112	LVDS_BLEN	UART_RXD	177	178	UART_CTS#
LVDS_A3+	113	114	LVDS_B3+	PCIE_TXP_2	179	180	PCIE_RXP_2
LVDS_A3-	115	116	LVDS_B3-	PCIE_TXN_2	181	182	PCIE_RXN_2
GND	117	118	GND	GND	183	184	GND
LVDS_A_CLK+	119	120	LVDS_B_CLK+	LPC_AD0	185	186	LPC_AD1
LVDS_A_CLK-	121	122	LVDS_B_CLK-	LPC_AD2	187	188	LPC_AD3
LVDS_BLT_CTRL	123	124	NC	LPC_CLK	189	190	LPC_FRAME#
LVDS_DID_DAT	125	126	NC	SERIRQ	191	192	LPC_LDRQ#
LVDS_DID_CLK	127	128	NC	VCC_RTC	193	194	SPKR
CAN_TX	129	130	CAN_RX	FAN_TACHOIN	195	196	FAN_PWMOUT
DP_L3+_TMDS_CLK+	131	132	NC	GND	197	198	GND
DP_L3+_TMDS_CLK-	133	134	NC	SPI_MOSI	199	200	SPI_CS0#
GND	135	136	GND	SPI_MISO	201	202	RSVD202
DP_L1+_TMDS_L1+	137	138	DP_AUXP	SPI_CLK	203	204	NC
DP_L1TMDS_L1-	139	140	DP_AUXN	VCC_5V_SB1	205	206	VCC_5V_SB2
GND	141	142	GND	NC	207	208	NC
DP_L2+_TMDS_L0+	143	144	NC	NC	209	210	NC
DP_L2TMDS_L0-	145	146	NC	VCC1	211	212	VCC2
GND	147	148	GND	VCC3	213	214	VCC4
DP_L0+_TMDS_L2+	149	150	HDMI_DDC_SDA	VCC5	215	216	VCC6
DP_L0TMDS_L2-	151	152	HDMI_DDC_SCL	VCC7	217	218	VCC8
DP_HDMI_HPD#	153	154	DP_HPD#	VCC9	219	220	VCC10
PCIE_CLK_REF+	155	156	PCIE_WAKE#	VCC11	221	222	VCC12
PCIE_CLK_REF-	157	158	PCIE_RST#	VCC13	223	224	VCC14
GND	159	160	GND	VCC15	225	226	VCC16
NC	161	162	NC	VCC17	227	228	VCC18
NC	163	164	NC	VCC19	229	230	VCC20
GND	165	166	GND				
PCIE_TXP_1	167	168	PCIE_RXP_1				
PCIE_TXN_1	169	170	PCIE_RXN_1				



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

Insyde 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 <F2> immediately after switching the system on, or

By pressing the <F2> key when the following message appears briefly at the left-top of the screen during the POST (Power On Self Test).

Press <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.

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 to previous item
\downarrow	Move to next item
\leftarrow	Move to the item in the left hand
\rightarrow	Move to the item in the right hand
Esc key	Main Menu Quit and not save changes into NVRAM Status Page Setup Menu and Option Page Setup Menu Exit current page and return to Main Menu
+ key	Increase the numeric value or make changes
- key	Decrease the numeric value or make changes
F1 key	General help, only for Status Page Setup Menu and Option Page Setup Menu
F9 key	Optimized defaults
F10 key	Save & Exit Setup

• 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 the F1 key again.

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 Insyde 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 InsydeH2O 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.

	InsydeH20 Setup Utility	Rev. 5.0
Main Advanced Security	Power Boot Exit	
System Time System Date	[16:19:35] [11/10/2015]	This is the help for the hour, minute, second field. Valid range is from 0 to 23.0 to 59.
Processor Type System Hemory Speed Total Hemory System BIOS Version GOP Version EC Version TXE FW Version Hard Disk	Intel(R) Celeron(R) CPU N3 1.60GHz 1600 HHz 2048 HB V1.00 8.0.1028 01.00 2.0.0.2073 [Not installed]	range is from 0 to 23, 0 to 59, 150 e 0 to 59. INCREASE/REDUCE : +/
Fl Help 🛛 🕄 Select	Item F5/F6 Change Values	F9 Setup Defaults
Esc Exit ↔ Select I	Menu 🛛 Enter Select 🕨 SubMen	u F10 Save and Exit

3.6.1.1 System Time

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

3.6.1.2 System Date

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



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.

	InsydeH20 Setup Utility	Rev. 5.0
Main Advanced Security Pow	ver Boot Exit	
 ▶SATA Configuration ▶PCI Express Configuration ▶RTC S5 Wake ▶Hardware Monitor ▶SI0 NUVOTON5104D ▶Brightness Control ▶Devices function control ₩atch Dog 	<Ωiisahled>	Select the SATA controller and hard disk drive type installed in your system
Panel Type Select	<1024x768 24/1>	
F1 Help 11 Select Item	F5/F6 Change Values	F9 Setup Defaults
ESC EXIT 🚽 Select Menu	i 🛛 Enter Select 🕨 Subhenu	FIU Save and Exit

ltem	Options	Description
	Disabled[Default],	
	30 sec	
	40 sec	
Watah Dag	50 sec	Salaat Watah Dag itama
Watch Dog	1 min	Select Walchbog hems.
	2 min	
	10 min	
	30 min	
	1024x768 24/1[Default]	
	800x600 18/1	
	1024x768 18/1	
	1366x768 18/1	
	1024x600 18/1	
	1280x800 18/1	
	1920x1200 24/2	
Panal Type Solect	640x480 18/1	Salact Panal Type for display
Fallel Type Select	800x480 18/1	Select Faller Type for display.
	1920x1080 18/2	
	1280x1024 24/2	
	1440x900 18/2	
	1600x1200 24/2	
	1366x768 24/1	
	1920x1080 24/2	
	1680x1050 24/2	

3.6.2.1 SATA Configuration

Aduanced		InsydeH20 Setup I	Jtility	Rev. 5.0
Advanced				
SATA Controller SATA Interface	Speed	<enab led=""> <<mark>Gen3></mark></enab>	DISABLED: Disab Controller. ENA SATA Controller	les SATA BLED: Enables
F1 Help Esc Exit	1↓ Select It ↔ Select Me	em F5/F6 Change Va nu Enter Select⊧	alues F9 Setup SubMenu F10 Save a	Defaults nd Exit

ltem	Options	Description	
SATA Controllor	Disabled,	SATA Controller.	
SATA Controller	Enabled[Default]		
	Gen1		
SATA Interface Speed	Gen2	Select SATA Interface Speed.	
	Gen3[Default]		

3.6.2.2 PCI Express Configuration

Advanced	InsydeH20 Setup Utility	Rev. 5.0
PCI Express Configuration		Control the PCI Express Root
PCI Express Root Port 1	<enable></enable>	another PCIE port will be
ASPM		disabled.
PCIe Speed	<auto></auto>	
PCI Express Root Port 2	<enable></enable>	
ASPM	<disabled></disabled>	
L1 Substates	<l1.1 &="" l1.2=""></l1.1>	
PC1e Speed	<auto></auto>	
PCI Express Root Port 3	<enable></enable>	
ASPM	<d i="" led="" sab=""></d>	
L1 Substates	<l1.1 &="" l1.2=""></l1.1>	
PCIe Speed	<auto></auto>	
PCI Express Root Port 4	<enable></enable>	
ASPM	<disabled></disabled>	
L1 Substates	<l1.1 &="" l1.2=""></l1.1>	
PCIe Speed	<auto></auto>	
Fl Help 11 Select Ite	m F5/F6 Change Values	F9 Setup Defaults
Esc Exit ↔ Select Men	u 🛛 Enter Select 🕨 SubMenu	FIO Save and Exit

ltem	Options	Description
PCI Express Root Port 1/2/3/4	Disabled Enabled [Default] ,	Control the PCI Express Root Port. If disable PCIE port 1, another PCIE port will be disabled.
ASPM	Disabled [Default] L0s L1 L0sL1	PCI Express Active State Power Management settings.
L1 Substates	Disabled [Default] L1.1 & L1.2 L1.1 L1.2	PCI Express L1 Substates settings.
PCle Speed	Auto [Default] Gen 1 Gen 2	Configure PCIe Speed.

3.6.2.3 RTC S5 Wake

Advanced	InsydeH20 Setup Utility	Rev. 5.0
RTC S5 Wake		Select wake up day of week
Wake up day of week Time	<d ed="" i="" l="" sab=""> [00 : 00 : 00]</d>	
F1 Help 14 Select It Esc Exit ↔ Select Me	em F5/F6 Change Values nu Enter Select ▶ SubNenu	F9 Setup Defaults F10 Save and Exit

ltem	Options	Description
Wake up day of week	Monday-Friday Monday-Saturday Every Day Disabled [Default]	Select wake up day of week.
Time	[00:00:00] [Default]	This is the help for the hour, minute second field. Valid range is from 0 to 23, 0 to 59, 0 to 59. INCREASE/REDUCE : +/

3.6.2.4 Hardware Monitor

	InsydeH20 Setup Util	lity Rev. 5.0
Advanced		
Hardware Monitor		
Voltage VCORE VINL (V)	0.880 V 5.124 V	
Temperature CPU (°C/°F)	46°C/114°F	
Fan Speed Sys Fan	0 RPH	
F1 Help î↓ Sel Esc Exit ↔ Sel	ect Item F5/F6 Change Value ect Menu Enter Select ⊨ Sub	es F9 Setup Defaults Menu F10 Save and Exit

3.6.2.5 SIO NUVOTON5104D

Advanced	InsydeHź	20 Setup Utility	Rev. 5.0
STO NUVOTON388N			
Serial Port 1 Base 1/0 Address Interrupt	<enab le=""> <2E0> <1RQ6></enab>		
F1 Help ↑↓ Esc Exit ↔	Select Item F5/F6 Select Menu Enter	Change Values Select ► SubMenu	F9 Setup Defaults F10 Save and Exit

3.6.2.6 Brightness Control

Advanced	InsydeH20 Setup Utility	Rev. 5.0
Brightness Control		Backlight brightness percentage
Backlight brightness LVDS Back Light PWM Frequency	<100%> <200>	
F1 Help	F5/F6 Change Values Enter Select ► SubMenu	F9 Setup Defaults F10 Save and Exit

ltem	Options	Description
	0%	
	25%	
Backlight brightness	50%	Backlight brightness percentage.
	75%	
	100%[Default]	
	200[Default]	
	300	
	400	
	500	
LVDS Back Light DWM	700	
Evenuency	1k	LVDS Back Light PWM Frequency.
Frequency	2k	
	Зk	
	5k	
	10k	
	20k	

3.6.2.7 Device function Control

Advanced		InsydeH20 Setup) Utility		Rev.	5.0
Devices function	n control			LVDS function		
LVDS function	<ena< th=""><th>bled></th><th></th><th></th><th></th><th></th></ena<>	bled>				
F1 Help Esc Exit	t↓ Select Item ↔ Select Menu	F5/F6 Change Enter Select	Values ► SubMenu	F9 Setup Defaul F10 Save and Exi	ts t	

Item Options		Description	
LVDS function	Enabled [Default]	Enable or Disable LVDS panel display	
	Disabled	function.	

3.6.3 Security

Main Advanced <mark>Security</mark>	InsydeH20 Setup Util Power Boot Exit	ity Rev. 5.0
Current TPM Device TPM State Supervisor Password User Password Set Supervisor Password	<not detected=""> Not Installed Not Installed Not Installed</not>	Install or Change the password and the length of password must be greater than one character.
Set User Password		
F1 Help t↓ Select Esc Exit ↔ Select	: Item F5/F6 Change Value: : Menu Enter Select 🕨 Subl	s F9 Setup Defaults Ienu F10 Save and Exit

ltem	Description
Cat Currentian Descurad	Set Supervisor Password. Install or Change the password and the length of
Set Supervisor Password	password must be greater than on character

3.6.4 Power

	InsydeH20	Setup Utility	Rev. 5.0
Main Advanced Secur	rity Power Boot Exit		
			- (D (E)
		ErP Functio	n (Deep 55)
Err Function	<disabled></disabled>		
AC LOSS RESMUE	<uisabled></uisabled>		
Turbo Mode	<visabled></visabled>		
Advanced CPU Control			
C-States	<enabled></enabled>		
1 Hein 11 Sei	lect Item F5/E6_C	hange ValuesE9_Se	tun Defaults
sc Exit ↔ Sel	lect Menu Enter So	elect ► SubMenu F10 Sa	ve and Exit

ltem	Option	Description
Ern Eurotion	Disabled[Default]	FrB Function (Doon SE)
Erp Function	Enabled	ETP Function (Deep 55).
	Disabled[Default]	
AC LOSS Resume	Enabled	AC Loss Resume setting.
Turke Mede	Disabled[Default]	Enable processor Turbo Mode(requires
Turbo Mode	Enabled	EMTTM enabled too).
C States	Disabled	Enable processor idle power saving
C-States	Enabled[Default]	states (C-States).

3.6.5 Boot

		InsydeH20 Setup Utility	Rev. 5.0
Main Advanc	ed Security Power	Boot Exit	
Boot Type Quick Boot Quiet Boot Network Stack PXE Boot capa Add Boot Opti	bility ons	<uef1 boot="" type=""> <disabled> <disabled> <disabled> <disabled> <auto></auto></disabled></disabled></disabled></disabled></uef1>	Select boot type to Dual type, Legacy type or UEFI type
▶EF I			
F1 Help	1↓ Select Item	F5/F6 Change Values	F9 Setup Defaults

		InsydeH20 Setup Utility	Rev. 5.0
		loot	
EFI			
EFI USB Devi Internal EFI	ce (KingstonDataTravele Shell	or 3.0)	
F1 Help For Evit	11 Select Item	F5/F6 Change Values	F9 Setup Defaults F10 Save and Evit

ltem	Option	Description
Boot Type	Legacy Boot Type	Select boot type to Legacy type or UEFI
воог туре	UEFI Boot Type[Default]	type.
	Dischlad Default	Allows InsydeH20 to skip certain tests
Quick Boot		while booting. This will decrease the
	Enabled	time needed to boot the system.
Quiet Boot	Disabled[Default]	Disables or enables booting in Text
	Enabled	Mode.
	Dischlad Default	Network Stack Support: Windows 8
Network Stack	Disabled[Default]	BitLocker Unlock UEFI IPv4/ IPv6 PXE
	Enabled	Legacy PXE OPROM.
Add Boot Ontions	First	Position in Boot Order for Shell, Network
Add Boot Options	Auto[Default]	and Removables.

3.6.6 Exit

Main Advanced Security	InsydeH20 Power Boot <mark>Exit</mark>	Setup Utility	Rev. 5.0
Exit Saving Changes Save Change Without Exit Exit Discarding Changes Load Optimal Defaults Load Custom Defaults Save Custom Defaults Discard Changes		Exit system changes.	setup and save your
F1 Help	Item F5/F6 Ch Menu Enter Se	nange Values F9 Set elect ► SubMenu F10 Sav	tup Defaults ve and Exit



3.6.6.1 Exit Saving Changes

Exit system setup and save your changers.

3.6.6.2 Save Change Without Exit

Save your changes and without exiting system.

3.6.6.3 Exit Discarding Changes

Exit system setup and without saving your changes.

3.6.6.4 Load Optimal Defaults

Load Optimal Defaults.

3.6.6.5 Load Custom Defaults

Load Custom Defaults.

3.6.6.6 Save Custom Defaults

Save Custom Defaults.

3.6.6.7 Discard Changes

Discard Changes.



4.1 Install Chipset Driver

Insert the Supporting DVD-ROM to DVD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to **\Driver_Chipset\Intel\EQM-BSW**.



Note: The installation procedures and screen shots in this section are based on Windows 8.1 operation system. If the warning message appears while the installation process, click Continue to go on.



Readme File	Information			-	-
*********	***********	***********	***********	*********	~
Product	: Intel(R) Chi	pset Device S	Software		1000
Version	: 10.0 PCH/Chinset: M	ived Platform	2		
Date: 2	015-03-12	TREU FIALION	1.		
*********	*********	*******	***********	******	
NOTE					
NOTE:	For the list	of supported	d chinsets, r	lease refer	
	to the Relea	se Notes			

CONTENT	S OF THIS DOCU	MENT			
*********	***********	***********	***********	*********	
This docum	ent contains t	he following	sections:		
. Overvi	ew				
. System	Requirements				
 Conten 	ts of the Dist	ribution Pack	cage		
3A. Pu	blic and NDA C	onfigurations	; 		\sim
					£

Step 3. Click Install.



Step 4. Click Finish to complete setup.





Step 2. Click Accept.

4.2 Install TXE Driver

Insert the Supporting DVD-ROM to DVD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to **\Utility\EQM-BSW_TXE**.



Note: The installation procedures and screen shots in this section are based on Windows 8.1 operation system. If the warning message appears while the installation process, click Continue to go on.

Setup			×
Intel® Trusted Execution Engine Welcome		(inte	D
You are about to install the following product:			
It is strongly recommended that you exit all programs Click Next to continue, or click Cancel to exit the setup	before continuing. program.		
Intel Corporation	< Back	Next >	Cancel

Step1. Click Next to start installation.

Intel® Trusted Execution Engine			1
License Agreement		intel	
INTEL SOFTWARE LICENSE AGREEMENT (Alpha / Be	ta, Organizational Use	e)	^
IMPORTANT - READ BEFORE COPYING, INSTALLING	GOR USING.		
Do not use or load this software and any associated until you have carefully read the following terms and Software, you agree to the terms of this Agreement install or use the Software.	l materials (collectively d conditions. By loadin t. If you do not wish t	, the "Software") g or using the o so agree, do not	
The Software contains pre-release "alpha" or "beta" and which Intel Corporation ("Intel") may substantia of the Software. Intel can provide no assurance the available a "final" version of this Software.	' code, which may not illy modify in producing at it will ever produce	be fully functional any "final" versior or make generally	ĉ
LICENSE. This Software is licensed for use only in co Use of the Software in conjunction with non-Intel co hereunder. You may copy the Software onto your o organization's use, and you may make a reasonable	onjunction with Intel co omponent products is r organization's compute number of back-up co	mponent products tot licensed rs for your pies of the	. ,
I accept the terms in the License Agreement.			
Intel Corporation	Rade	Next	ncel

Step 2. Click Next.



Step 3. Click Next to continue installation.

Se	etup		
Intel® Trusted Execution Engine Completion		(inte	D
You have successfully installed the follo Intel® Trusted Execution Engine	wing product:		
Click <u>here</u> to open log file location.			

Step 4. Click Finish to complete setup.

4.3 Install VGA Driver

Insert the Supporting DVD-ROM to DVD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to **\VGA\EQM-BSW**.



Note: The installation procedures and screen shots in this section are based on Windows 8.1 operation system.



Step 1. Click Next to continue installation.



Step 2.

Click **Yes** to accept license agreement.



Step 3. Click Next.

ntel® Graphics Driver	\sim		
etun Progress	(intel)		
etup Progress			
Please wait while the following setup operations are p	erformed:		
Leteuring regious y resy: much (SUP) Wake United USUI Deleting File: C1 (ProgramData Microsoft (Windows (St Deleting Registry Key; HLM (SOPTWARE Untel (SFX)) Deleting Registry Key; HLM (SOPTWARE Untel (SFX))	art Menu (Programs (Intel (I) the (R) HD Gray art Menu (Programs (Intel (R) HD Graphics art Menu (Programs (Intel (R) Graphics art Menu (Programs (Intel (Intel (R) Graphic aphics Control Panel. Ink art Menu (Programs (Intel (Intel (R) Iris(TM) 4) Graphics Control Panel. Ink Internal (AudioFix		
A VENUE AND A	122		
Click Next to continue.	¥		
Click Next to continue.	· · · · · · · · · · · · · · · · · · ·		

Step 4. Click Next.



Step 5. Click Finish to complete setup.

EQM-BSW 4.4 Install Audio Driver (For Realtek ALC233)

Insert the Supporting CD-ROM to CD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to \Driver_Audio\Realtek\ALC233\EQM-BSW_Audio.



Note: The installation procedures and screen shots in this section are based on Windows 8.1 operation system.



Step 1. Click Next to continue setup.



Step 2. Click Finish to complete the setup.

4.5 Install Ethernet Driver

Insert the Supporting DVD-ROM to DVD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to

\Driver_Gigabit\Realtek\RTL8119\EQM-BSW_L AN.



Note: The installation procedures and screen shots in this section are based on Windows 8.1 operation system.





Step 3. Click **Finish** to complete the setup.

Step 1. Click Next.



Step 2. Click Install to proceed.

4.6 Install Serial IO Driver

Insert the Supporting CD-ROM to CD-ROM drive, and it should show the index page of Avalue's products automatically. If not, locate Index.htm and choose the product from the menu left, or link to **\Utility\EQM-BSW_Serial IO**.

Note: The installation procedures and screen shots in this section are based on Windows 8.1 operation system.



Step 1. Click Next to continue setup.



Step 2. Click Finish to complete the setup.

User's Manual

5. Mechanical Drawing





Unit: mm

