TECHNICAL MANUAL

Of

Intel Bay Trail Series CPU

Based Mini-ITX M/B

NO. G03-IMB1900-F

Revision: 7.0

Release date: January 26, 2024

Environmental Protection Announcement

Do not dispose this electronic device into the trash while discarding. To minimize pollution and ensure environment protection of mother earth, please recycle.

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Environmental Safety Instruction

- Avoid the dusty, humidity and temperature extremes. Do not place the product in any area where it may become wet.

- 0 to 60 centigrade is the suitable temperature. (The figure comes from the request of the main chipset)

- Generally speaking, dramatic changes in temperature may lead to contact malfunction and crackles due to constant thermal expansion and contraction from the welding spots' that connect components and PCB. Computer should go through an adaptive phase before it boots when it is moved from a cold environment to a warmer one to avoid condensation phenomenon. These water drops attached on PCB or the surface of the components can bring about phenomena as minor as computer instability resulted from corrosion and oxidation from components and PCB or as major as short circuit that can burn the components. Suggest starting the computer until the temperature goes up.

- The increasing temperature of the capacitor may decrease the life of computer. Using the close case may decrease the life of other device because the higher temperature in the inner of the case.

- Attention to the heat sink when you over-clocking. The higher temperature may decrease the life of the device and burned the capacitor.

USER'S NOTICE

Manual Revision Information

Reversion	Revision History	Date
7.0	Seventh Edition	January 26, 2024

Item Checklist

- ☑ Motherboard
- ☑ Cable(s)
- ☑ I/O Back panel shield

Chapter 1
Introduction

1-1 Product Features

- Onboard Intel® Celeron Series Processor, with low power consumption and high performance
- Support DirectX 11 3D Graphics Acceleration
- Support DDR3L SO-DIMM 1333 MHz up to 8GB
- Integrated HD Audio CODEC
- PCI Express Gigabit LAN
- Support 1 * SATAII (3Gb/s) Device
- Support M.2 connector (2242/2260)
- Support Mini-PCIE connector
- Support USB 3.0 data transport demand
- Support Amplifier function(3W)
- Support Thunder Protection Function
- Support Power Onboard(12V)
- 2 Phase CPU Power Support
- Support TPM2.0 (option)

1-2 Specification

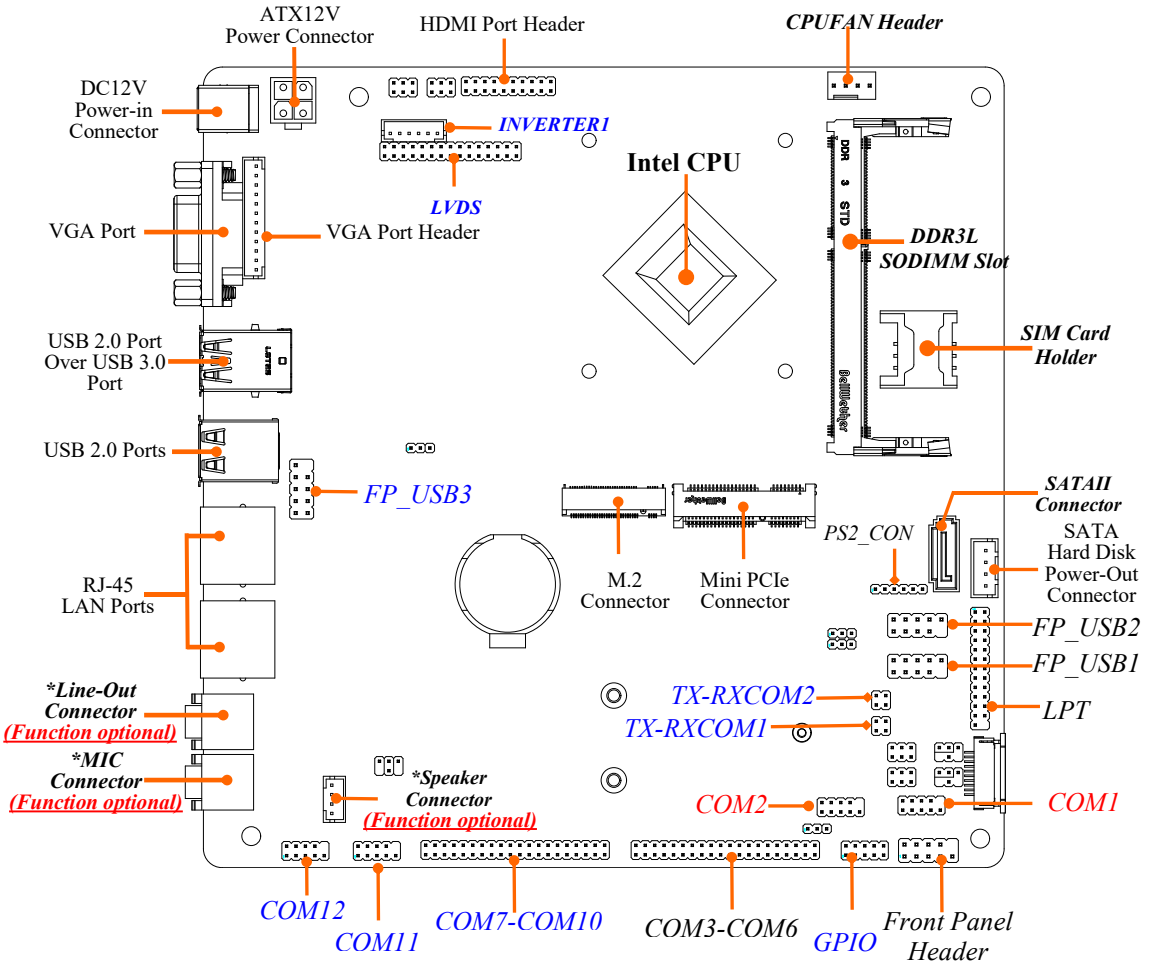
Spec	Description
CPU	● Intel® Celeron series CPU
Memory	● 1* DDR3L SO-DIMM slot ● Support DDR3L 800/1066/1333 MHz SDRAM, expandable to 8GB
Expansion Slot	● 1* Full-size Mini-PCIE slot
Storage	● 1* SATAII 3Gb/s port
LAN Chip	● Integrated with Realtek PCI-E Gigabit LAN chip ● Support two Fast Ethernet LAN function of providing 10/100/1000Mbps Ethernet data transfer rate * ***JIMB(A)-1900-6C series*** *are integrated with ONE LAN chip*
***Audio Chip (Optional)**	● Realtek HD Audio Codec integrated, with Audio driver and utility included (*Optional for ***JIMB-1900-2L/ JIMB-1900-6C*** *ONLY*)
BIOS	● AMI 64MB Flash ROM
Rear I/O	● 1* USB 3.0 port ● 3* USB 2.0 port **(*5*USB2.0 for JIMB-1900-6C/ JIMBA-1900-6C*)** ● 2* RJ-45 LAN port ***(1*RJ-45 for JIMB-1900-6C/ JIMBA-1900-6C)*** ● 1* Line-out port *(*No Function for* ***JIMBA-1900-2L/ JIMBA-1900-6C*****)** ● 1* MIC*(*No Function for* ***JIMBA-1900-2L/ JIMBA-1900-6C*****)** ● 1* VGA port ● 1* 12V DC in
Internal I/O	● 3* USB 2.0 headers for 6 USB 2.0 ports or **2* USB 2.0 headers for 4 USB 2.0 ports for *JIMB-1900-6C/JIMBA-1900-6C* series** ● 1* CPU / Chassis Fan connectors ● 12* COM headers(**Only *for JIMB-1900-2L/ JIMBA-1900-2L***, COM1/COM2 supports RS422/RS485/RS232 and TTL) ● 6* COM headers **(Only *for JIMB-1900-6C/ JIMBA-1900-6C*)** ● 1* Parallel header ● 1* PS2/KB header ● 1* 4-pin ATX12V internal power connector

	• 1* 4-pin SATA Power connector • 1* 15-pin VGA header • 1* 20-pin HDMI header • 1* eDP header **(Only *for* *JIMB-1900-6C/ JIMBA-1900-6C*)** • 1* 24-bit Dual Channel LVDS header **(Only *for* *JIMB-1900-2L/ JIMBA-1900-2L*)** • 1* GPIO header **(Only *for* *JIMB-1900-2L/ JIMBA-1900-2L*)** • 1* Mini PCI-e connector • 1* M.2 Connector(2242/2260) • 1* SATA Connector • 1* 3W Amplifier Speaker header(**No Function for* ***JIMBA-1900-2L/ JIMBA-1900-6C***) • 1* Front panel header • 1* SIM Card socket • Support TPM2.0 (option *for* ***JIMB-1900-2LT***)

***Note*: *JIMBA* series (*JIMBA-1900-2L/ JIMBA-1900-6C*) are the cost down version for *JIMB* series (*JIMB-1900-2L/ JIMB-1900-6C*). *JIMBA* series are removed of Audio Codec, as a result, rear panel *Line-out, MIC* port and internal 3W *speaker* header are function-less; other functions are mostly the same.**

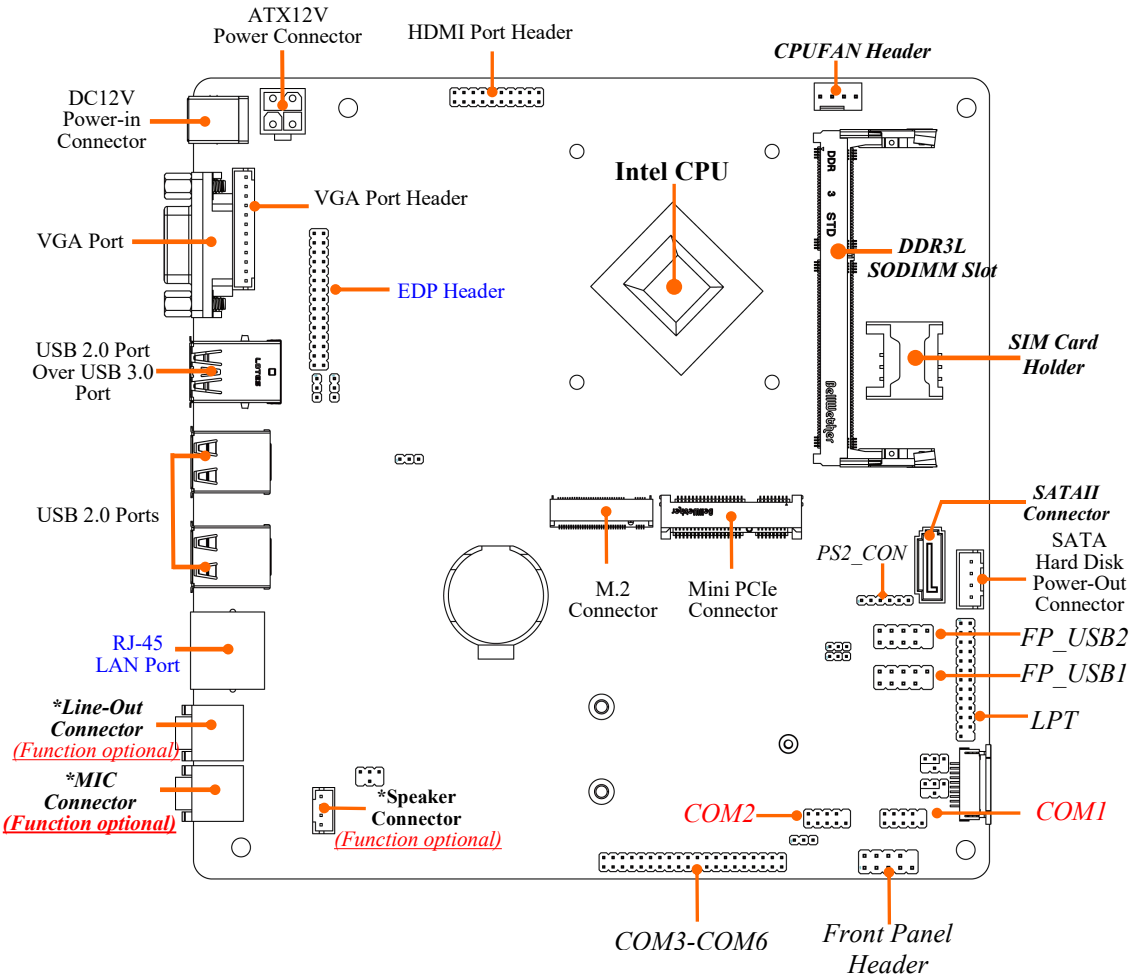
1-3 Product Diagram

For JIMB (A)-1900-2L Series:



***Note:** **Rear panel Line-out, MIC Port** and internal **3W Speaker header** have no actual function for **JIMBA-I1900-2L** series for lack of Audio Codec. For **JIMB-I1900-2L** series these IO can function normally, other functions being the same.*

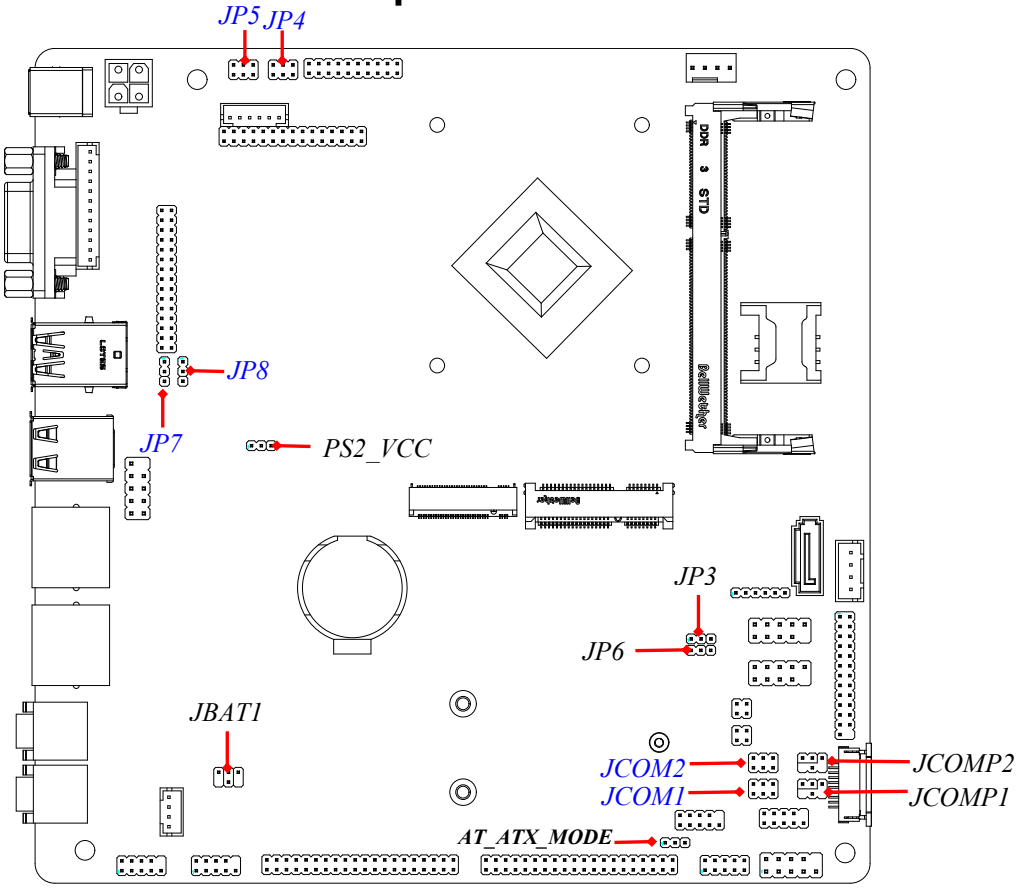
For JIMB (A)-1900-6C Series:



***Note:** **Rear panel Line-out, MIC Port** and internal **3W Speaker header** have no actual function for **JIMBA-I1900-6C** series for lack of Audio Codec. For **JIMB-I1900-6C** series these IO can function normally, other functions being the same.*

Chapter 2
Hardware Installation

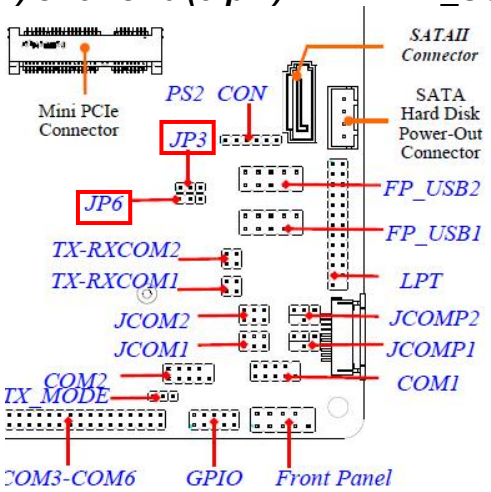
2-1 Location of Internal Jumpers



Note:** the above diagram is for illustration purpose only; please refer to the actual product you purchased for real specification.**JP4 & JP5, JCOM1 & JCOM2** are only for **JIMB-1900-2L & JIMBA-1900-2L series; JP7 & JP8** are only for **JIMB-1900-6C/ JIMBA-1900-6C series.

2-2 Internal Jumper Settings

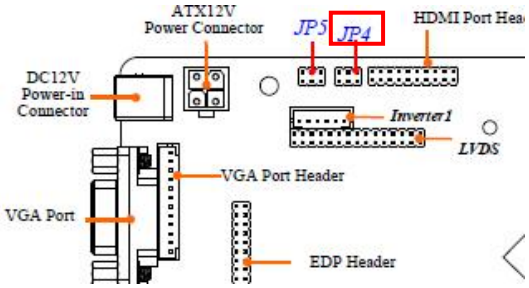
(1) JP3 / JP6 (3-pin): MPE / FP_USB2 Select



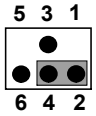
1-2 Close: MPE (Default);

2-3 Close: FP_USB2.

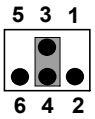
(2) JP4 (4-pin): LVDS VCC 3.3V/5V/12V Select (Only for JIMB-1900-2L/JIMBA-1900-2L)



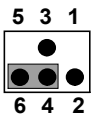
JP4→LVDS VCC



2-4 Closed: VCC=3.3V;

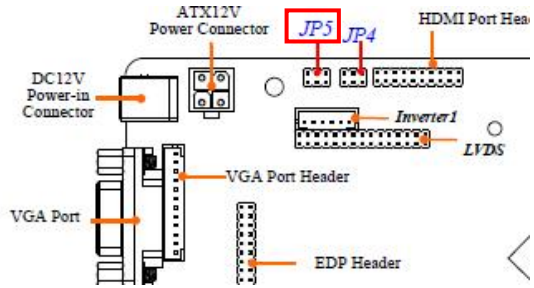


3-4 Closed: VCC= 5V;

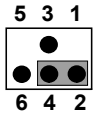


4-6 Closed: VCC= 12V.

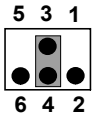
(3) JP5 (4-pin): INVERTER Back Light VCC 3.3V/5V /12V Select (Only for JIMB-1900-2L/ JIMBA-1900-2L)



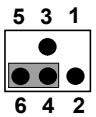
JP5→Inverter Back Light



2-4 Closed:
VCC=3.3V;

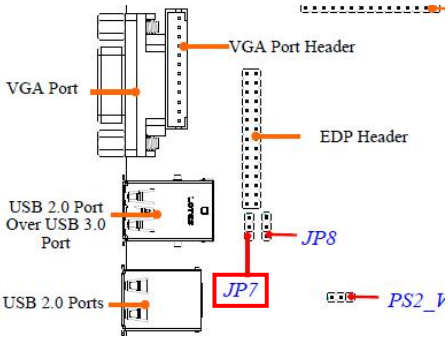


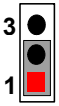
3-4 Closed:
VCC= 5V;



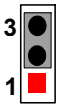
4-6 Closed:
VCC= 12V.

(4) JP7 (3-pin): EDP BKLT_PW 5V/12V Select (Only for JIMB-1900-6C/ JIMBA-1900-6C)



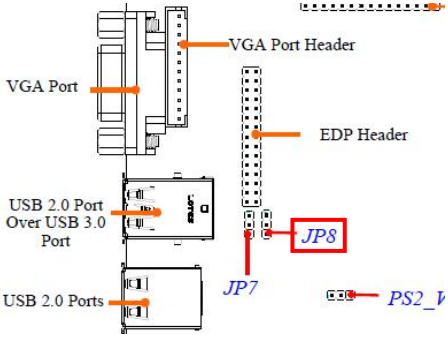


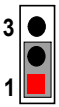
1-2 Close: 5V (Default);



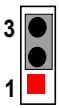
2-3 Close: 12V.

(5) JP8(3-pin): EDP_VDD 5V/3.3V Select (Only for JIMB-1900-6C/ JIMBA-1900-6C)



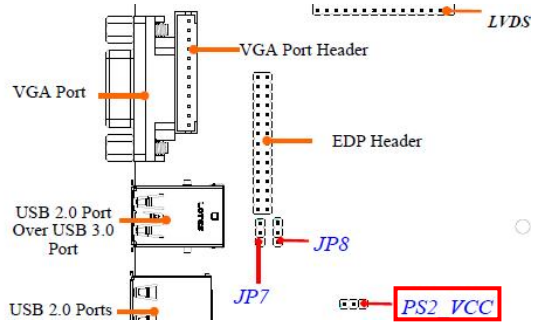


1-2 Close: 5V (Default);



2-3 Close: 3.3V.

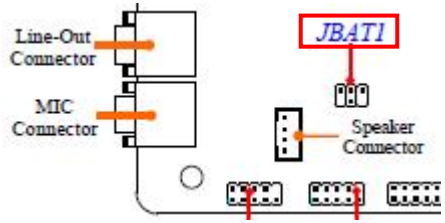
(6) PS2_VCC (3-pin): PS2_VCC 5V/5VSB Select



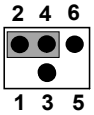
1-2 Close: 5V (Default);

2-3 Close: 5VSB.

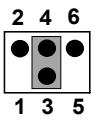
(7) JBAT1 (4-pin): Clear CMOS Setting



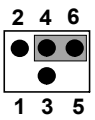
JBAT1→Clear CMOS Setting



2-4 Closed:
Clear CMOS;



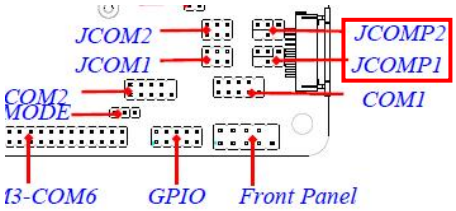
3-4 Closed:
Default;

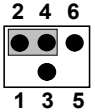


4-6 Closed:
RTC_RST.

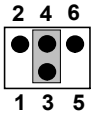
(8) JCOMP1/JCOMP2 (4-pin): COM1/COM2 Port Function Select

JCOMP1/JCOMP2→RS232/12V/5V Setting

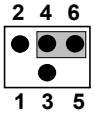




2-4 Closed:
RS232 (Default);

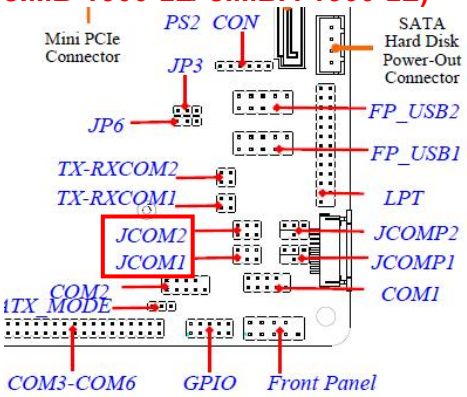


3-4 Closed:
12V;



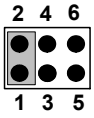
4-6 Closed:
5V.

(9) JCOM1/JCOM2 (6-pin): RS232/RS422/RS485 Function Select (Only for JIMB-1900-2L/ JIMBA-1900-2L)

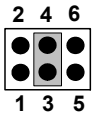


JCOM1→COM1 Header RS232/RS422/RS485 Select

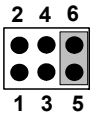
JCOM2→COM2 Header RS232/RS422/RS485 Select



1-2 Closed: RS232 (Default);

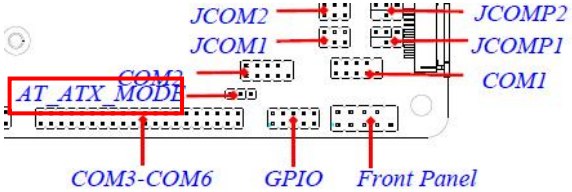


3-4 Closed: RS485;



5-6 Closed: RS422.

(10) AT_ATX_MODE (3-pin): AT/ATX Mode Select



1-2 Close: ATX_Mode (Default);

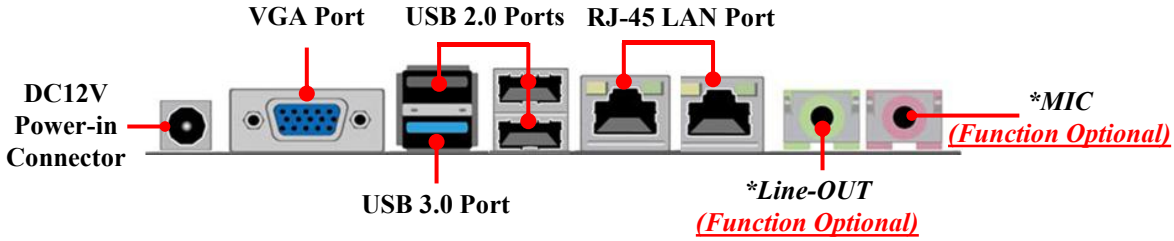
2-3 Close: AT_Mode.

***ATX Mode Selected**: Press power button to power on after power input ready;*
***AT Mode Selected:** Directly power on as power input ready.*

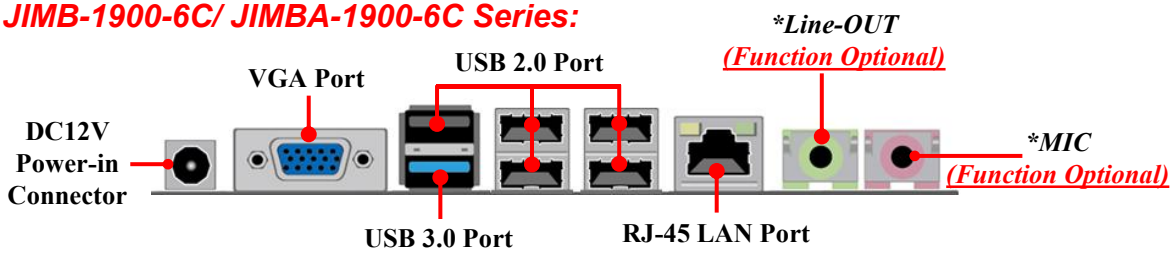
2-2-1 Connectors

(1) Rear I/O Connectors

For JIMB-1900-2L/ JIMBA-1900-2L Series:



For JIMB-1900-6C/ JIMBA-1900-6C Series:

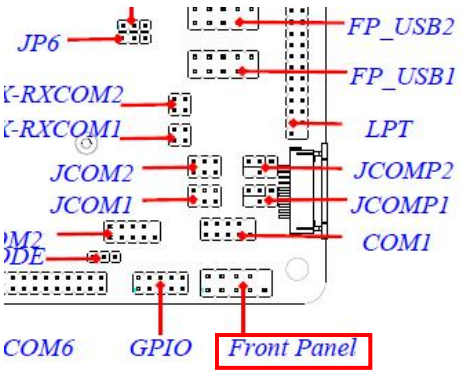


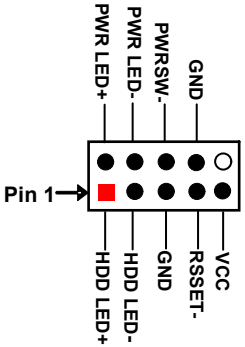
Icon	Name	Function
	**DC-in 12V Power Connector**	For user to connect compatible power adapter to provide power supply for the system.
	**VGA Port**	To connect display device that support VGA specification.
	**USB 2.0 Port**	To connect USB keyboard, mouse or other devices compatible with USB specification.
	**USB 3.0 Port**	To connect USB keyboard, mouse or other devices compatible with USB specification. USB 3.0 ports supports up to 5Gbps data transfer rate.

	**RJ-45 LAN Port**	This connector is standard RJ-45 LAN jack for Network connection.
	***Line-Out Connector*** ***(*Function Optional)***	*Audio Line-out port For user to connect external speaker, earphones, etc to transfer system audio output.* *(No function for **JIMBA** series due to lack of audio Codec)*
	***MIC Connector*** ***(*Function Optional)***	*For user to connect external speaker, earphones, etc to transfer system audio output.* *(No function for **JIMBA** series due to lack of audio Codec)*

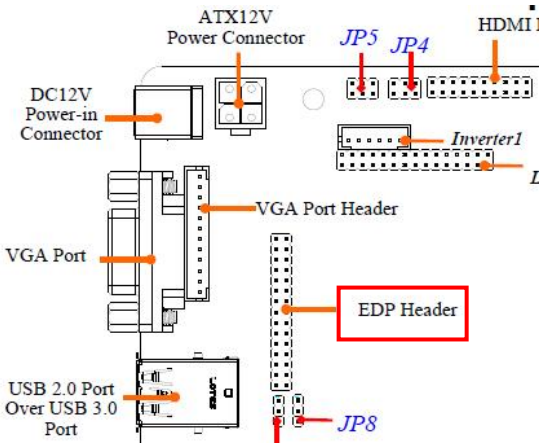
2-2-2 Headers

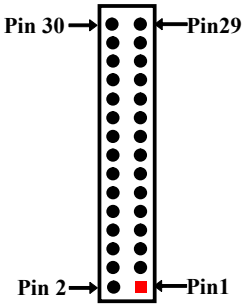
(1) JW_FP1 (9-pin): Front Panel Header





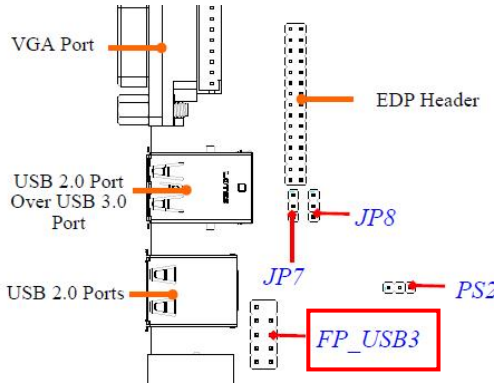
(2) EDP (30-pin): eDP Header (Only *for JIMB-1900-6C/JIMBA-1900-6C*)

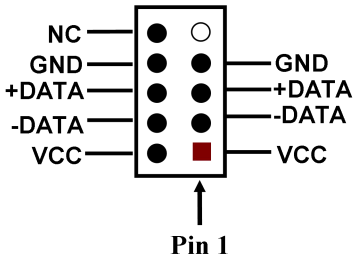




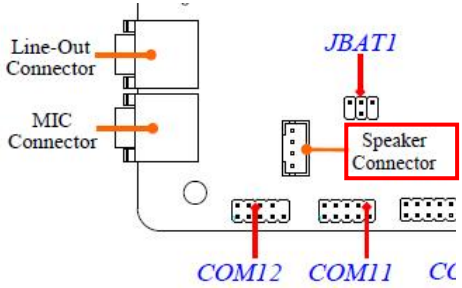
Pin NO.	Pin Define	Pin NO.	Pin Define
Pin 30	EDP_LANE-0	Pin 29	EDP_LANE+0
Pin 28	EDP_LANE-1	Pin 27	EDP_LANE+1
Pin 26	GND	Pin 25	GND
Pin 24	EDP_LANE-2	Pin 23	EDP_LANE+2
Pin 22	EDP_LANE-3	Pin 21	EDP_LANE+3
Pin 20	GND	Pin 19	GND
Pin 18	EDP_AUXN_C	Pin 17	EDP_HPD
Pin 16	EDP_AUXP_C	Pin 15	L_BKLT_EN
Pin 14	GND	Pin 13	GND
Pin 12	L_BKLT_PWM	Pin 11	EDP_VDD
Pin 10	NC	Pin 9	EDP_VDD
Pin 8	NC	Pin 7	GND
Pin 6	GND	Pin 5	GND
Pin 4	GND	Pin 3	BKLT_PW
Pin 2	BKLT_PW	Pin 1	BKLT_PW

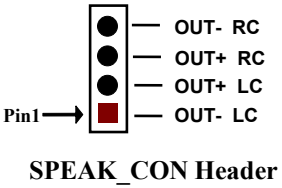
(3) FP_USB3 (9-pin): USB Port Header (Only *for JIMB-1900-2L/ JIMBA-1900-2L*)





(4) SPEAK_CON (4-pin): Speaker Header



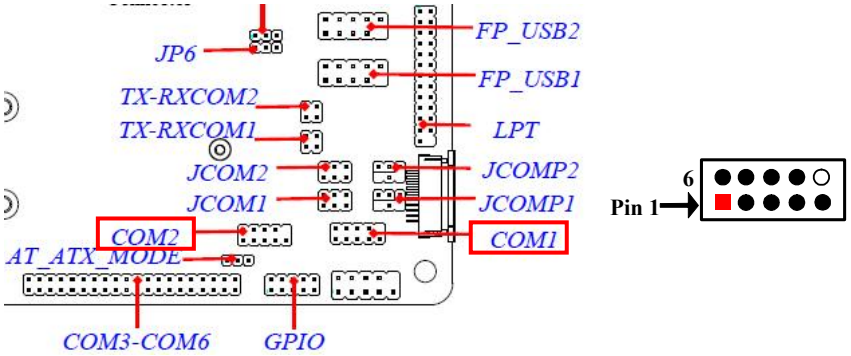


SPEAK_CON Header

Note:* ***SPEAK_CON* *is function-less for* ***JIMBA*** *(****JIMBA-1900-2L/ JIMBA-1900-6C****) series for lack of Audio Codec. For* ***JIMB*** *(****JIMB-1900-2L/ JIMB-1900-6C****) series* ***SPEAK_CON*** *can function normally.*

(5) COM1/2 (9-pin): Serial Port Headers

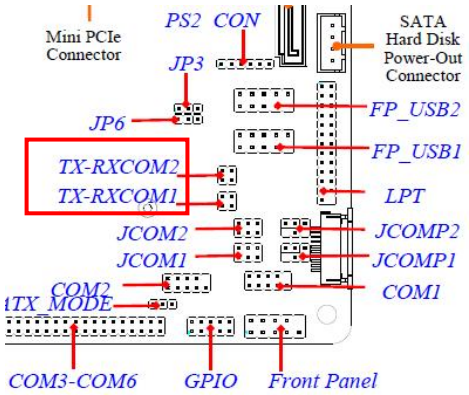
For JIMB-1900-2L/ JIMBA-1900-2L Sereis:RS232/422/485 Serial Port Header;
For JIMB-1900-6C/ JIMBA-1900-6C Sereis:RS232 Serial Port Header.

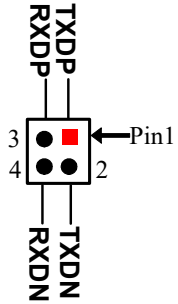


Pin NO.	RS232	*RS422	*RS485
Pin 1	DCD	TX-	DATA-
Pin 2	**RXD**	TX+	DATA+
Pin 3	**TXD**	RX+	NC
Pin 4	DTR	RX-	NC
Pin 5	GND	GND	GND
Pin 6	DSR	NC	NC
Pin 7	RTS	NC	NC
Pin 8	CTS	NC	NC
Pin 9	RI	NC	NC

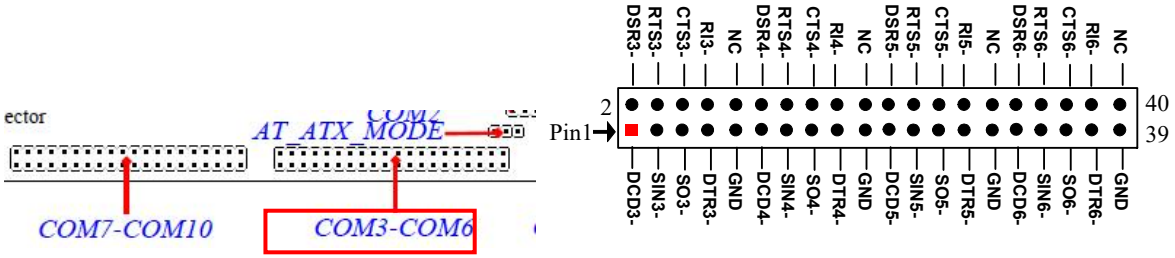
***Notice:** For **JIMB-1900-2L/ JIMBA-1900-2L** **Sereis,** User also needs to go to BIOS '**Transmission Mode Select**' for COM1/COM2 to choose from RS232/422/485 mode before connecting compatible COM cable for RS232, RS422 or RS 485 function**(refer to Page 28).*

(6) TX-RXCOM1/TX-RXCOM2 (4-pin block): TX/RX Select(Only *for JIMB-1900-2L/ JIMBA-1900-2L*)

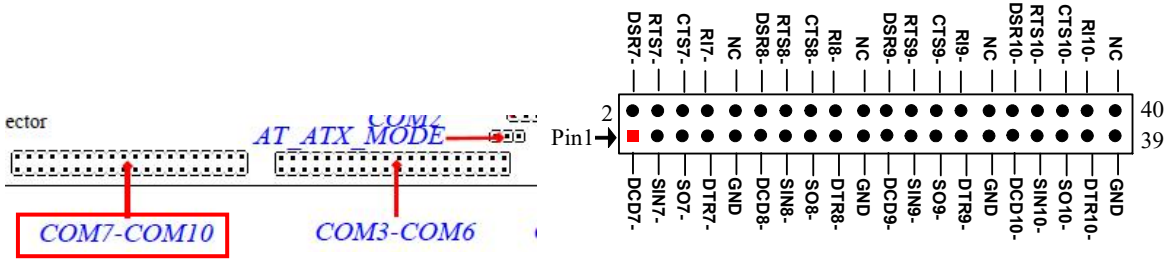




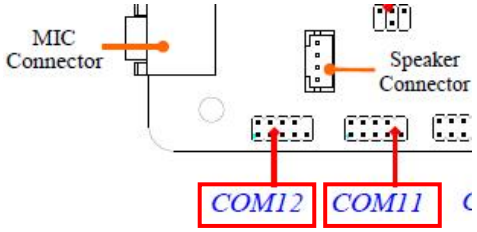
(7) COM3-COM6 (40-Pin): Serial Port Headers

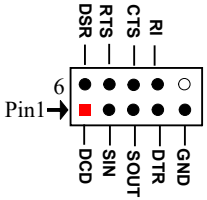


(8) COM7-COM10 (40-Pin): Serial Port Headers (Only *for JIMB-1900-2L/ JIMBA-1900-2L*)

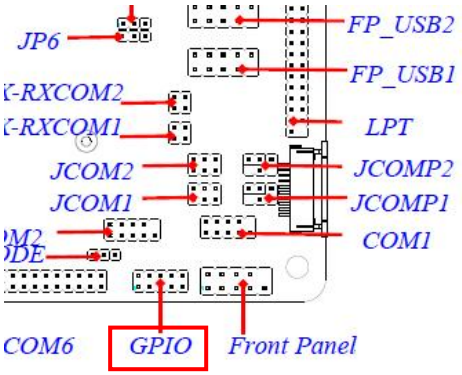


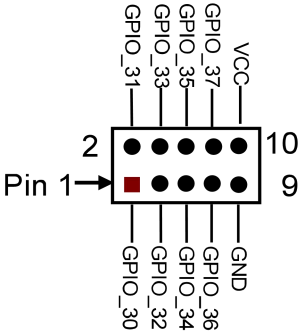
(9) COM11/COM12 (9-Pin): Serial Port Headers (Only *for JIMB-1900-2L/ JIMBA-1900-2L*)



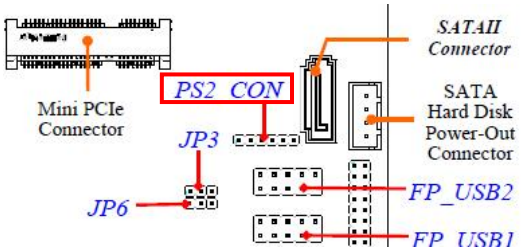


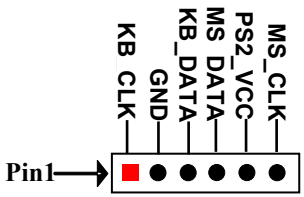
(10) GPIO (10-pin): GPIO Header (Only *for JIMB-1900-2L/ JIMBA-1900-2L*)



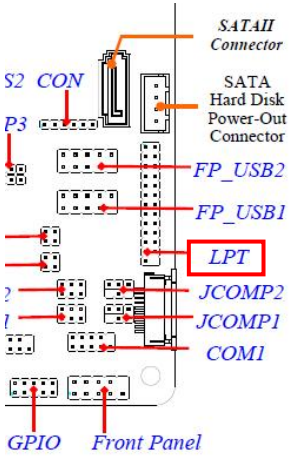


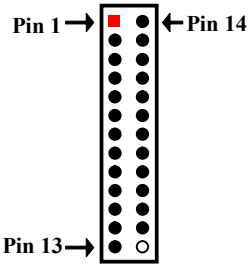
(11) PS2_CON (6-pin): PS/2 Keyboard & Mouse Header





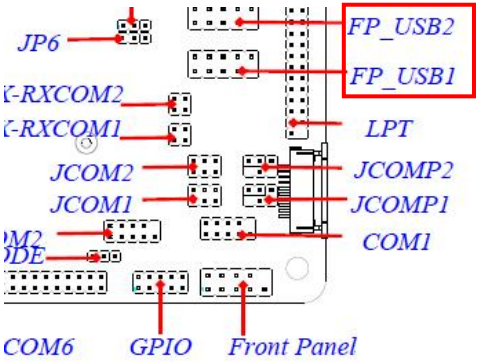
(12) LPT1 (25-pin): Parallel Port Header

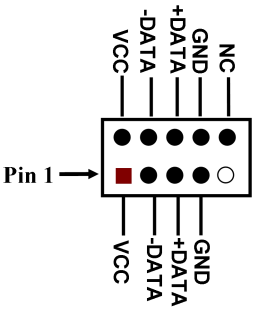




Pin NO.	Pin Definition	Pin NO.	Pin Definition
Pin 1	STB-	Pin 14	AFD-
Pin 2	PRD0	Pin 15	ERR-
Pin 3	PRD1	Pin 16	INIT-
Pin 4	PRD2	Pin 17	SLIN-
Pin 5	PRD3	Pin 18	GND
Pin 6	PRD4	Pin 19	GND
Pin 7	PRD5	Pin 20	GND
Pin 8	PRD6	Pin 21	GND
Pin 9	PRD7	Pin 22	GND
Pin 10	ACK-	Pin 23	GND
Pin 11	BUSY	Pin 24	GND
Pin 12	PE	Pin 25	GND
Pin 13	SLCT		

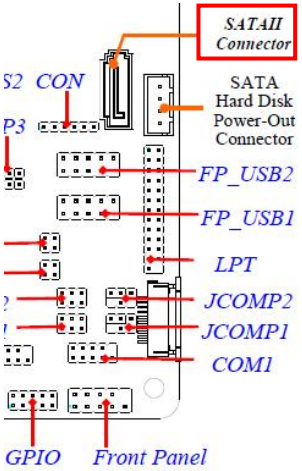
(13) FP_USB1/ FP_USB2 (9-pin): USB 2.0 Port Header



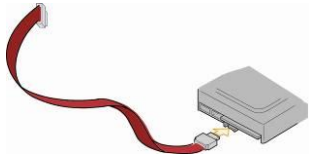


(14) SATA2 (7-pin block):SATAII Port connector

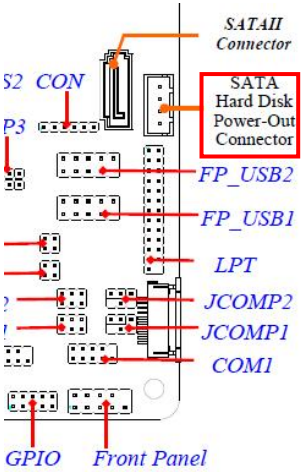
This connector is a high-speed SATAII port that supports 3 GB/s transfer rate.

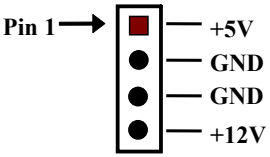


Pin No.	Definition
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

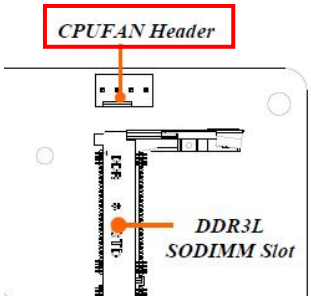


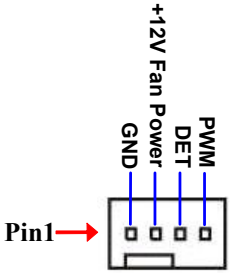
(15) SATAPW2 (4-pin): SATA Hard Disk Power-out Connector



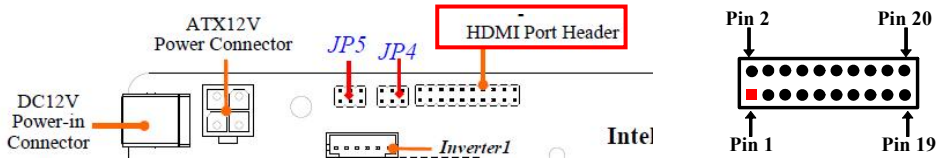


(16) CPUFAN (4-pin): CPUFAN Header



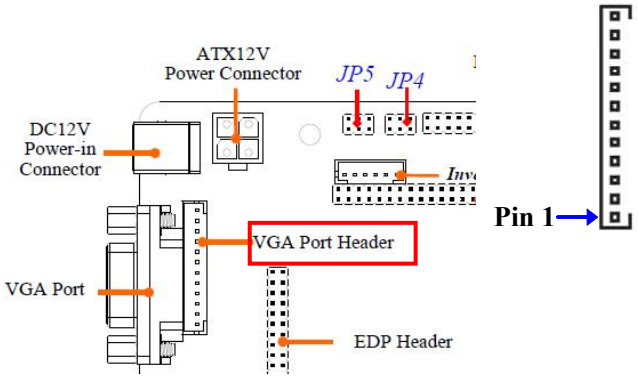


(17) HDMI (20-pin): HDMI Header



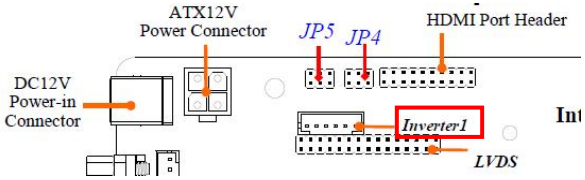
Pin NO.	Pin Definition	Pin NO.	Pin Definition
Pin 1	GND	Pin 2	HDMI_TXP2
Pin 3	HDMI_TXP1	Pin 4	HDMI_TXN2
Pin 5	HDMI_TXN1	Pin 6	GND
Pin 7	GND	Pin 8	HDMI_TXP0
Pin 9	HDMI_TXCP	Pin 10	HDMI_TXN0
Pin 11	HDMI_TXCN	Pin 12	GND
Pin 13	NC	Pin 14	NC
Pin 15	HDMI_SDA	Pin 16	HDMI_SCL
Pin 17	HDMI_+5V	Pin 18	GND
Pin 19	GND	Pin 20	HDMI_HPD

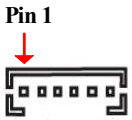
(18) VGA1 (12-pin): VGA Header



Pin No.	Definition
1	VCC5(Reserved)
2	VGA_VSYNC
3	VGA_HSYNC
4	GND_RED
5	RED_VGA
6	GND_GRN
7	GRN_VGA
8	GND_BLUE
9	BLUE_VGA
10	GND
11	DDC_DATA
12	DDC_CLK

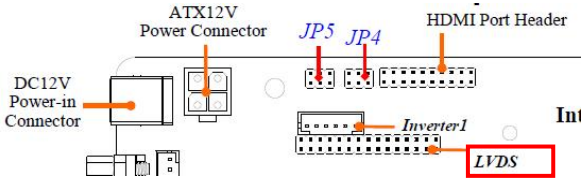
(19) INVERTER1 (6-Pin): LVDS1 Inverter Header (Only *for JIMB-1900-2L/ JIMBA-1900-2L*)

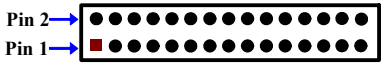




Pin No.	Definition
1	BKLT_PWR1
2	BKLT_PWR2
3	BKLT_EN
4	BKLT_PWM
5	GND1
6	GND2

(20) LVDS (30-Pin): 24-bit dual channel LVDS Header (Only *for JIMB-1900-2L/ JIMBA-1900-2L*)





Pin NO.	Pin Define	Pin NO.	Pin Define
Pin 1	LVDS_VCC	Pin 2	LVDS_VCC
Pin 3	LVDS_VCC	Pin 4	GND
Pin 5	GND	Pin 6	GND
Pin 7	LVDSA_DATAN0	Pin 8	LVDSA_DATAP0
Pin 9	LVDSA_DATAN1	Pin 10	LVDSA_DATAP1
Pin 11	LVDSA_DATAN2	Pin 12	LVDSA_DATAP2
Pin 13	GND	Pin 14	GND
Pin 15	LVDSA_CLKN	Pin 16	LVDSA_CLKP
Pin 17	LVDSA_DATAN3	Pin 18	LVDSA_DATAP3
Pin 19	LVDSB_DATAN0	Pin 20	LVDSB_DATAP0
Pin 21	LVDSB_DATAN1	Pin 22	LVDSB_DATAP1
Pin 23	LVDSB_DATAN2	Pin 24	LVDSB_DATAP2
Pin 25	GND	Pin 26	GND
Pin 27	LVDSB_CLKN	Pin 28	LVDSB_CLKP
Pin 29	LVDSB_DATAN3	Pin 30	LVDSB_DATAP3

Chapter 3
Introducing BIOS

Notice! The BIOS options in this manual are for reference only. Different configurations may lead to difference in BIOS screen and BIOS screens in manuals are usually the first BIOS version when the board is released and may be different from your purchased motherboard. Users are welcome to download the latest BIOS version form our official website.

The BIOS is a program located on a Flash Memory on the motherboard. This program is a bridge between motherboard and operating system. When you start the computer, the BIOS program will gain control. The BIOS first operates an auto-diagnostic test called POST (power on self test) for all the necessary hardware, it detects the entire hardware device and configures the parameters of the hardware synchronization. Only when these tasks are completed done it gives up control of the computer to operating system (OS). Since the BIOS is the only channel for hardware and software to communicate, it is the key factor for system stability, and in ensuring that your system performance as its best.

3-1 Entering Setup

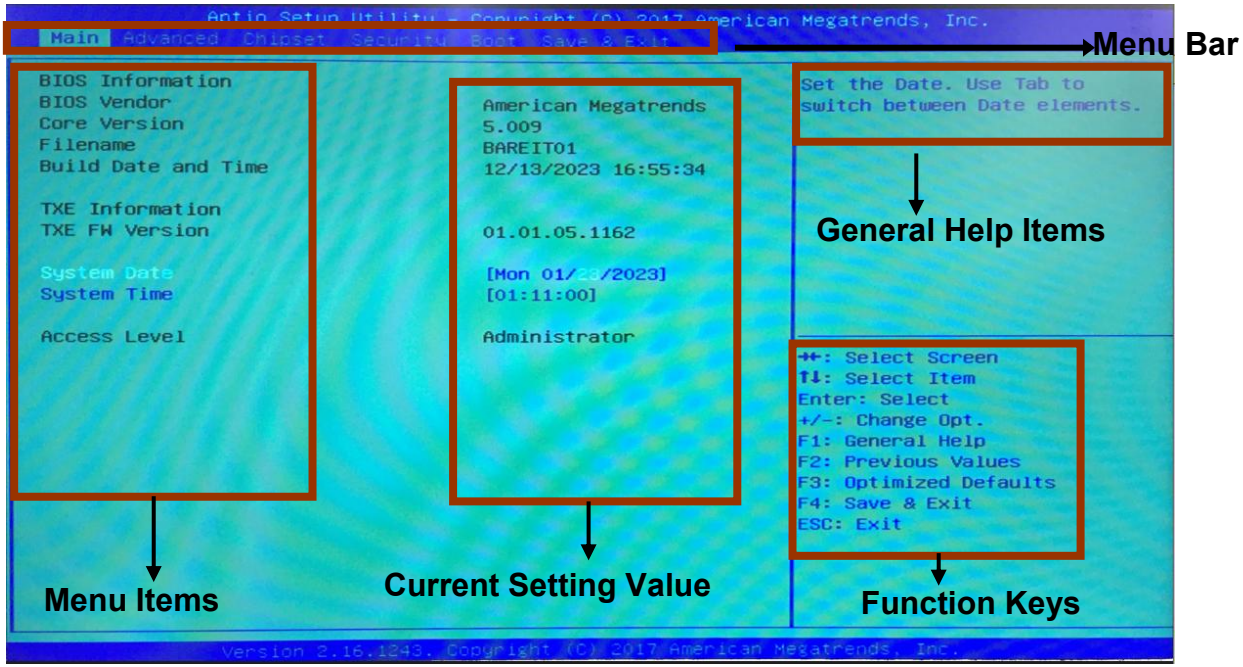
Power on the computer and by pressing <Del> immediately allows you to enter Setup. If the message disappears before your respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the “RESET” button on the system case. You may also restart by simultaneously 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 **<Del>** to enter Setup

3-2 BIOS Menu Screen

The following diagram show a general BIOS menu screen:

BIOS Menu Screen



3-3 Function Keys

In the above BIOS Setup main menu of, you can see several options. We will explain these options step by step in the following pages of this chapter, but let us first see a short description of the function keys you may use here:

- Press←→ (left, right) to select screen;
- Press ↑↓ (up, down) to choose, in the main menu, the option you want to confirm or to modify.
- Press **<Enter>** to select.

- Press **<+>/<–>** keys when you want to modify the BIOS parameters for the active option.
- **[F1]:** General help.
- **[F2]:** Previous value.
- **[F3]:** Optimized defaults.
- **[F4]:** Save & Reset.
- Press **<Esc>** to quit the BIOS Setup.

3-4 Getting Help

Main Menu

The on-line description of the highlighted setup function is displayed at the top right corner the screen.

Status Page Setup Menu/Option Page Setup Menu

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**>.

3-5 Menu Bars

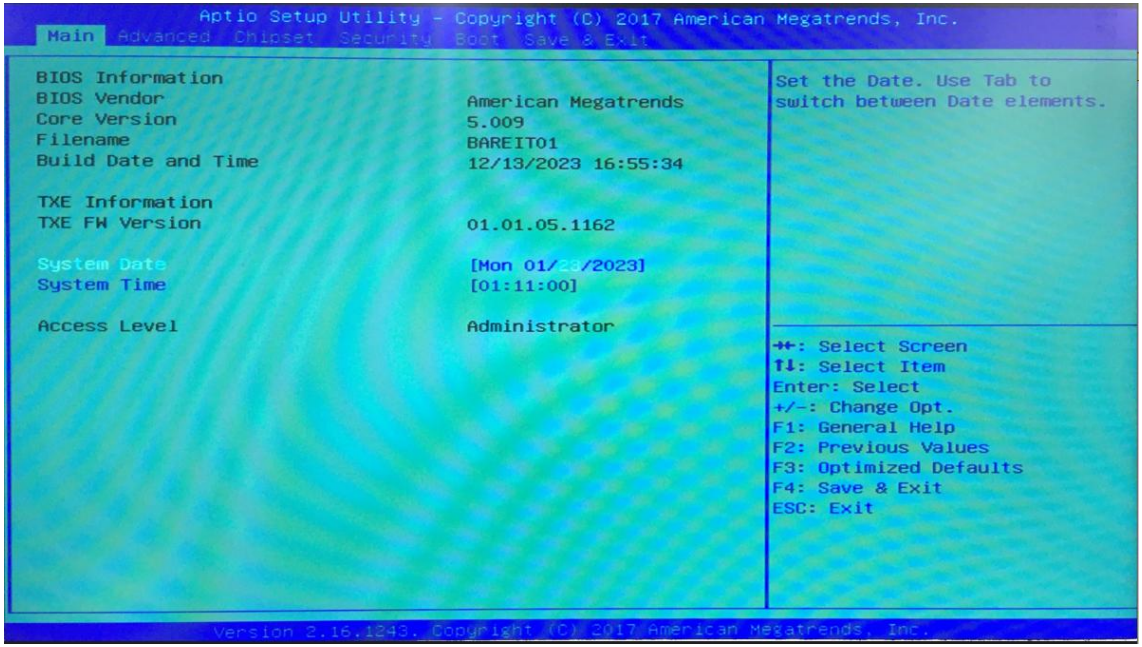
There are six menu bars on top of BIOS screen:

Main	To change system basic configuration
Advanced	To change system advanced configuration
Chipset	To change chipset configuration
Security	Password settings
Boot	To change boot settings
Save & Exit	Save setting, loading and exit options.

User can press the right or left arrow key on the keyboard to switch from menu bar. The selected one is highlighted.

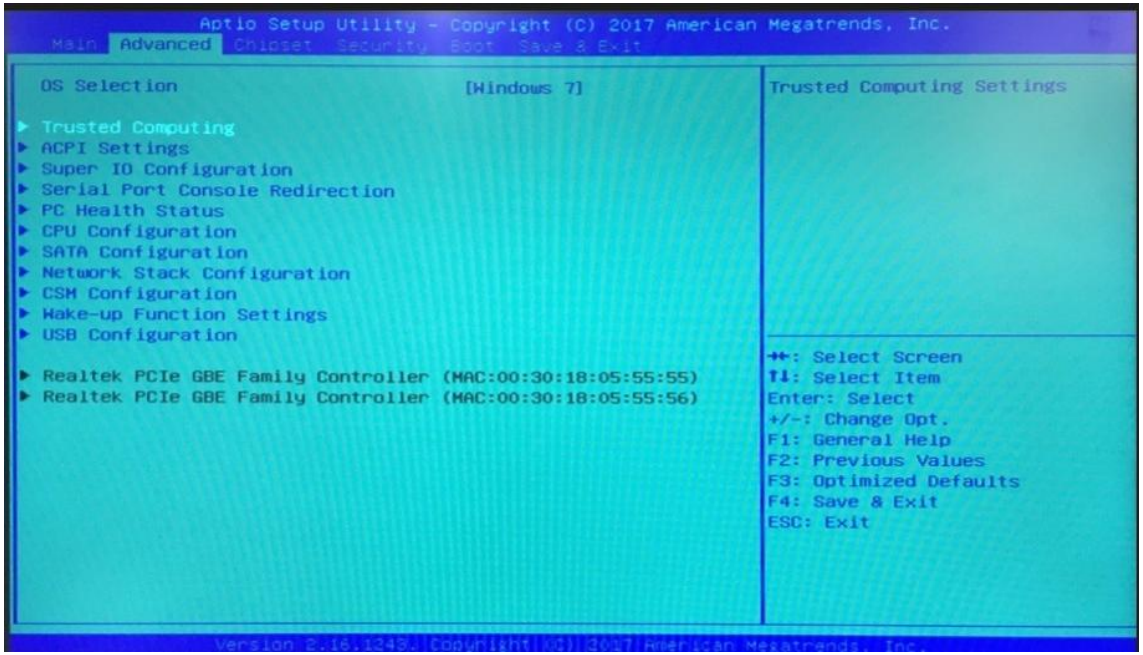
3-6 Main Menu

Main menu screen includes some basic system information. Highlight the item and then use the <+> or <-> and numerical keyboard keys to select the value you want in each item.



System Date
Set the date. Please use [Tab] to switch between date elements.
System Time
Set the time. Please use [Tab] to switch between time elements.

3-7 Advanced Menu



OS Selection

The optional settings: [Windows 8.X]; [Linux/Android]; [Windows 7].

** **Note:** User need to go to this item to select the OS mode before installing corresponding OS driver, otherwise problems will occur when installing the driver.*

- **Trusted Computing**

  Press [Enter] to make settings for the following sub-item:

  Security Device Support

  Use this item to enables or disables BIOS support for security device. O.S. will not show security device. TCG EFI protocol and INT1A interface will not be available.

  The optional settings: [Disabled]; [Enabled].

  TPM20 Device Found

  When set Security Device Support as [Enabled], the following sub-items shall appear:

  Pending Operation

Use this item to schedule an operation for the security device.
NOTE: Your computer will reboot during restart in order to change state of security device.
The optional settings are: [None]; [TPM Clear].
When set Security Device Support as [Disabled], the following sub-items shall appear:
HashPolicy
Use this item to select the Hash policy to use. SHA-2 is most secure but might not be supported by all operating systems.
The optional settings are: [Sha-1]; [Sha256]

- **ACPI Settings**

Press [Enter] to make settings for the following sub-item:
ACPI Sleep State
Use this item to select the highest ACPI sleep state the system will enter when the suspend button is pressed.
The optional settings are: [Suspend Disabled]; [S3 (Suspend to RAM)].

- **Super I/O Configuration**

Press [Enter] to make settings for the following sub-items:

- **Serial Port 1-2 Configuration**

Press [Enter] to make settings for the following items:
Serial Port
Use this item to enable or disable serial port (COM). The optional settings are: [Disabled]; [Enabled].
Device Settings
Change Settings
Use this item to select an optimal setting for super IO device. **Changing setting may conflict with system resources.**
The optional settings are: [Auto]; [IO=3F8h; IRQ=4]; [IO=2F8h; IRQ=3]; [IO=3E8h; IRQ=4]; [IO=2E8h; IRQ=3];
Transmission Mode Select ***(Only for JIMB-1900-2L/ JIMBA-1900-2L)***
The optional settings are: [RS422]; [RS232]; [RS485].
**Note: 'Transmission Mode Select' is only for Serial Port 1 Configuration/ Serial*

Port 2 Configuration *from* ***JIMB-1900-2L/ JIMBA-1900-2L*** *series COM1/COM2 header.*

Serial Port FIFO Mode

Use this item to select an optimal setting for FIFO Mode.

The optional settings are: [16-Bute FIFO]; [32-Byte FIFO]; [64-Byte FIFO]; [128-Byte FIFO]

- **Serial Port 3-6 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM). The optional settings are: [Disabled]; [Enabled].

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device. **Changing setting may conflict with system resources.**

The optional settings are: [Auto]; [IO=3F8h; IRQ=10]; [IO=2F8h; IRQ=10]; [IO=3E8h; IRQ=10]; [IO=2E8h; IRQ=10]; [IO=2F0h; IRQ=10]; [IO=2E0h; IRQ=10];

Serial Port FIFO Mode

Use this item to select an optimal setting for FIFO Mode.

The optional settings are: [16-Bute FIFO]; [32-Byte FIFO]; [64-Byte FIFO]; [128-Byte FIFO]

- **Serial Port 7 Configuration**

Press [Enter] to make settings for the following items:

Serial Port

Use this item to enable or disable serial port (COM). The optional settings are: [Disabled]; [Enabled].

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device. **Changing setting may conflict with system resources.**

The optional settings are: [Auto]; [IO=240h; IRQ=11]; [IO=248h; IRQ=11]; [IO=250h; IRQ=11]; [IO=258h; IRQ=11]; [IO=260h; IRQ=11]; [IO=268h; IRQ=11];

Serial Port FIFO Mode

Use this item to select an optimal setting for FIFO Mode.
The optional settings are: [16-Bute FIFO]; [32-Byte FIFO]; [64-Byte FIFO]; [128-Byte FIFO]

- **Serial Port 8 Configuration**

Press [Enter] to make settings for the following items:
Serial Port
Use this item to enable or disable serial port (COM). The optional settings are: [Disabled]; [Enabled].
Device Settings
Change Settings
Use this item to select an optimal setting for super IO device. **Changing setting may conflict with system resources.**
The optional settings are: [Auto]; [IO=248h; IRQ=11]; [IO=240h; IRQ=11]; [IO=250h; IRQ=11]; [IO=258h; IRQ=11]; [IO=260h; IRQ=11]; [IO=268h; IRQ=11];
Serial Port FIFO Mode
Use this item to select an optimal setting for FIFO Mode.
The optional settings are: [16-Bute FIFO]; [32-Byte FIFO]; [64-Byte FIFO]; [128-Byte FIFO]

- **Serial Port 9 Configuration**

Press [Enter] to make settings for the following items:
Serial Port
Use this item to enable or disable serial port (COM). The optional settings are: [Disabled]; [Enabled].
Device Settings
Change Settings
Use this item to select an optimal setting for super IO device. **Changing setting may conflict with system resources.**
The optional settings are: [Auto]; [IO=250h; IRQ=11]; [IO=240h; IRQ=11]; [IO=248h; IRQ=11]; [IO=258h; IRQ=11]; [IO=260h; IRQ=11]; [IO=268h; IRQ=11];
Serial Port FIFO Mode
Use this item to select an optimal setting for FIFO Mode.
The optional settings are: [16-Bute FIFO]; [32-Byte FIFO]; [64-Byte FIFO]; [128-Byte FIFO]

- **Serial Port 10 Configuration**

  Press [Enter] to make settings for the following items:

  Serial Port

  Use this item to enable or disable serial port (COM). The optional settings are: [Disabled]; [Enabled].

  Device Settings

  Change Settings

  Use this item to select an optimal setting for super IO device. **Changing setting may conflict with system resources.**

  The optional settings are: [Auto]; [IO=258h; IRQ=11]; [IO=240h; IRQ=11]; [IO=248h; IRQ=11]; [IO=250h; IRQ=11]; [IO=260h; IRQ=11]; [IO=268h; IRQ=11];

  Serial Port FIFO Mode

  Use this item to select an optimal setting for FIFO Mode.

  The optional settings are: [16-Bute FIFO]; [32-Byte FIFO]; [64-Byte FIFO]; [128-Byte FIFO]

- **Serial Port 11 Configuration**

  Press [Enter] to make settings for the following items:

  Serial Port

  Use this item to enable or disable serial port (COM). The optional settings are: [Disabled]; [Enabled].

  Device Settings

  Change Settings

  Use this item to select an optimal setting for super IO device. **Changing setting may conflict with system resources.**

  The optional settings are: [Auto]; [IO=260h; IRQ=11]; [IO=240h; IRQ=11]; [IO=248h; IRQ=11]; [IO=250h; IRQ=11]; [IO=258h; IRQ=11]; [IO=268h; IRQ=11];

  Serial Port FIFO Mode

  Use this item to select an optimal setting for FIFO Mode.

  The optional settings are: [16-Bute FIFO]; [32-Byte FIFO]; [64-Byte FIFO]; [128-Byte FIFO]

- **Serial Port 12 Configuration**

  Press [Enter] to make settings for the following items:

  Serial Port

Use this item to enable or disable serial port (COM). The optional settings are: [Disabled]; [Enabled].

Device Settings

Change Settings

Use this item to select an optimal setting for super IO device. **Changing setting may conflict with system resources.**

The optional settings are: [Auto]; [IO=268h; IRQ=11]; [IO=240h; IRQ=11]; [IO=248h; IRQ=11]; [IO=250h; IRQ=11]; [IO=258h; IRQ=11]; [IO=268h; IRQ=11]

Serial Port FIFO Mode

Use this item to select an optimal setting for FIFO Mode.

The optional settings are: [16-Bute FIFO]; [32-Byte FIFO]; [64-Byte FIFO]; [128-Byte FIFO]

- **Parallel Port Configuration**

Press [Enter] to make settings for the following items:

Parallel Port

Use this item to enable or disable parallel port(LPT/LPTE).

The optional settings are: [Disabled]; [Enabled].

When set Security Device Supportas [Enabled], the following sub-items shall appear:

Change Settings

Use this item to select an optimal setting for super IO device.

The optional settings are: [Auto]; [IO=378h; IRQ=5];
[IO=378h; IRQ=5,6,7,9,10,11,12]; [IO=278h; IRQ=5,6,7,9,10,11,12];
[IO=3BCh; IRQ=5,6,7,9,10,11,12];

Device mode

Use this item to change the Printer Port mode.

The optional settings are: [STD Printer Mode]; [SPP Mode]; [EPP-1.9 and SPP Mode]; [EPP-1.7 and SPP Mode]; [ECP Mode]; [ECP and EPP 1.9 Mode]; [ECP and EPP 1.7 Mode].

OS Select for Serial Port

Serial port supports for Windows or Linux. The optional settings are: [Windows]; [LINUX].

ERP Support

Use this item to energy-related products function. disable ERP to active all wake-up functions.
The optional settings are: [Disabled]; [Enabled].

PS2 KB/MS Connect

Use this item to setting PS2 Connect Primary Devices.
The optional settings are: [Keyboard First]; [Mouse First].

WatchDog Reset Timer

This item support WDT reset function.
The optional settings: [Disabled]; [Enabled].
Use this item to enable or disable WatchDog Timer Control. When set as [Enabled], the following sub-items shall appear:

WatchDog Reset Timer Value

User can set a value in the range of [10] to [255] seconds or in the range of [1] to [255] minutes.

WatchDog Reset Timer Unit

The optional settings are: [Sec.]; [Min.].

WatchDog Wake-up Timer

Support WDT Wake-up.
The optional settings: [Disabled]; [Enabled]. When set as [Enabled], the following sub-items shall appear:

WatchDog Wake-up Timer Value

User can set a value in the range of [10] to [4095] seconds when '**WatchDog Timer Unit in ERP**' set as [Sec.], or in the range of [1] to [4095] minutes when '**WatchDog Timer Unit in ERP**' set as [Min.].

WatchDog Wake-up Timer Unit

The optional settings are: [Sec.]; [Min.].

ATX Power Emulate AT Power

This item support Emulate AT power function, MB power On/Off control by power supply. Use needs to select 'AT or ATX Mode' on MB jumper at first *(refer to **AT_ATX_MODE Pin 1&2** jumper setting for ATX Mode & **Pin 2&3** jumper setting for AT Mode Select)*

- **Serial Port Console Redirection**

COM1

Console Redirection

The optional settings: [Disabled]; [Enabled]. When set as [Enabled], the following sub-items shall appear:

- **Console Redirection Settings**

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

  Press [Enter] to make settings for the following items:

  Terminal Type

  The optional settings: [VT100]; [VT100+]; [VT-UTF8]; [ANSI].

  Emulation: 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; ANSI: Extended ASCII char set.

  Bits per second

  Use this item to select serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.

  The optional settings: [9600]; [19200]; [38400]; [57600]; [115200].

  Data Bits

  The optional settings: [7]; [8].

  Parity

  A parity bit can be sent with the data bits to detect some transmission errors.

  The optional settings: [None]; [Even]; [Odd]; [Mark]; [Space].

  Even: parity bit is 0 if the 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.

  Stop Bits

  Stop bits indicate the end of a serial data packet. (A start bit indicates the beginning). The standard settings is 1 stop bit. Communication with slow devices may require more than 1 stop bit.

  The optional settings: [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.
The optional settings: [None]; [Hardware RTS/CTS].

VT-UTF8 Combo Key Support

Use this item to enable VT-UTF8 Combination Key Support for ANSI/VT100 terminals.
The optional settings: [Disabled]; [Enabled].

Recorder Mode

With this mode enable only text will be sent. This is to capture Terminal data.
The optional settings: [Disabled]; [Enabled].

Resolution 100x31

Use this item to enable or disable extended terminal resolution.
The optional settings: [Disabled]; [Enabled].

Putty KeyPad

Use this item to select FunctionKey and KeyPad on Putty.
The optional settings: [VT100]; [LINUX] ; [XTERMR6] ; [SCO] ; [ESCN] ; [VT400].

Serial Port for Out-of-Band Management/
Windows Emergency Management Services (EMS)

Console Redirection

Use this item to console redirection enable or disable..
The optional settings: [Disabled]; [Enabled].
When set as [Enabled], the following sub-items shall appear:

- **Console Redirection Settings**

Out-of-Band Mgmt Port

Terminal Type

Use this item to VT-UTF8 is the preferred terminal type for out-of-band management. The next best choice is VT100+ and then VT100.See above, in console redirection settings page, for more help with terminal type/emulation.
The optional settings: [VT100]; [VT100+]; [VT-UTF8]; [ANSI]

Bit per second

Use this item to selects serial port transmission speed. The speed must be matched on the other side. Long or noisy lines may require lower speeds.

The optional settings: [9600]; [19200]; [57600]; [115200]

Flow Control

Use this item to 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.

The optional settings: [None]; [Hardware RTS/CTS]; [Software Xon/Xoff]

Data Bits

Parity

Stop Bits

- **PC Health Status**

Press [Enter] to view current hardware health status, set shutdown temperature, or make further settings in '**SmartFan Configuration**'.

- **SmartFan Configuration**

Press [Enter] to make settings for SmartFAN Configuration:

CPUFAN Smart Mode

The optional settings are: [Disabled]; [Enabled].

When set as [Enabled], the following sub-items shall appear:

CPUFAN Full-Speed Temperature

Use this item to set CPUFAN full speed temperature. Fan will run at full speed when above the pre-set temperature.

CPUFAN Full-Speed Duty

Use this item to set CPUFAN full speed duty. Fan will run at full speed when above the pre-set duty.

CPUFAN Idle-Speed Temperature

Use this item to set CPUFAN idle speed temperature. Fan will run at idle speed when below the pre-set temperature.

CPUFAN Idle-Speed Duty

Use this item to set CPUFAN idle speed duty. Fan will run at idle speed when below the pre-set duty.

Shutdown Temperature

Use this item to select system shutdown temperature.

The optional settings are: [Disabled]; [70˚C/158˚F]; [75˚C/167˚F]; [80˚C/176˚F]; [85˚

C/185°F]; [90°C/194°F].

- **CPU Configuration**

Press [Enter] to view current CPU configuration and make settings for the following sub-items:

Limit CPUID Maximum

The optional settings: [Disabled]; [Enabled].

This item should be set as [Disabled] for Windows XP.

Execute Disable Bit

Use this item to 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.)

The optional settings: [Disabled]; [Enabled].

Hardware Prefetcher

The optional settings are: [Disabled]; [Enabled].

Use this item to enable the Mid Level Cache (L2) streamer prefetcher.

Adjacent Cache Line Prefetch

The optional settings are: [Disabled]; [Enabled].

Use this item to enable Mid Level Cache (L2) prefetching of adjacent cache lines.

EIST

Use this item to enable /disable intel speedstep

The optional settings are: [Disabled]; [Enabled].

When set EIST as [Enabled], the following sub-items shall appear:

CPU C State Report

Use this item to enable or disable CPU C state report to OS.

The optional settings: [Disabled]; [Enabled].

When set as [Disabled], the following sub-items shall appear:

Turbo Mode

The optional settings: [Disabled]; [Enabled].

When set EIST as [Disabled] and CPU C State Report, the following sub-items shall appear:

Enhanced C state

Use this item to enable or disable CPU Cstate.

The optional settings: [Disabled]; [Enabled].

Max CPU C-State
This item controls Max C-state that the processor will support.
The optional settings: [C7]; [C6]; [C1].

- **SATA Configuration**

Press [Enter] to make settings for the following sub-items:
SATA Controller
Use this item to enable/disable serial ATA
The optional settings are: [Enabled]; [Disabled].
When set as [Enabled], the following sub-items shall appear:
SATA Speed Support
User to set the SATA speed support Gen1 or Gen2
The optional settings are: [Gen1]; [Gen2].
SATA Mode
The optional settings are: [IDE Mode]; [AHCI Mode].
SATA Port
The optional settings are: [Enabled]; [Disabled].
Not Present
M.2
The optional settings are: [Enabled]; [Disabled].
Not Present

- **Network Stack Configuration**

Press [Enter] to go to '**Network Stack**' screen to enable or disable UEFI Network Stack.
Network Stack
The optional settings are: [Enabled]; [Disabled].
When set as [Enabled], the following sub-items shall appear:
Ipv4 PXE Support
The optional settings are: [Disabled]; [Enabled].
Use this item to enable Ipv4 PXE Boot Support. When set as [Disabled], Ipv4 boot optional will not be created.
Ipv6 PXE Support
The optional settings are: [Disabled]; [Enabled].
Use this item to enable Ipv6 PXE Boot Support. When set as [Disabled], Ipv6 boot

optional will not be created.

PXE boot wait time

Use this item to set wait time to press [ESC] key to abort the PXE boot.

- **CSM Configuration**

  Use this item to enable/disable, option ROM execution settings, etc.

  Press [Enter] to make settings for the following items:

Boot Option Filter

This option controls Legacy/UEFI ROMs priority.

The optional settings are: [UEFI and Legacy]; [Legacy only]; [UEFI only].

Network

This item controls the execution of UEFI and Legacy PXE OpROM.

The optional settings are: [Do Not Launch]; [UEFI only]; [Legacy only].

Storage

This option controls the execution of UEFI and Legacy Storage OpROM.

The optional settings are: [Do Not Launch]; [UEFI only]; [Legacy only].

Other PCI Devices

This item determines OpROM execution policy for devices other than Network, storage or video.

The optional settings are: [UEFI First]; [Legacy Only].

- **Wakeup Function Settings**

Press [Enter] to make settings for the following sub-items:

Wake-up System with Fixed Time

Use this item to enable or disable system wake-up on alarm event.

The optional settings: [Disabled]; [Enabled].

When set as [Enabled], the following sub-items shall appear:

Wake-up Hour

Use this item to 0-23. For example, 3 for 3am and 15 for 3pm.

Wake-up Minute

Use this item to 0-59

Wake-up Second

Use this item to 0-59

Wake-up System with Dynamic Time

Use this item to enable or disable system wake-up on alarm event.

The optional settings: [Disabled]; [Enabled].
When set as [Enabled], system will wake on the current time + increased minute(s).The settings range is from [1] ~ [60] minute(s).

Wake-up Time Increase

Use this item to 1 to 60 minute(s)

PS2 KB/MS Wake-Up from S3-S5

PS2 KB/MS Wake-up is affected by ERP function in S4-S5. Please disable ERP before activating this function in S4-S5.
The optional settings: [Disabled]; [Enabled].

- **USB Configuration**

Press [Enter] to make settings for the following sub-items:

Legacy USB Support

The optional settings are: [Enabled]; [Disabled]; [Auto].
[Enabled]: To enable legacy USB support.
[Disabled]: To keep USB devices available only for EFI specification,
[Auto]: To disable legacy support if no USB devices are connected.

XHCI Hand-off

This is a workaround for OSes without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.
The optional settings are: [Enabled]; [Disabled].

EHCI Hand-off

This is a workaround for OSes without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.
The optional settings are: [Disabled]; [Enabled].

USB Mass Storage Driver Support

The optional settings are: [Disabled]; [Enabled].

USB hardware delay and time-outs:

USB Transfer time-out

Use this item to set the time-out value for control, bulk, and interrupt transfers.
The optional settings are: [1 sec]; [5 sec]; [10 sec]; [20 sec].

Device Reset Time-out

Use this item to set USB mass storage device start unit command time-out.
The optional settings are: [10 sec]; [20 sec]; [30 sec]; [40 sec].

Device power-up delay

Use this item to set 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 100 ms, for a hub port the delay is taken from hub descriptor.

The optional settings: [Auto]; [Manual].

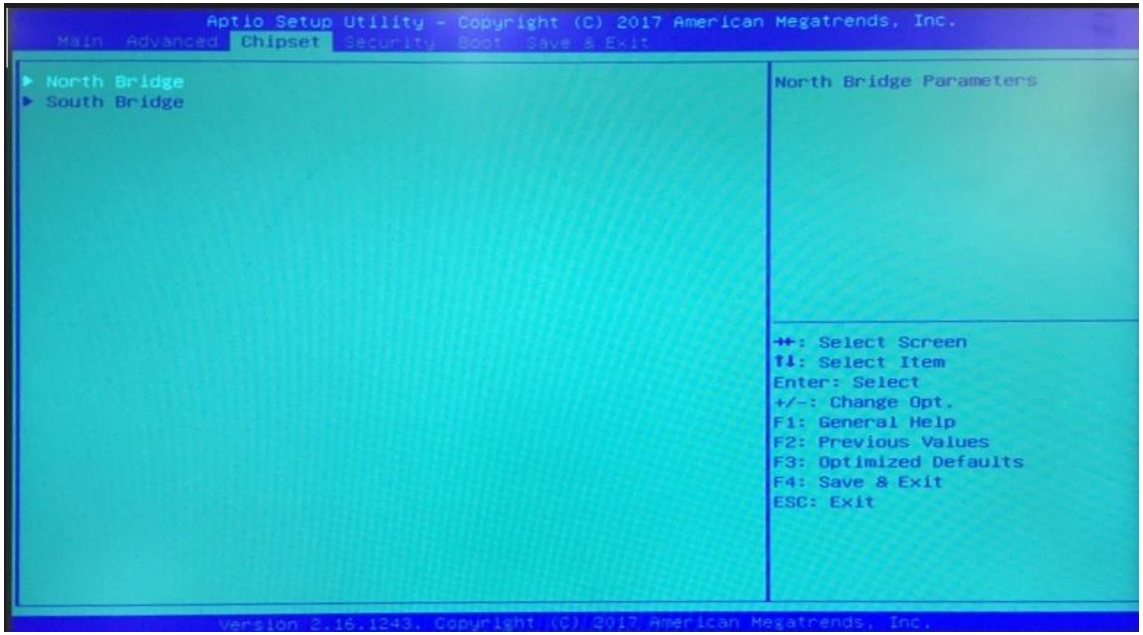
Select [Manual] you can set value for the following sub-item: '**Device Power-up Delay in Seconds'.**

Device Power-up Delay in Seconds

The delay range is from [1] to [40] seconds, in one second increments.

- **Realtek PCIe GBE Family Controller (MAC:XX:XX:XX:XX:XX:XX)**
- **Realtek PCIe GBE Family Controller (MAC:XX:XX:XX:XX:XX:XX)**

3-8 Chipset Menu



- **North Bridge**

Press [Enter] to view current using memory information and make settings for the following sub-items:

PAVC

Use this item to enable or disable protected audio video control.

The optional settings are: [Disabled]; [LITE Mode]; [SERPENT Mode].

DVMT Pre-Allocated

Use this item to select DVMT 5.0 pre-allocated (fixed) graphics memory size used by the internal graphics device.

The optional settings are: [64M]; [96M]; [128M]; [160M]; [192M]; [224M]; [256M]; [288M]; [320M]; [352M]; [384M]; [416M]; [448M]; [480M]; [512M].

DVMT Total Gfx Mem

Use this item to select DVMT 5.0 total graphics memory size used by the internal graphics device.

The optional settings are: [128MB]; [256MB]; [Max].

Aperture Size

The optional settings are: [128MB]; [256MB]; [512MB].

GTT Size

The optional settings are: [1MB]; [2MB].

Primary IGFX Boot Display

Use this item to select the video device which will be activated during POST. This has no effect if external graphics present.

The optional settings are: [VBIOS Default]; [CRT]; [HDMI]; [LFP]

NOTE: When Active LFP is set to [LVDS], the [LFP] option will appear

Active LFP

The optional settings are: [Disabled]; [LVDS].

When set as [LVDS], the following sub-items shall appear:

LCD Panel Type

The optional settings: [800x600 24-bit 1ch]; [800x600 18-bit 1ch]; [1024x600 18-bit 1ch]; [1024x768 24-bit 1ch]; [1024x768 18-bit 1ch]; 800x480 18-bit 1ch]; [1366x768 18-bit 1ch]; [1440x900 18-bit 2ch]; [1366x768 24-bit 1ch]; [1440x900 24-bit 2ch]; [1280x1024 24-bit 2ch]; [1280x800 18-bit 1ch]; [1280x800 24-bit 1ch]; [1680x1050 24-bit 2ch]; [1280x768 24-bit 1ch]; [1920x1080 24-bit 2ch];

Memory Information

Total Memory

- **South Bridge**

Press [Enter] to set south bridge parameters.

Mini PCIE

The optional settings are: [Enabled]; [Disabled].

Mini PCIE Speed

Use this item to configure PCIe Port Speed.

The optional settings are: [Auto]; [Gen 2]; [Gen 1].

Onboard PCIE LAN1

The optional settings are: [Enabled]; [Disabled].

Onboard PCIE LAN2

The optional settings are: [Enabled]; [Disabled].

Audio Controller

The optional settings are: [Disabled]; [Enabled].

Azalia HDMI Codec

Use this item to enable or disable internal HDMI codec for Azalia.

The optional settings are: [Disabled]; [Enabled].

- **USB Configuration**

Press [Enter] to make settings for the following sub-items:

USB 3.0 Support

The optional settings are: [Enabled]; [Auto]; [Disabled].

** **Note:** When set as [Auto] or [Disabled], USB 2.0 Support is applicable, for user to make further settings.*

USB 2.0 Support

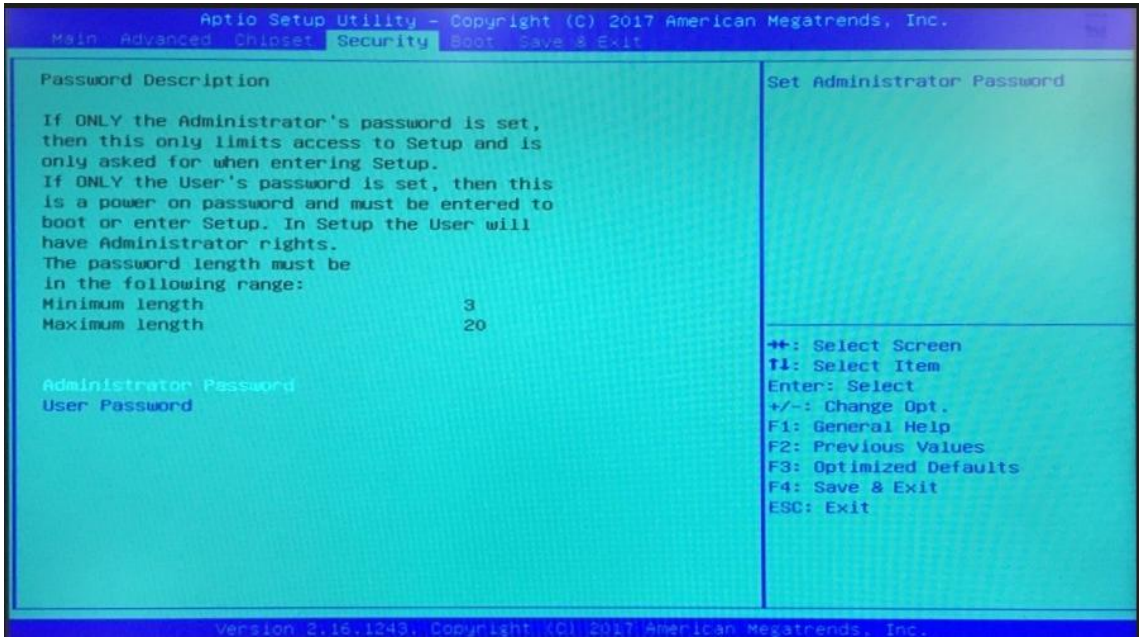
The optional settings are: [Enabled]; [Disabled].

- **System State after Power Failure**

Use this item to select the system state when AC power is re-applied after a power loss. The options- <Always On> and <former State> are affected by ERP function. Please disable ERP to support <Always On> and <Former State>.

The optional settings are: [Always Off]; [Always On]; [Former State].

3-9 Security Menu



Security menu allow users to change administrator password and user password settings.

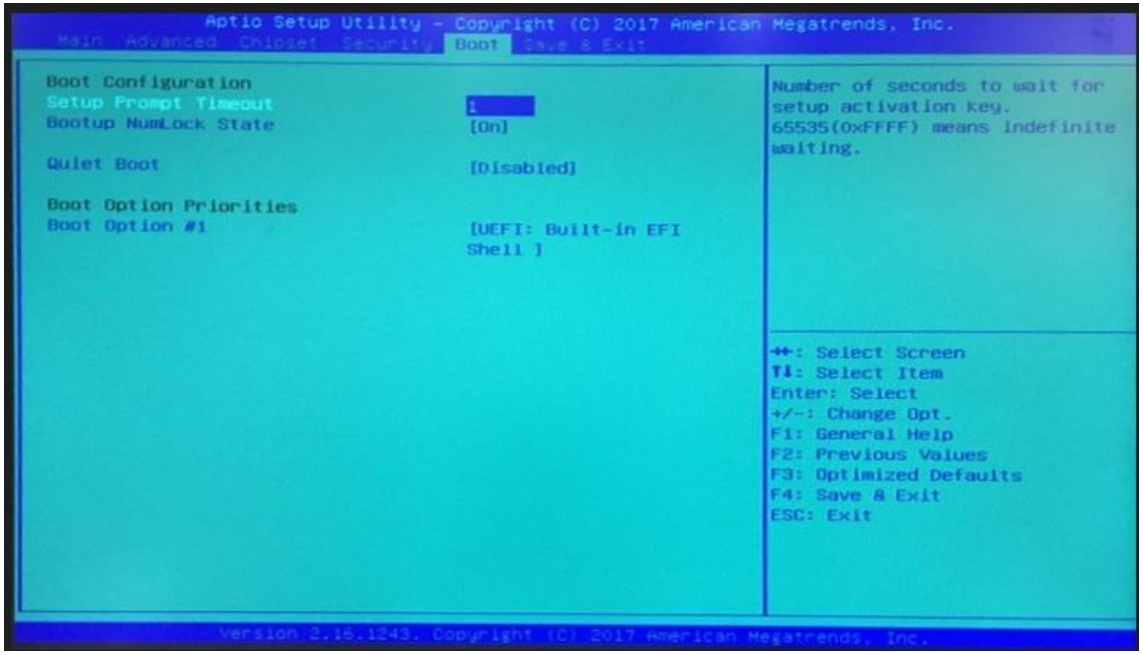
Administrator Password

If there is no password present on system, please press [Enter] to create new setup administrator password. If password is present on system, please press [Enter] to verify old password then to clear/change password. Press again to confirm the new administrator password.

User Password

If there is no password present on system, please press [Enter] to create new user password. If password is present on system, please press [Enter] to verify old password then to clear/change password. Press again to confirm the new user password.

3-10 Boot Menu



Boot Configuration

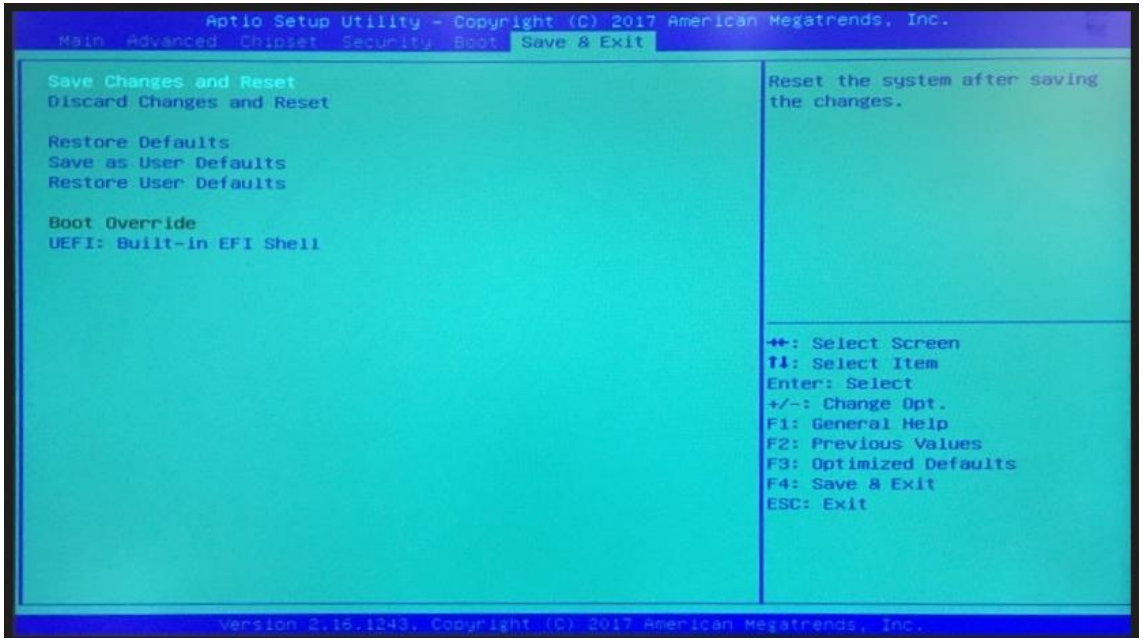
- **Setup Prompt Timeout**
  Use this item to set number of seconds to wait for setup activation key.
- **Bootup Numlock State**
  Use this item to select keyboard numlock state.
  The optional settings are: [On]; [Off].
- **Quiet Boot**

  Use this item to enables or disables quiet boot option
  The optional settings are: [Disabled]; [Enabled].

Boot Option Priorities

Boot Option #1
Use this item to set system boot order.
The optional settings are: [UEFI: Built-in EFI Shell]; [Disabled].

3-11 Save & Exit Menu



- **Save Changes and Reset**
  This item allows user to reset the system after saving the changes.
- **Discard Changes and Reset**
  This item allows user to reset the system without saving any changes.
- **Restore Defaults**
  Use this item to restore /load default values for all the setup options.
- **Save as User Defaults**
  Use this item to save the changes done so far as user defaults.
- **Restore User Defaults**
  Use this item to restore defaults to all the setup options.

Boot Override

- **UEFT: Built-in EFI Shell**
  Launch Internal EFI shell application (shell.efi).