NSA-50A1

Networking Micro Box

- *Intel® Denverton® SoC*
- *4x 2.5GbE Copper*

User Manual

Acrosser Technology Co., Ltd.
www.acrosser.com

Disclaimer

For the purpose of improving reliability, design and function, the information in this document is subject to change without prior notice and does not represent a commitment on the part of Acrosser Technology Co., Ltd.

In no event will Acrosser Technology Co., Ltd. be liable for direct, indirect, special, incidental, or consequential damages arising out of the use or inability to use the product or documentation, even if advised of the possibility of such damages.

Copyright

Trademarks

The product names appear in this manual are for identification purpose only. The trademarks and product names or brand names appear in this manual are the property of their respective owners.

Purpose

This document is intended to provide the information about the features and use of the product.

Audience

The intended audiences are technical personnel, not for general audiences.

WARNING

Danger of explosion if batteries are incorrectly replaced. Always replace the battery with the same specifications. Dispose of used batteries according to the manufacturer's instructions.

Before running the system, make sure the power cord is firmly plugged into the socket.

CAUTION

 IEC 60417-6042 (2010-11)  IEC 60417-6172 (2012-09)

All power cords must be disconnected during product repair.

Ver: 100
Date: May. 28, 2025

To read this User Manual on your smart phone, you will have to install an APP that can read PDF file format first. Please find the APP you prefer from the APP Market.

Table of Contents

1. System Introduction

NSA-50A1 is an entry level networking appliance. In a small box, this appliance equip a powerful Intel Atom C3000 SoC. This SoC supports multi-core CPU computing and support QAT, USB 3.0 and LAN controller which can be 2.5GbE capable.

NSA-50A1 is an ideal networking appliance for small office. It can support 4 LAN ports with both copper and fiber media. Supports two USB 3.0 ports, optional Wi-Fi and 4G LTE or 5G wireless connection.

1.1. Specifications

(Specifications are subject to change without notice.)

General

Thermal Solution
- Fanless

CPU
- Intel® Denverton® C3558R

Memory
- 1x SO-DIMM DDR4

BIOS
- Support Console Re-direction
- Support Bypass Setting

Scenario	Normal	Bypass
SYS (ON)	V	
SYS (OFF)		V
WDT (Timeout)		V
PWR (Lost)	Remained prior status	

- Support PXE boot from all RJ-45 Coppers

Network Interface

Ethernet (on-board)
- 2x 2.5GbE Copper
- Intel i225, LAN [1: 4] Copper

LAN bypass (1-pair)
- LAN bypass by LAN[1: 2]

Storage

HDD Bay
- 1x 2.5” Internal HDD Bay

M.2 B Socket
- 1x M.2 B socket for 2242 USB SSD (shared with RF module)

I/O

Front Panel	• 4x Ethernet Link/Act LED • 4x Ethernet 2.5G Green/1G Orange LED • 1x Sys Power LED • 1x Storage LED • 1x LAN Bypass LED
Rear Panel	• Reset button • 2x USB 3.0 • 1x RJ45 Console Port • 4x GbE RJ45 • 1 or 2 x DC-in Connector (12V)
Internal I/O	• 1x M.2E_1 2230 Connector (for Wi-Fi 2T2R module) • 1x M.2B_1 Connector (with USB 2.0+3.0 signal) with SIM socket, support 3042/3052

Other Features

Watchdog Timer	• Software programmable 0~255 Seconds, 0=disable timer.
Battery	• Lithium Battery, 3V 220mAH (CR2032), for RTC
Hardware Monitoring	• CPU Voltage • CPU Temperature • System Temperature • Fan Speed
Security & Mgmt.	• On-board TPM 2.0

Power Requirement

Power Adapter	• 12VDC, 40W Adapter

Software

OS Support	• Linux Kernel 5.15 & above, (64-bit)

Mechanical & Environment

Dimension	• 231(L) x 145(W) x 44(H) mm
Operating Temperature	• 0 ~ 40°C (32 ~ 104°F)
Storage Temperature	• -20 ~ 80°C (-4 ~ 176°F)
Relative Humidity	• 0 to 90% @40°C, non-condensing

EMC & Safety

Certification	• CE, FCC Class A, RoHS 2
Drop Test	• ISTA-2A 2006

1.2. Package Contents

Check if the following items are included in the package.

	Item	Q'ty	Remark
☐	NSA-50A1 System	1	
☐	Power Adapter (12V)	1 or 2	2pcs for 2NSA-50A1-02
☐	Screw Pack	1	

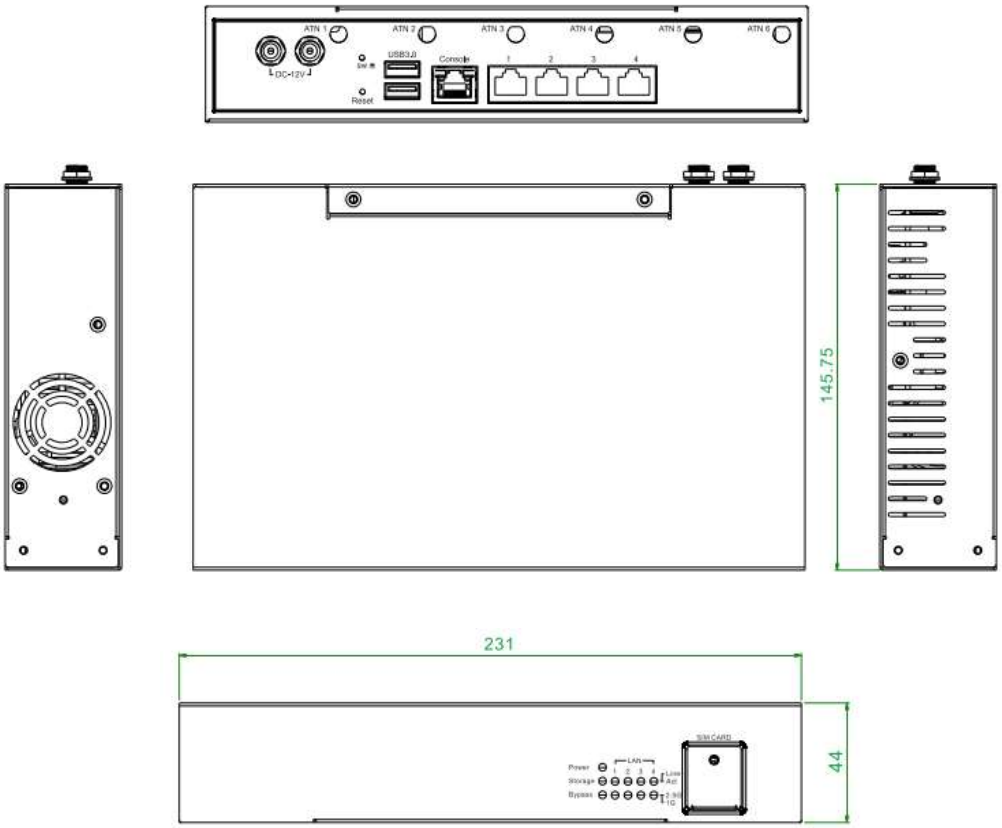
1.3. Model Description

Model Name	Description
NSA-50A1-01	Intel Atom® Processor C3338R 4 x 2.5GbE 1 x DC-In 12V Power Adapter
NSA-50A1-02	Intel Atom® Processor C3338R 4 x 2.5GbE 2 x DC-In 12V Power Adapter

1.4. System Dissection

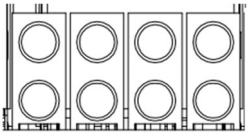
1.4.1. Dimensions

(Unit: mm)



1.4.2. Front I/O Panel

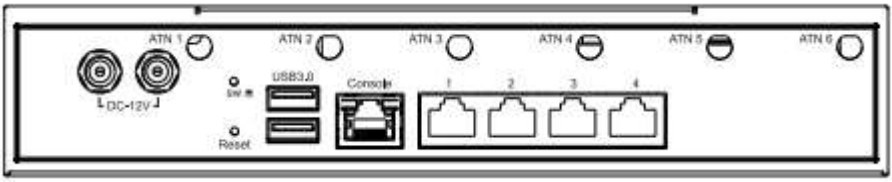
- **Power**
  System Power LED
- **Storage**
  Storage Active LED
- **Bypass**
  LAN Bypass LED
- **LAN 1~4**
  LAN 1~4 Link/Active LED



LED	Light	Display
G	Green	Link with Activity
G/Y	Green Yellow	2500Mbps 1000Mbps

- **SIM CARD**
  SIM Card Socket

1.4.3. Rear I/O Panel



- **ANT1 ~ ANT6**
  SMA Antenna Hole. Reserved for optional WLAN & WWAN (Wi-Fi & 4G LTE /5G)
- **Reset**
  Reset Button
- **DC 12V**
  DC12V Power Input
- **Console:** Console Port (RJ45)

Pin #	Signal	Pin #	Signal
1	RTS	**5**	GND
2	DTR	**6**	RxD
3	TxD	**7**	DSR
4	GND	**8**	CTS

- **USB 3.0**
  USB 3.0 Port
- **LAN 1 ~ LAN 4:** RJ45 LAN Port

	LED	Light	Status
	**Left**	Green (Blink)	Link with Activity
	Right	Off	10Mbps/100Mbps
		Yellow	1000Mbps
		Green	2500Mbps

2. Components Assembly

Please follow the instruction to install the inner modules.

2.1. SIM Card Installation

Step 1: Remove the screw on the SIM Card cover plate.

Step 2: Take down the SIM Card cover plate.

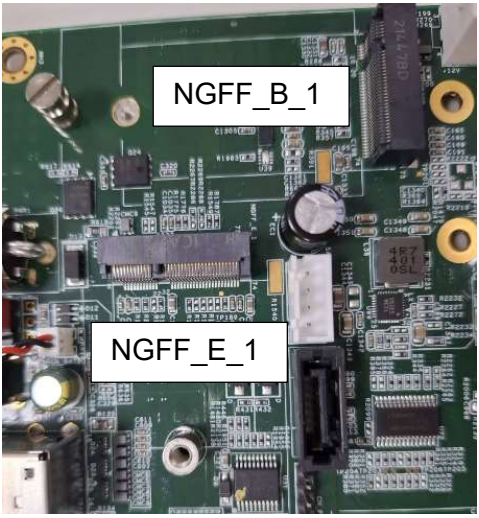
Step 3: Insert the SIM card.

Step 4: Push the SIM card into the socket until it docks in locked position.

Step 5: Put the the SIM Card cover plate back.

Step 6: Lock the SIM Card cover plate with screw.

2.2. PCB Parts Description



NGFF_E_1

M.2E connector for Wi-Fi 2T2R module

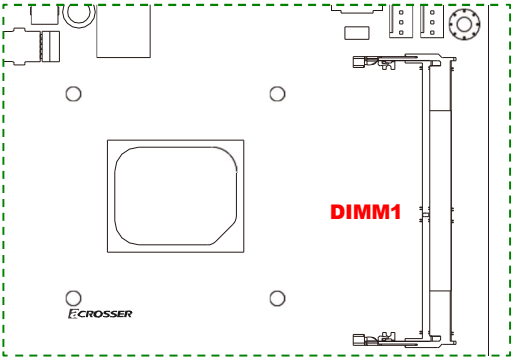
The Wi-Fi antenna is SMA female type. Please connect to the socket marked with ANT2 / ANT3 on the panel and have it fastened.

NGFF_B_1

M.2B connector with USB 2.0+3.0 signal & SATA3, for 4G LTE / 5G module or SSD

The 4G LTE / 5G antenna is SMA male type. Please connect to the socket marked with ANT1 / ANT4 / ANT 5 / ANT 6 on the panel and have it fastened.

DIMM1



The memory module is DDR4 SO-DIMM type.

Check if the DIMM keys align correctly with the connector. Firmly press the DIMM straight down to lock into position. The retaining clips snap into the locked position when the DIMM is firmly seated in the connector.

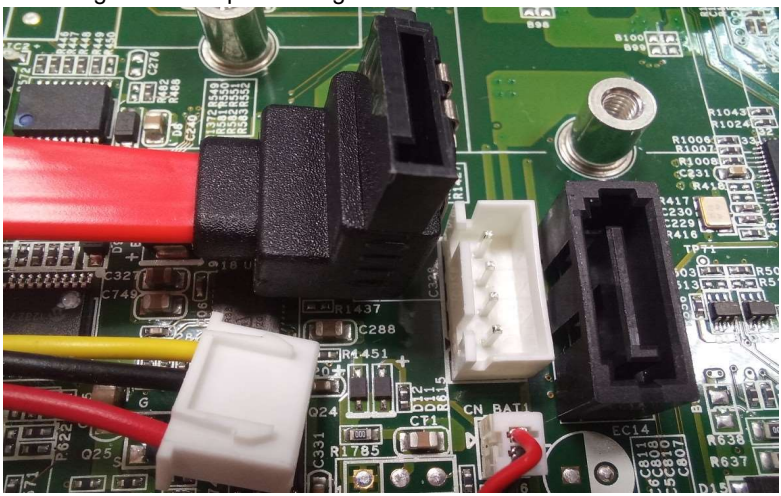
2.3. Hard Disk Installation

Step 1: Use a philips screw driver to remove the four screws that locked the lower side of the front panel. Push the body out to open the top cover.

Step 2: The hard drive uses SATA 2.5” type. Connect the hard drive with SATA cable and SATA power cable taken out from the accessory bag, and then fixed it to the top cover. When using HDD 7mm, please place the front side facing the mainboard and fix screws at 4 sides.

Step 3: Before fixing the hard disk, use a cross screwdriver to fix the hard disk with screws on 4 sides. The screws are included in the accessory bag.

Step 4: Connect the SATA cable/SATA power cable to the mainboard. The end of SATA cable is black, SATA power cable is white. Please connect it according to the fool-proof design.



2.4. Module Installation

Step 1: Slopingly insert the module into the connector. (Do the same way for M.2 and mPCIE.)

Step 2: Use screws to lock the module to the nut position on the board.

Notes:

- As there are fifferent module interfaces, like M.2 B key, M.2 E key, or mPCIE, please comply with the one the system specification specified.
- As there are fifferent module specifications, like Half size, Full size, 3042, or 3052, please comply with the one the system specification specified.

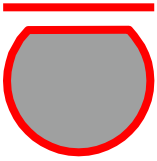
2.5. RF Cable Installation

Step 1: Connect the RF plug to the module connector.

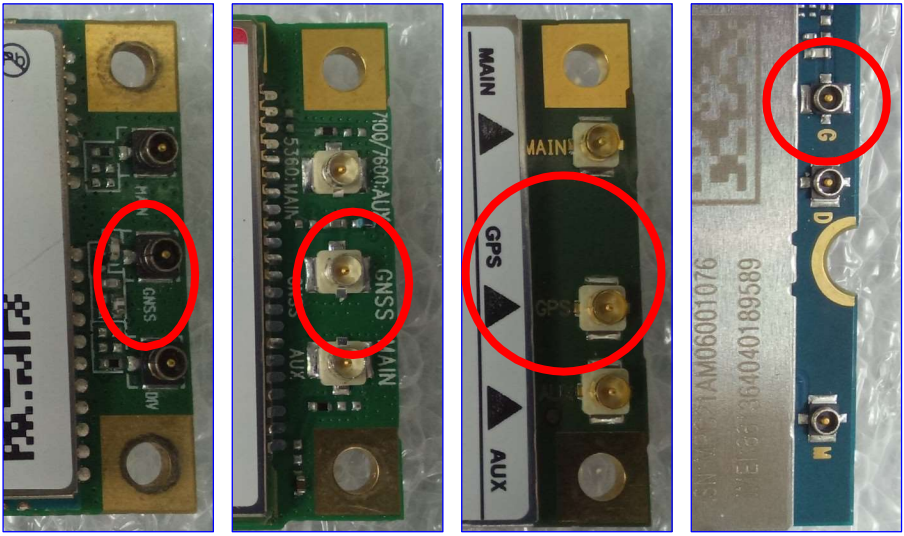
Notes:

- Wi-Fi: Support 2 RF cables at least.
- 4G LTE: Support 1 RF cable at least, up to 3 RF cables.
- 5G: Support 2 RF cables at least, up to 4 RF cables.

Step 2: The foolproof position and shape of the joint should correspond with the opening of the system panel.



Step 3: Assemble the SMA end of the RF Cable and lock it with gasket and nut.



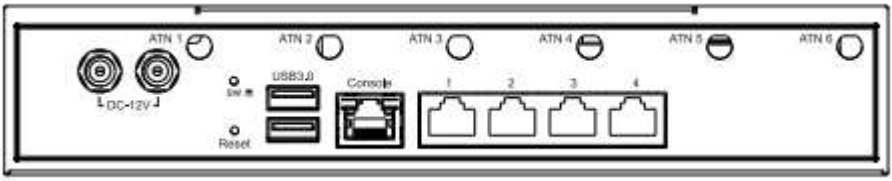
Notes:

- For the connector marked as GNSS or GPS, please install it on the system panel where the GPS antenna is located.
- The connector marked as MAIN or AUX is a 4G LTE / 5G connector, please install

  It on the system panel marked 4G or 5G antenna. Use the MAIN connector first.

2.6. Antenna Installation

Connect your antennas according to your system configuration.



ANT1	ANT2	ANT3	ANT4	ANT5	ANT6
4G LTE / 5G	Wi-Fi	Wi-Fi	4G LTE / 5G	4G LTE / 5G /GPS	5G

Wi-Fi:

Connect female type antenna to the male type socket **ANT 2** and **ANT 3**

GPS:

Connect male type antenna tail cable to the female type socket **ANT 5**.

4G LTE / 5G:

Connect male type antenna to the female type socket marked with **ANT1** and **ANT** 4 or **ANT6**.

.

3. BIOS Settings

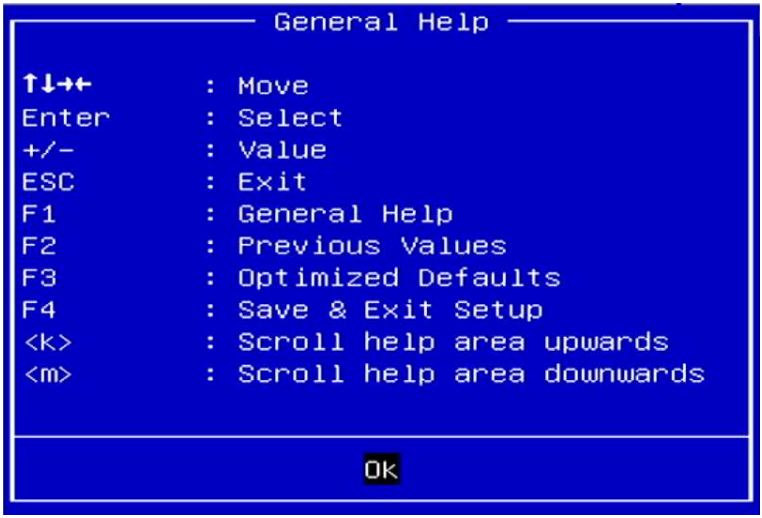
This chapter introduces the BIOS menus, which allow users to modify BIOS settings and control various system functions. The following topics are covered:

- **Main Setup**
- **Advanced Setup**
- **Chipset Setup**
- **Security Setup**
- **Boot Setup**
- **Save & Exit Setup**

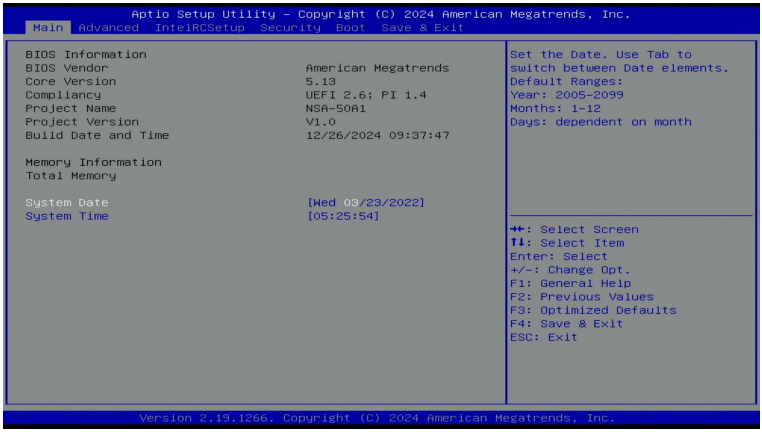
Press the <**Del**> key on your keyboard to enter the BISO setup. The main BIOS setup menu will then be displayed. You can access the other BIOS function settings.

Press the <**F1**> key to display general help.

Use the <**Up**>/<**Down**>/<**Left**>/<**Right**> keys to highlight the item, then use the **+** / **-** keys to select the value in each item, or press the <**Enter**> key to select the item and configure the function.

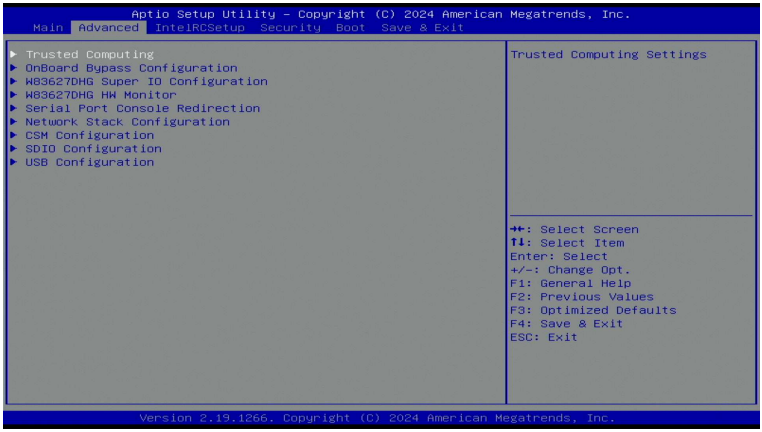


3.1. Main Setup



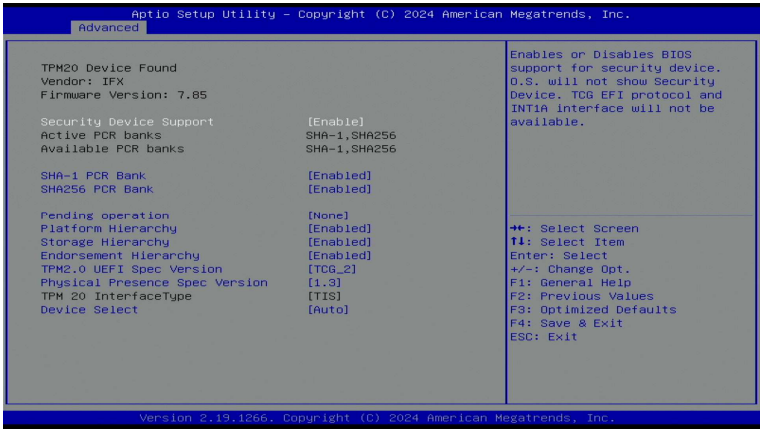
- **BIOS Vender**
  Displays the BIOS vendor, where we suppliers license from.
- **Core Version**
  Displays the BIOS vendor's kernel core version.
- **Compliancy**
  Displays this BIOS supporting industry standards compliance.
- **Project Name**
  Displays the project name.
- **Project Version**
  Displays the project version.
- **Build Date and Time**
  Displays this BIOS build date and time.
- **Total Memory**
  Displays the total memory size of the system.
- **System Date**
  Set the system date. Use Tab to switch between Date elements. Use + / - or numbers to change the value.
- **System Time**
  Set the system time. Use Tab to switch between Date elements. Use + / - or numbers to change the value.

3.2. Advanced Setup



- **Trusted Computing**
  Select the Trusted Computing item to enter the submenu of that item.
- **OnBoard Bypass Configuration**
  Select the OnBoard Bypass Configuration item to enter the submenu of that item.
- **W83627DHG Super IO Configuration**
  Select the W83627DHG Super IO Configuration item to enter the submenu of that item.
- **W83627DHG HW Monitor**
  Select the W83627DHG HW Monitor item to enter the submenu of that item.
- **Serial Port Console Redirection**
  Select the Serial Port Console Redirection item to enter the submenu of that item.
- **Network Stack Configuration**
  Select the Network Stack Configuration item to enter the submenu of that item.
- **CSM Configuration**
  Select the CSM Configuration item to enter the submenu of that item.
- **SDIO Configuration**
  Select the SDIO Configuration item to enter the submenu of that item.
- **USB Configuration**
  Select the USB Configuration item to enter the submenu of that item.

3.2.1 Trusted Computing



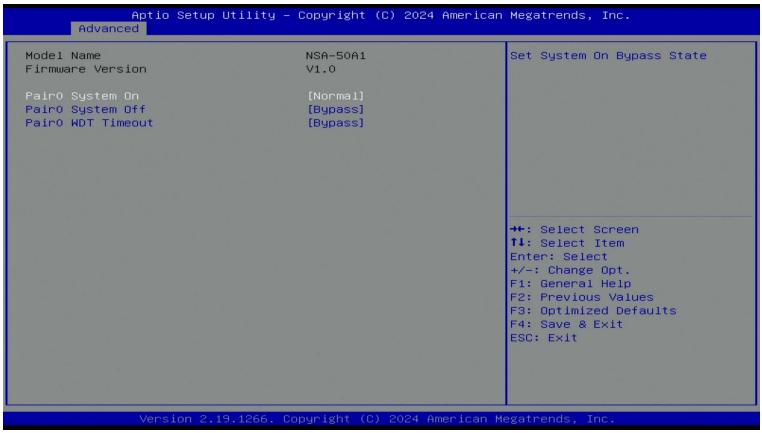
- **Security Device Support**
  Enables or Disables BIOS support for security device. O.S. will not show Security Device. TCG EFI protocol and INT1A interface will not be available.
  Option : Enable、Disable
- **SHA-1 PCR Bank**
  Enable or Disable SHA-1 PCR Bank
  Option : Enabled、Disabled
- **SHA256 PCR Bank**
  Enable or Disable SH256 PCR Bank
  Option : Enabled、Disabled
- **Pending operation**
  Schedule an Operation for the Security Device.
  Option : None、Clear

  NOTE :
  Your Computer will reboot during restart in order to change state of Security Device.
- **Platform Hierarchy**
  Enable or Disable Platform Hierarchy.
  Option : Enabled、Disabled
- **Storage Hierarchy**
  Enable or Disable Storage Hierarchy.
  Option : Enabled、Disabled
- **Endorsement Hierarchy**
  Enable or Disable Endorsement Hierarchy.
  Option : Enabled、Disabled
- **TPM2.0 UEFI Spec Version**
  Select the TCG2 Spec Version Support
  Option : TCG_1_2、TCG_2
- **Physical Presence Spec Version**
  Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3

Option : 1.2、1.3

- **Device Select**
  TPM 1.2 will restrict support to TPM 1.2 device, TPM 2.0 will restrict support to TPM 2.0 devices, Auto will support both with the default set to TPM 2.0 devices if not found, TPM 1.2 device will be enumerated.
  Option : TPM 1.2、TPM 2.0、Auto

3.2.2 OnBoard Bypass Configuration

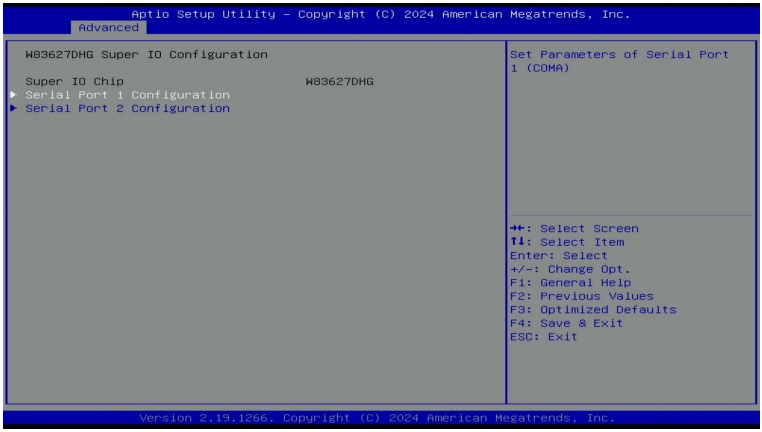


Each Pair Lan[a] and Lan[b] Bypass State Setting,

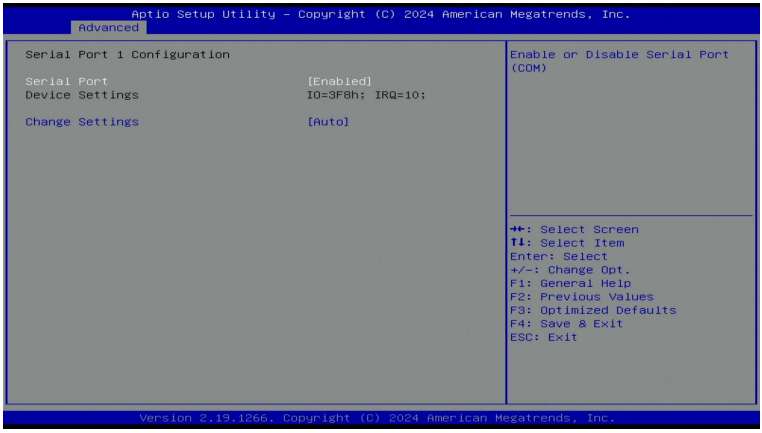
- **Pair0 System On**
  Set System On Lan[a] and Lan[b] work state.
  Option : Normal、Bypass
- **Pair0 System Off**
  Set System Off Lan[a] and Lan[b] work state.
  Option : Normal、Bypass
- **Pair0 WDT Timeout**
  Set Watchdog Timeout Lan[a] and Lan[b] work state.
  Option : Normal、Bypass

NOTE :
[Normal] Lan[a] and Lan[b] work on normal mode.
[Bypass] Lan[a] data will bypass to Lan[b].

3.2.3 W83627DHG Super IO Configuration

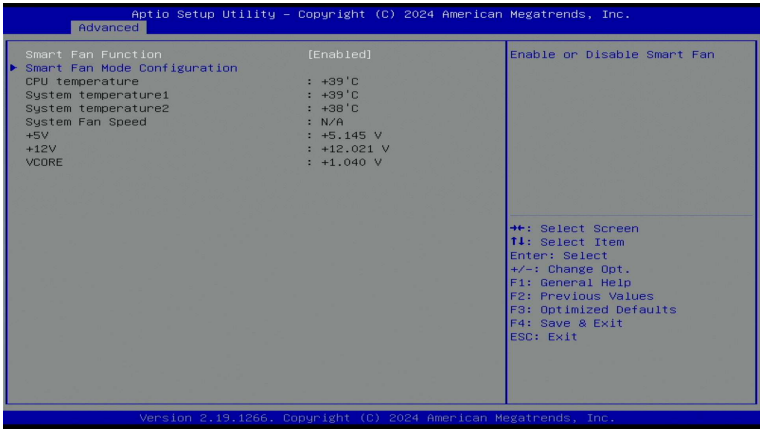


- **Serial Port 1 Configuration**
- **Serial Port 2 Configuration**
  Select the Serial Port x Configuration item to enter the submenu of that item.

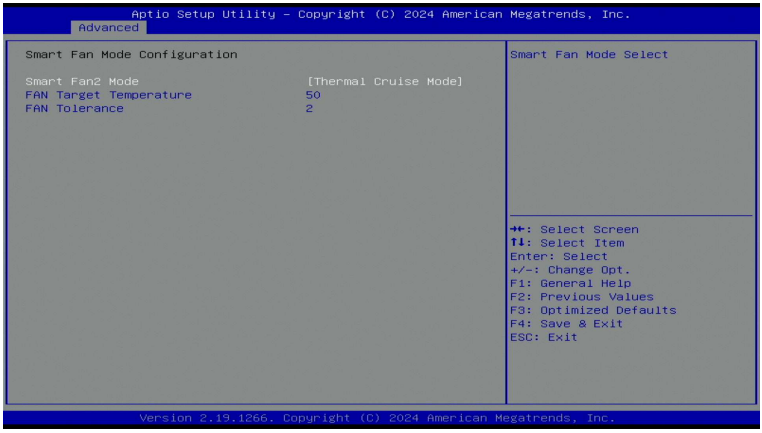


- **Serial Port**
  Select Enabled to enable the onboard serial port.
  Option : Enabled、Disabled
- **Change Settings**
  This option specifies the base I/O port address and the interrupt Request address of Serial Port.
  Select [Auto] to let the BIOS automatically assign the base I/O and IRQ address.

3.2.4 W83627DHG HW Monitor



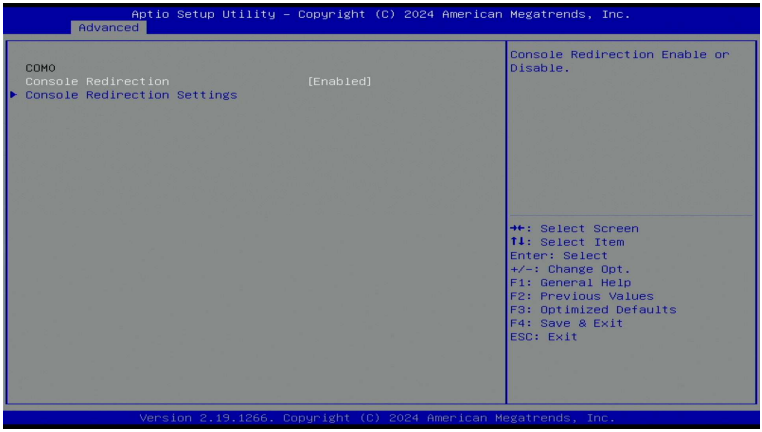
- **Smart Fan Function**
  Enable or Disable Smart Fan Function.
  Option : Enabled、Disabled
- **Smart Fan Mode Configuration**
  Select the Smart Fan Mode Configuration item to enter the submenu of that item.



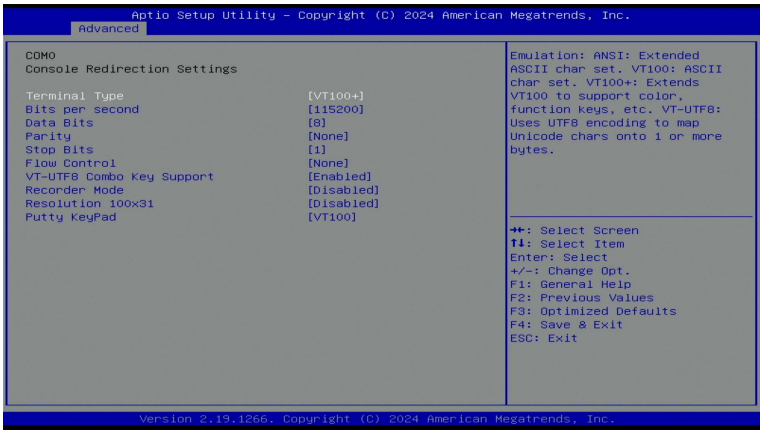
- **Smart Fan Mode**
  Control the fan speed with these options
  Option : Thermal Cruise Mode、Manual Mode
- **FAN Target Temperature**
  Input a target temperature between 1 ~ 127°C.
- **FAN Tolerance**
  Input a target temperature tolerance.

NOTE :
[Manual Mode] : You can set fixed fan speed.
[Thermal Cruise Mode] : You can adjust FAN Target Temperatur and FAN Tolerance manually. If CPU temp is lower than target temp-tolerance, the fan will run at low fan speed. If CPU temp is higherer than target temp+tolerance, the fan will run at full fan speed.

3.2.5 Serial Port Console Redirection



- **Console Redirection**
  Use this option to enable or disable Console Redirection.
  Option : Enabled、Disabled

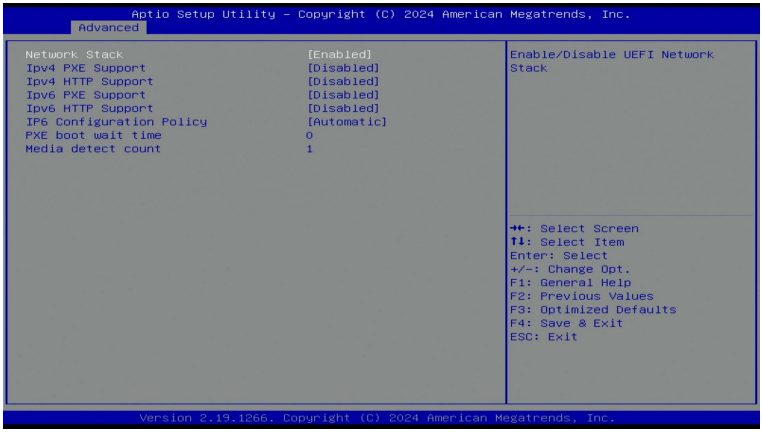


- **Terminal Type**
  Use this item to select the preferred terminal emulation type for out-of-band management.
  Option : VT100、VT100+、VT-UTF8、ANSI
- **Bits per second**
  Use this item to select the serial port transmission speed. The speed used in the host computer and the client computer must be the same.
  Option : 9600、19200、57600、115200
- **Data Bits**
  Use this item to set the data transmission size.

Option : 7、8

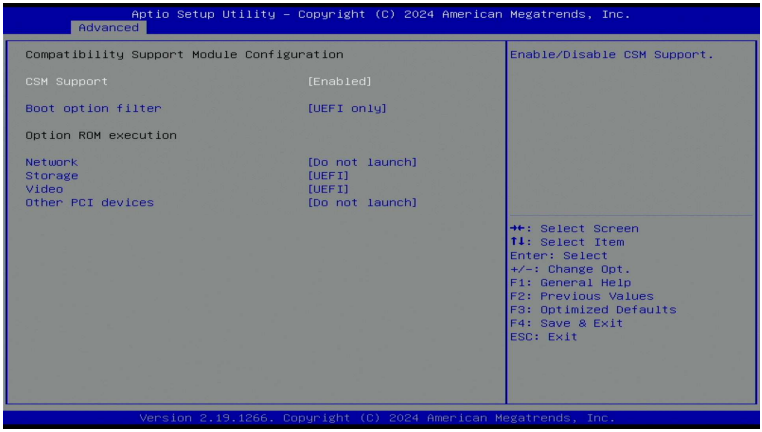
- **Parity**
  Use this item to select the parity bit.
  Option : None、Even、Odd、Mark、Space
- **Stop Bits**
  The item indicates the end of a serial data packet.
  Option : 1、2
- **Flow Control**
  Use this item to set the f low control to prevent data loss from buffer overflow. When sending data, if the receiving buffers are full, a “stop” signal can be sent to stop the data low. Once the buffers are empty, a “start” signal can be sent to restart the low. Hardware low uses two wires to send start/stop signals.
  Option : None、Hardware RTS/CTS
- **VT-UTF8 Combo Key Support**
  Use this item to enable or disable the VT-UTF8 Combo Key Support for ANSI/VT100 terminals.
  Option : Enabled、Disabled
- **Recorder Mode**
  With this mode enabled only text will be sent. This is to capture terminal data.
  Option : Enabled、Disabled
- **Resolution 100x31**
  Use this item to enable or disable extended terminal resolution support.
  Option : Enabled、Disabled
- **Putty KeyPad**
  Use this item to select Function Key and Keypad on Putty.
  Option : VT100、LINUX、XTERMR6、SCO、ESCN、VT400

3.2.6 Network Stack Configuration



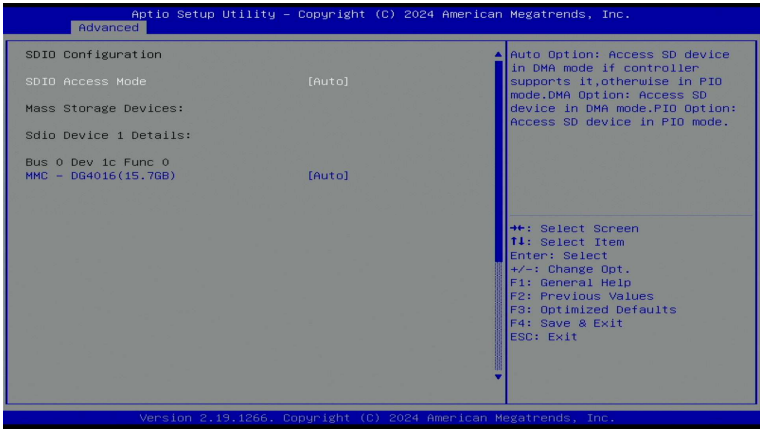
- **Network Stack**
  Enables or disables UEFI Network Stack
  Option : Enabled、Disabled
- **Ipv4 PXE Support**
  Enable or disable the Ipv4 PXE support.
  Option : Enabled、Disabled
- **Ipv4 HTTP Support**
  Enable or disable the Ipv4 HTTP support.
  Option : Enabled、Disabled
- **Ipv6 PXE Support**
  Enable or disable the Ipv6 PXE support.
  Option : Enabled、Disabled
- **Ipv6 HTTP Support**
  Enable or disable the Ipv6 HTTP support.
  Option : Enabled、Disabled
- **PXE boot wait time**
  Click ESC key to cancel the PXE boot wait time.
- **Media detect count**
  Set up the media detecting wait time by seconds.

3.2.7 CSM Configuration



- **CSM Support**
  Enable or disable CSM support.
  Option : Enabled、Disabled
- **Boot option filter**
  This option controls Legacy/UEFI ROMs priority
  Option : UEFI and Legacy、Legacy only、UEFI only
- **Network**
  Controls the execution of UEFI and Legacy PXE OpROM
  Option : UEFI、Legacy、Do not Launch
- **Stroage**
  Controls the execution of UEFI and Legacy Storage OpROM
  Option : UEFI、Legacy、Do not Launch
- **Video**
  Controls the execution of UEFI and Legacy Video OpROM
  Option : UEFI、Legacy、Do not Launch
- **Other PCI devices**
  Determines OpROM execution policy for devices other than Network, Storage, or Video
  Option : UEFI、Legacy、Do not Launch

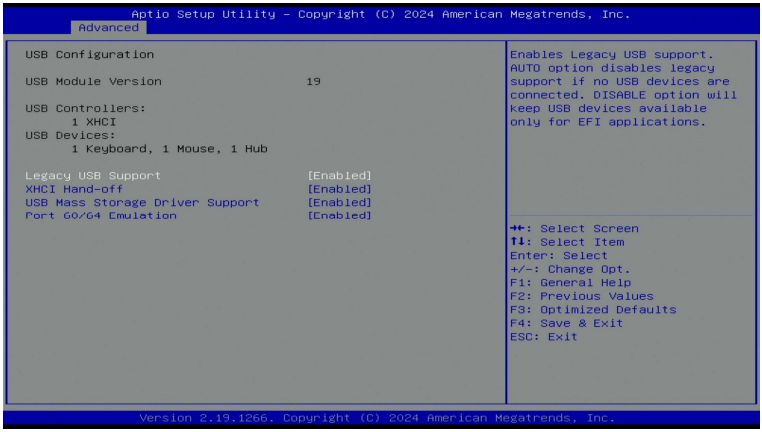
3.2.8 SDIO Configuration



- **SDIO Access Mode**
  Option : Auto、ADMA、SDMA、PIO

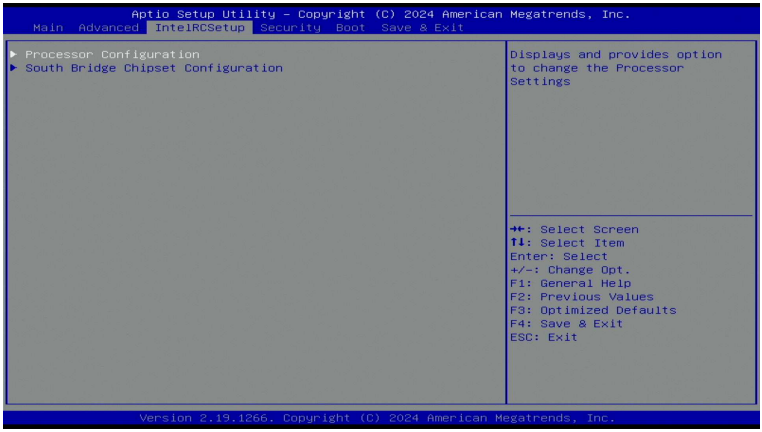
  NOTE :
  [Auto] : Access SD device in DMA mode if controller supports it. Otherwise in PIO mode
  [ADMA/SDMA] : Access SD device in DMA mode.
  [PIO] : Access SD device in PIO mode

3.2.9 USB Configuration



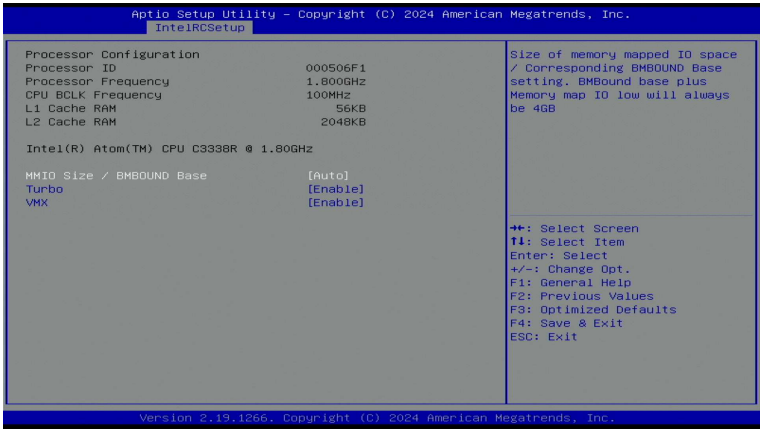
- **Legacy USB Support**
  Enables legacy USB support. AUTO option disables legacy support if no USB devices are connected. DISABLE option will keep USB devices available only for EFI applications.
  Option : Enabled、Disabled、Auto
- **XHCI Hand-off**
  This is a work-around solution for operating systems that do not support XHCI (Extensible Host Controller Interface) hand-off. The XHCI ownership change should be claimed by the XHCI driver.
  Option : Enabled、Disabled
- **USB Mass Storage Driver Support**
  Select Enabled for USB Mass Storage Driver support.
  Option : Enabled、Disabled
- **Port 60/64 Emulation**
  Select Enabled for I/O port 60h/64h emulation support. This should be enabled for the complete USB keyboard legasupport for the operating systems that do not support legacy USB devices.
  Option : Enabled、Disabled

3.3. IntelRCSetup



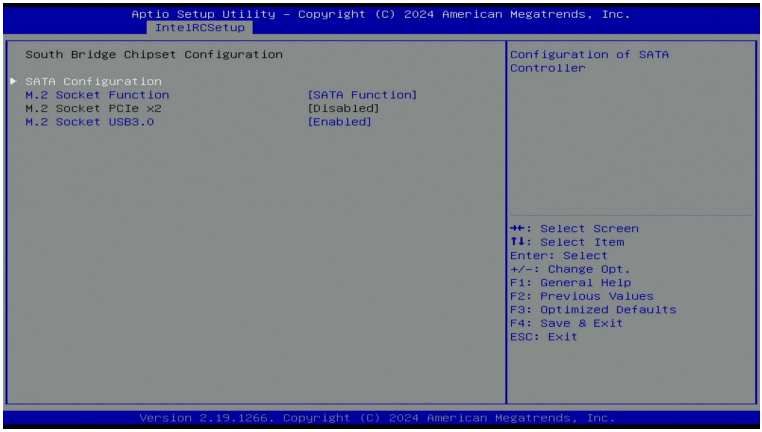
- **Processor Configuration**
  Select the Processor Configuration item to enter the submenu of that item.
- **South Bridge Chipset Configuration**
  Select the South Bridge Chipset Configuration item to enter the submenu of that item.

3.3.1 Processor Configuration

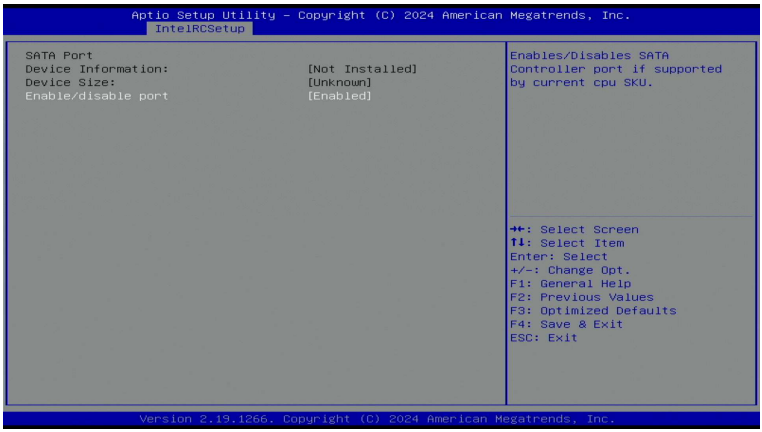


- **MMIO Size / BMBOUND Base**
  Use this feature to select the memory mapped IO size and BMBOUND base setting. The low for the two settings will always be 4GB
  Option : Auto、024M/3072M、3072M/1024M
- **Turbo**
  This feature allows processor cores to run faster than marked frequency in Specific conditions.
  Option : Enable、Disable
- **VMX**
  Intel Virtual Machine Extensions (VMX) for IA-32 processors that support Intel® Vanderpool Technology.
  Option : Enable、Disable

3.3.2 South Bridge Chipset Configuration



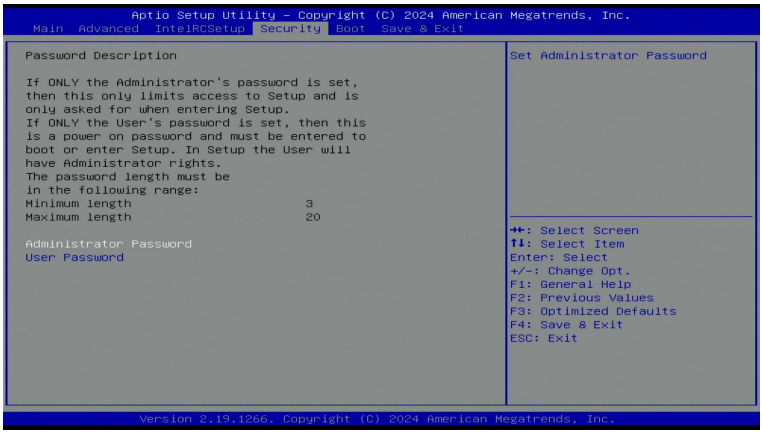
- **SATA Configuration**
  Select the SATA Configuration item to enter the submenu of that item.
- **M.2 Socket Function**
  Select M.2 for SATA or PCIe function selection.
  Option : PCIe Function、SATA Function
- **M.2 Socket PCIe x2**
  Select M.2 PCIe function enabled or disabled.
  Option : Enabled、Disabled
- **M.2 Socket USB3.0**
  Select M.2 USB3.0 function enabled or disabled.
  Option : Enabled、Disabled



- **Enable/disable port**
  SATA Port/M.2 Socket 1/M.2 Socket 2, SATA function enabled or disabled.

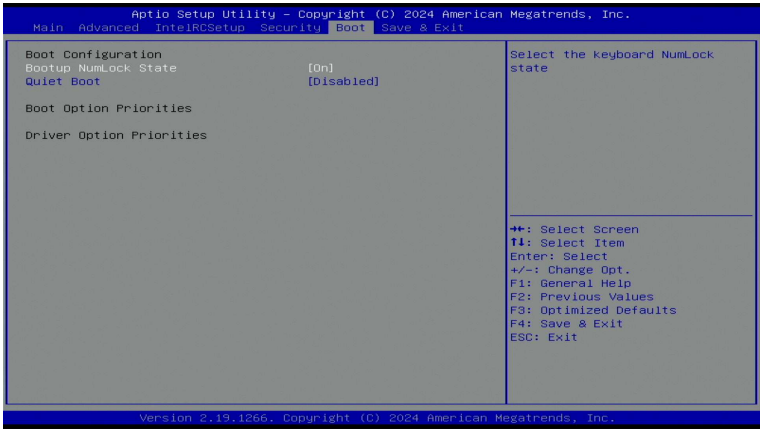
Option : Enabled、Disabled

3.3.3 Security Setup



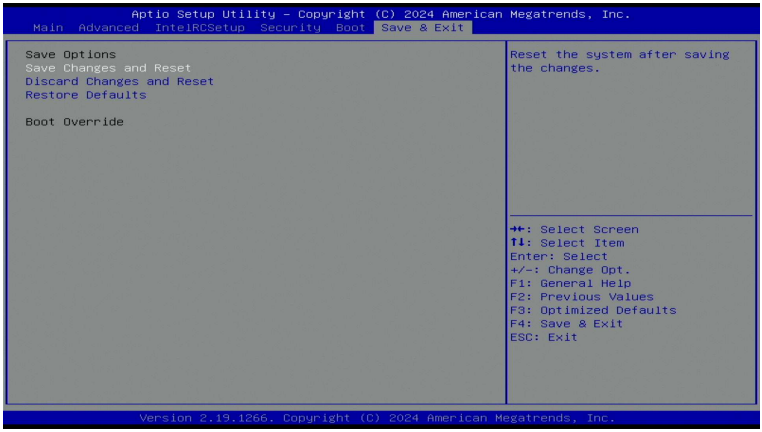
- **Administrator Password**
  Press Enter to create a new, or change an existing Administrator password.
- **User Password**
  Press Enter to create a new, or change an existing User password.

3.4. Boot Setup



- **Bootup NumLock State**
  Select the keyboard NumLock state
  Option : On、Off
- **Quiet Boot**
  Enables or disables Quiet Boot option
  Option : Disabled、Enabled
- **Boot Option Priorities**
  Specifies the boot sequence from the available devices.

3.5. Save & Exit Setup



- **Save Changes and Reset**
  Reset the system after saving the changes.
- **Discard Changes and Reset**
  Reset system setup without saving any changes.
- **Restore Defaults**
  Restore/Load Default values for all the setup options.

4. Software Installation and Programming Guide

4.1. Introduction

4.1.1 GPIO

The system provides a GPIO interface, allowing users to configure GPIO pins using GPIO APIs. When a pin is set as an input, its state can be read. When a pin is set as an output, users can set it to either high or low.

Pin number	GPIO name	Pin number	GPIO name
0	GP30	4	GP34
1	GP31	5	GP35
2	GP32	6	GP36
3	GP33	7	GP37

4.1.2 Software Reset Button

The system provides a software button function, using GPIO GP30 as the button trigger event. Users can assign it to specific software functions.

4.1.3 Watchdog

The system provides a Watchdog timer. When the timer expires, the system will reboot. Users can use the Watchdog APIs to configure and access the timer. The Watchdog timer can be set to a value between 1 and 255 seconds. Setting the timer to zero disables it.

4.1.4 LAN Bypass Subsystem

The system has a pair of LAN ports with a bypass function. Users can invoke the LAN Bypass APIs to control the bypass state of the LAN ports.

- **Get Bypass Firmware Version.**
  Get the bypass firmware version string.
- **Set Bypass WDT Timer.**
  Set the bypass watchdog timer to a value between 1 and 255 seconds. Setting it to 0 disables it.
- **Set Bypass WDT State.**
  Set the bypass state after the watchdog timer has timed out.
- **Get Bypass WDT State.**
  Get the bypass state after the watchdog timer has timed out.
- **Set Bypass Power On State.**
  Set the bypass state when the system power is turned on.
- **Get Bypass Power On State.**
  Get the bypass state when the system power is turned on.

- **Set Bypass Power Off State.**
  Set the bypass state when the system is shut down.
- **Get Bypass Power Off State.**
  Get the bypass state when the system is shut down.
- **Set Bypass Current State.**
  Set the current bypass state during system operation.
- **Get Bypass Current State.**
  Get the current bypass state during system operation.

4.2. File Descriptions

- **TestUtility.exe**

  GPIO、Reset Button、Watchdog and Lan Bypass functional test utility.

- **Libw83627.h**

  This file contains API declarations and macro definitions.

- **Libw83627.a**

  The static library for linux.

- **Libw83627.so**

  The dynamic library for linux.

- **Install_driver**

  This file is a Linux shell script. Running this file will help you install the environment and modprobe the driver on Linux.

- **Readme**

  If this is your first time using this utility, please read the README file first.

4.3. API List and Descriptions

4.3.1 GPIO

Syntax	**int Set_GPIO_Dir(int pin, int dir)**
Description	Set the GPIO input/output direction.
Parameters	**pin** : pin number, range is 0 ~ 7 **dir** : GPIO direction, 0 : Output, 1 : Input
Return Value	0 : successful, -1: fail.

Syntax	**int Get_GPI_Status(int pin)**
Description	Get the state of the GPI input pin.
Parameters	**pin** : pin number, range is 0 ~ 7
Return Value	1: HIGH, 0: LOW.

Syntax	**int Set_GPO_Status(int pin, int sts)**
Description	Set the state of the GPO output pin
Parameters	**pin** : pin number, range is 0 ~ 7 **sts** : GPO status, 1: HIGH, 0: LOW.
Return Value	0 : successful, -1: fail.

Syntax	**int Get_GPO_Status(int pin)**
Description	Get the state of the GPO output pin.
Parameters	**pin** : pin number, range is 0 ~ 7
Return Value	1: HIGH, 0: LOW.

4.3.2 Software Reset Button

Syntax	**int Get_SWBUT_Status(void)**
Description	Get the pressed or released state of a button.
Parameters	None
Return Value	1: Releaase, 0: Pressed.

4.3.3 Watchdog

Syntax	**void WDT_Start(int time)**
Description	Set the time value of the watchdog timer register and start the countdown.
Parameters	**time** : watchdog time value, range is 1 ~ 255
Return Value	Returns the value of the time counter as an unsigned integer.

Syntax	**void WDT_Stop(void)**
Description	Stop the watchdog timer.
Parameters	None

Return Value	None

4.3.4 LAN Bypass Subsystem

Syntax	**int Get_Bypass_Firmware_Ver(char *ver)**
Description	Get the bypass firmware version string and store it in a character pointer.
Parameters	char pointer, this pointer to 16 character array.
Return Value	0: successful, -1: fail.

Syntax	**int Set_Bypass_WDT(int pair, int time)**
Description	Set the bypass watchdog timer for the selected pair.
Parameters	**pair** : range is 1 ~ 4. **time** : Watchdog time value, range is 1 ~ 255, 0 is stop
Return Value	0: successful, -1: fail.

Syntax	**int Set_Bypass_WDT_State(int pair, int sts)**
Description	Set the bypass watchdog timer timeout state for the selected pair.
Parameters	**pair** : range is 1 ~ 4. **sts** : times out state, 1: Bypass, 0: Normal.
Return Value	0: successful, -1: fail.

Syntax	**int Get_Bypass_WDT_State(int pair)**
Description	Get the bypass watchdog timer timeout state for the selected pair.
Parameters	**pair** : range is 1 ~ 4.
Return Value	1: Bypass, 0: Normal.

Syntax	**int Set_Bypass_PWRON_State(int pair, int sts)**
Description	Set the bypass state when the system is powered on.
Parameters	**pair** : range is 1 ~ 4. **sts** : times out state, 1: Bypass, 0: Normal.
Return Value	0: successful, -1: fail.

Syntax	**int Get_Bypass_PWRON_State(int pair)**
Description	Get the bypass state when the system is powered on.
Parameters	**pair** : range is 1 ~ 4.
Return Value	1: Bypass, 0: Normal.

Syntax	**int Set_Bypass_PWROFF_State(int pair, int**

	sts)
Description	Set the bypass state when the system shuts down.
Parameters	**pair** : range is 1 ~ 4. **sts** : times out state, 1: Bypass, 0: Normal.
Return Value	0: successful, -1: fail.

Syntax	**int Get_Bypass_PWROFF_State(int pair)**
Description	Get the bypass state when the system shuts down."
Parameters	**pair** : range is 1 ~ 4.
Return Value	1: Bypass, 0: Normal.

Syntax	**int Set_Bypass_Current_State(int pair, int sts)**
Description	Set the current bypass state during system operation.
Parameters	**pair** : range is 1 ~ 4. **sts** : times out state, 1: Bypass, 0: Normal.
Return Value	0: successful, -1: fail.

Syntax	**int Get_Bypass_Current_State(int pair)**
Description	Get the current bypass state during system operation.
Parameters	**pair** : range is 1 ~ 4.
Return Value	1: Bypass, 0: Normal.

4.3.5 Notes

Syntax	**int libw83627_init(void)**
Description	This function must be called before using GPIO, the reset button, and the watchdog.
Parameters	None
Return Value	0: successful, -1: fail.

Syntax	**void lib_close(void)**
Description	Call this function if no other functions are used in the program.
Parameters	None
Return Value	None

5. FAQ

Q 1. Where is the serial number located on my system ?

- The serial number (S/N) is an alpha-numeric character located on the bottom orside chassis.

Technical Support Form

We deeply appreciate your purchase of Acrosser products. Please find the "**tech_form. doc**" file in our utility CD. If you have any questions or problems about Acrosser products, please fill in the following information. We will answer your questions in the shortest time possible.

Describe Your Info and Acrosser System Info

- Your Company Name: _____
- Your Contact Info: _____ Phone Number: _____
- Your E-Mail Address: _____
- Your Company Address: _____

  _____
- Acrosser Model Name: _____
- Acrosser Serial Number: _____

Describe System Configuration

- CPU Type: _____
- Memory Size: _____
- Storage Device (e.g. HDD, CF, or SSD): _____
- Additional Peripherals (e.g. Graphic Card): _____
- Operating System & Version (e.g. Windows 7 Embedded): _____
- Special API or Driver: _____

  (If yes, please provide it for debug.)
- Running Applications: _____
- Others: _____

Describe Your Problems or Questions:

Send the above information to one of the following Acrosser contacts:

- Acrosser Local Sales Representative
- Acrosser Authorized Sales Channels
- Acrosser Inquiry --- https://www.acrosser.com
- Acrosser FAX Number --- 886-2-29992887