AND-DNV3N3-xxR Series

Networking Micro Box

- *Intel® Denverton® SoC*
- *8 GbE Copper (1-pair bypass)*
- *SFP+*

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: 110-003
Date: Apr. 8, 2021

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

The AND-DNV3N3-xxR series networking product is based on Intel's Atom C3000 Refresh CPU, powerful and scalable for vary application scenarios.

This series provides a flexible system expansion versatility by supporting from Intel Atom C3338R(2 core), C3558R(4 core) to C3758R(8 core) with 8x GbE copper LANs (with 1-pair bypass), 2x or 4x 10G fiber networks (SFP+). Furthermore, in the system design, there are one 2.5-inch HDD/SSD and two Mini PCIe slots to support WiFi5 function (IEEE 802.11 a/b/g/n/ac) and 4G LTE feature as well.

1.1. Specifications

(Specifications are subject to change without notice.)

General

Thermal Solution
- Fanless, Passive heat dissipation(C3338R/C3558R)
- Or Smart Fan(C3758R)

CPU
- Intel® Denverton® C3758R 8 cores, 2.4GHz
- Intel® Denverton® C3558R 4 cores, 2.4GHz
- Intel® Denverton® C3338R 2 cores, 1.8GHz

Memory
- 2x SO-DIMM DDR4 (for C3558R/C3758R)
- 1x SO-DIMM DDR4 (for C3338R)

BIOS
- Support Console Re-direction
- Support Bypass Setting

Status	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)
- 8x Copper, 2/4x SFP+
- Intel i211, LAN [1:8] Copper
- SoC embedded SFI, SFP+[1:2](for C3558R)
- SoC embedded SFI, SFP+[1:4](for C3758R)

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

Storage

HDD Bay	• 1x 2.5” Internal HDD Bay
M.2 NVME	• Support 1x M.2 2280 card (for C3558R/C3758R)
CFast	• 1x CFast socket

I/O

Front Panel	• Ethernet Link/Act LED x8 (LAN[1:8) • Ethernet 1000M LED x8 (LAN[1:8]) • Ethernet 100/10M LED x8 (LAN[1:8]) • SFP+ Link LED x4 • SFP+ Act LED x4 • Sys Power LED x1 (12V) • Storage LED x1 • LAN Bypass LED x1
Rear Panel	• Reset button • 2x USB 3.0 • 2x Console ports, one is RJ45 another is micro USB • 2/4x SFP+ (For C3558R & C3758R) • 8x GbE LAN (Copper) • 1x VGA port (For C3558R & C3758R) • 4x SMA for WLAN & WWAN (IEEE 802.11 a/b/g/n/ac & 4G LTE) (Optional) • 2x DC-in connectors (12V)
Internal I/O	• 1x mini-PCIe connector (for Wi-Fi IEEE 802.11 a/b/g/n/ac 3T3R module) • 1x mini-PCIe connector (w USB 2.0+3.0 signal only, for 4G module only) • 1x SATA3+power connector

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 (C3758R)
Security & Mgmt.	• On-board TPM 2.0

Power Requirement

Power Adapter	• 12VDC, 40W or 60W Adapter

Software

OS Support	• Linux Kernel 4.4 & above, (64-bit)

Mechanical & Environment

Dimension	• 300(L) x 201(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, cULus
Drop Test	• ISTA-2A 2006

1.2. Package Contents

Check if the following items are included in the package.

	Item	Q'ty
☐	AND-DNV3N3-xxR System	1
☐	Console Cable	1
☐	Optional Rackmount Kit	1
☐	Power Adapter (12V)	2
☐	Power Cord	2
☐	Screw Pack	1

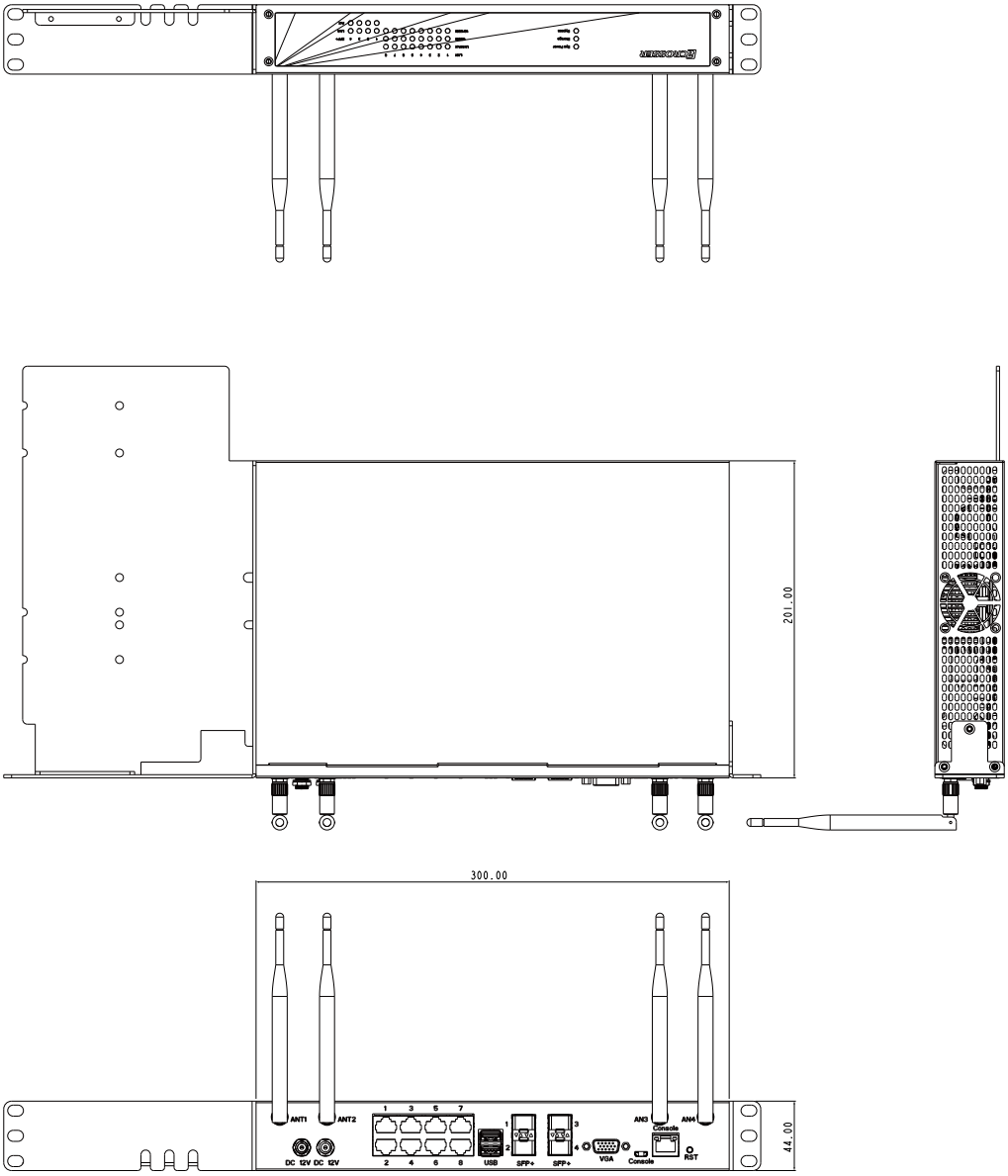
1.3. ANR-DNV3N3-xxR Series Comparison Table

Model Name	Description
AND-DNV3N3-02R	Intel Atom C3338R (2-core) SoC, 8 GbE Copper (1-pair bypass), 2x USB 3.1, 1x 2.5"SATAIII, 1x CFast, 2x mPCIe socket (for WLAN and 4G LTE), 2x DC-In and 40W AC adapter
AND-DNV3N3-04R	Intel Atom C3358R (4-core) SoC, 8 GbE Copper (1-pair bypass), 2x SFP+, 2x USB 3.1, 1x 2.5"SATAIII, 1x CFast, 2x mPCIe socket (for WLAN and 4G LTE), 1x M.2 2280 card, 1x VGA, 2x DC-In and 40W AC adapter
AND-DNV3N3-08R	Intel Atom C3758R (8-core) SoC, 8 GbE Copper (1-pair bypass), 4x SFP+, 2x USB 3.1, 1x 2.5"SATAIII, 1x CFast, 2x mPCIe socket (for WLAN and 4G LTE), 1x M.2 2280 card, 1x VGA, 2x DC-In and 60W AC adapter

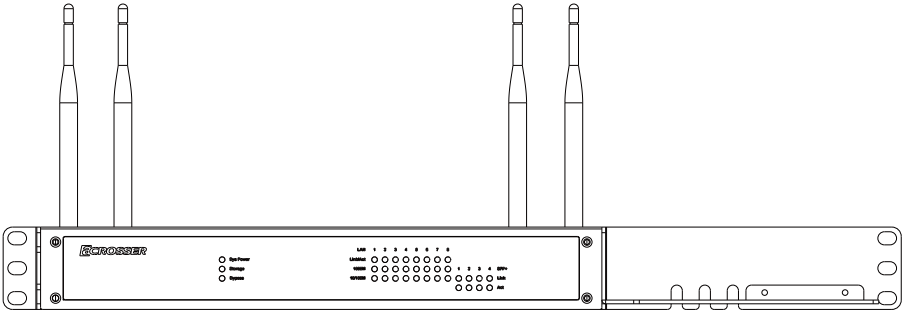
1.4. System Dissection

1.4.1. Dimensions

(Unit: mm)



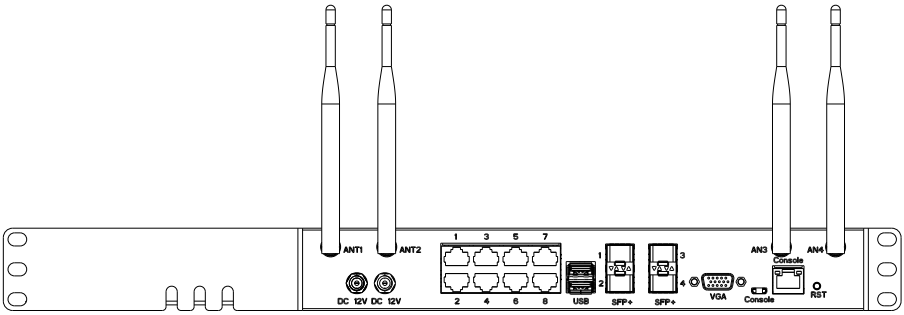
1.4.2. Front I/O Panel



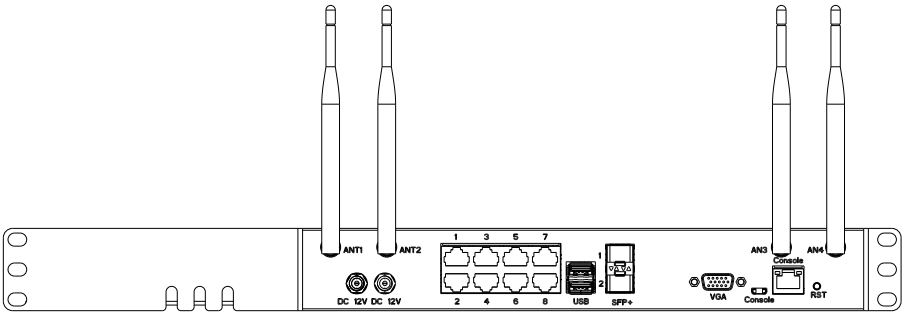
- **Sys Power**
  System Power LED
- **Storage**
  Storage Active LED
- **Bypass**
  LAN Bypass LED
- **LAN 1~8**
  LAN 1~8 Link/Active LED
- **SFP+ 1~4**
  SFP+ 1~4 Link/Active LED

1.4.3. Rear I/O Panel

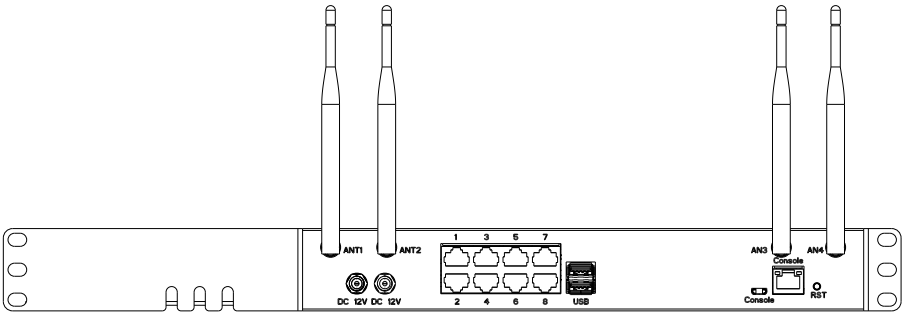
- **AND-DNV3N3-08R**



- **AND-DNV3N3-04R**



- **AND-DNV3N3-02R**



- **ANT1 ~ ANT4**
  SMA Antenna Hole. Reserved for optional Wi-Fi / BT, 4G LTE antenna.
- **DC 12V**
  DC12V Power Input
- **LAN1 ~ LAN8**
  RJ45 LAN Port
- **USB**
  USB 3.0 Port
- **SFP1 ~ SFP4**
  SFP LAN Port
- **VGA**
  VGA Port
- **Console**
  Console Port (RJ45)

Pin #	Signal
1	RTS
2	DTR
3	SOUT
4	GND
5	GND
6	SIN
7	DSR
8	CTS

- **Console**
  Console Port (Micro USB)

Note: *Both console ports (RJ45/ Micro USB) cannot be used at the same time.*

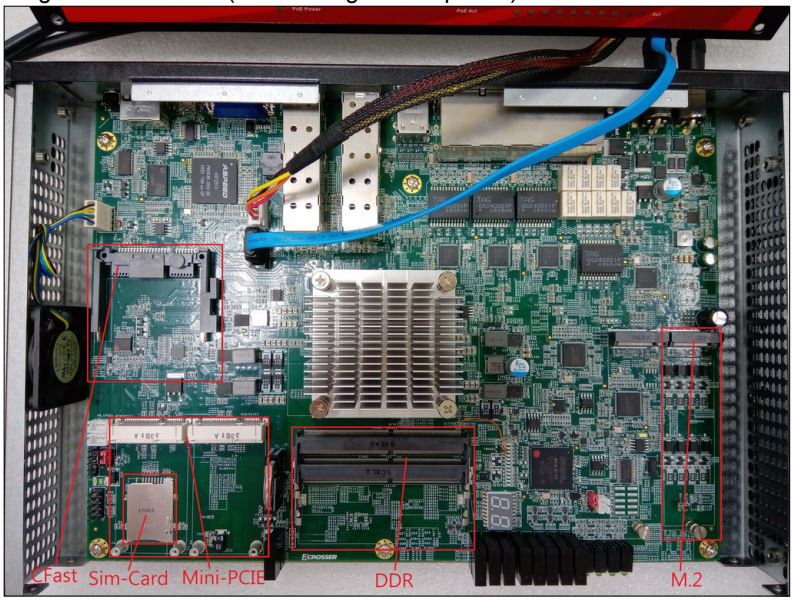
- **RST**
  Reset Button

2. Components Assembly

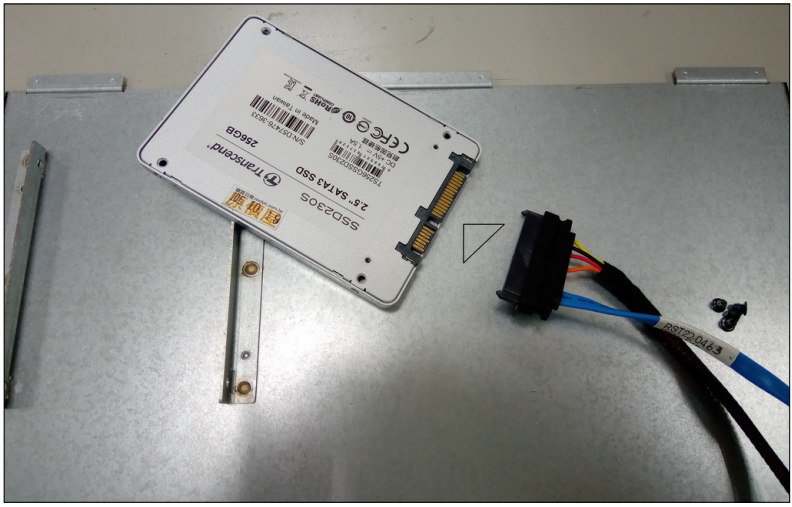
Please follow the instruction to install the inner modules.

2.1. HDD/SSD Installation

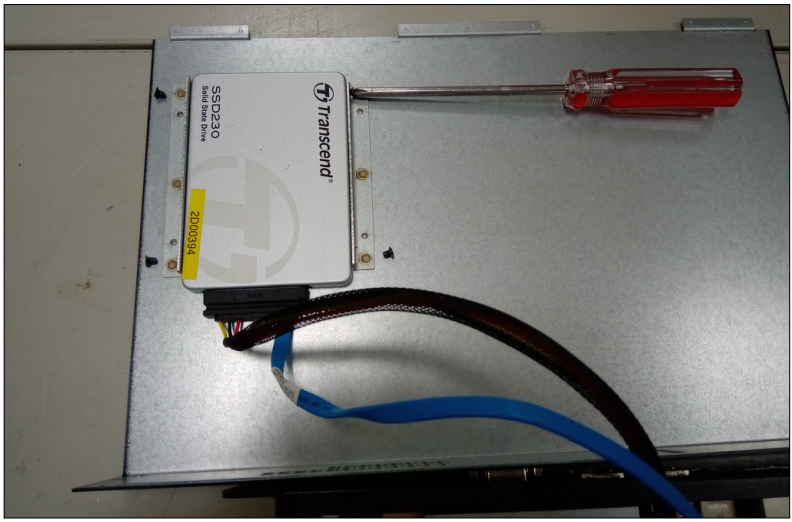
Step 1: Plug the SATA cable (both the signal and power) in the socket on PCB.



Step 2: Connect the SATA cable with the HDD/SSD.



Step 3: Fasten the HDD/SSD with 4 screws onto the inner side of the chassis top cover.



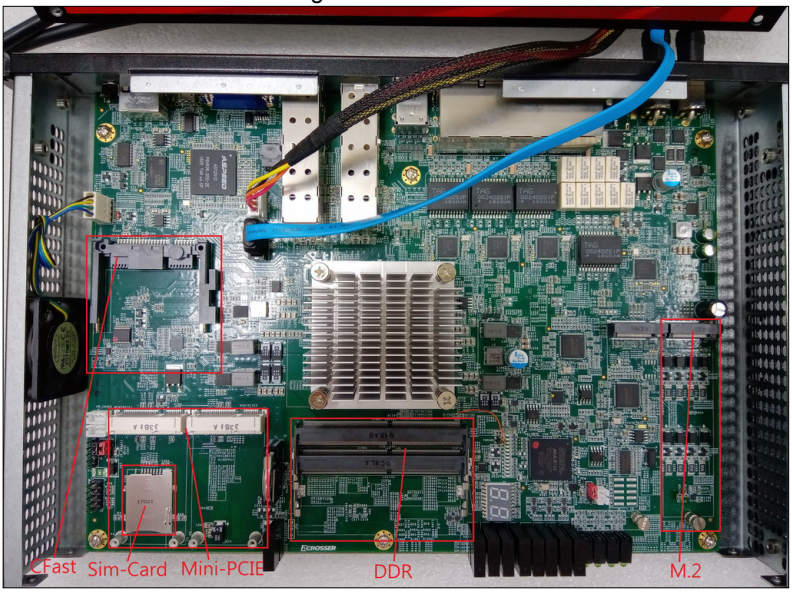
Step 4: Before closing the top cover, pay attation to arrange the cable wire among the PCB components spaces.

Step 5: Fasten the cover with 4 screws.

2.2. PCB Parts Description

There are four modular sockets/slots reserved to install your modules: CFast, Mini-PCIe, DDR, and M.2.

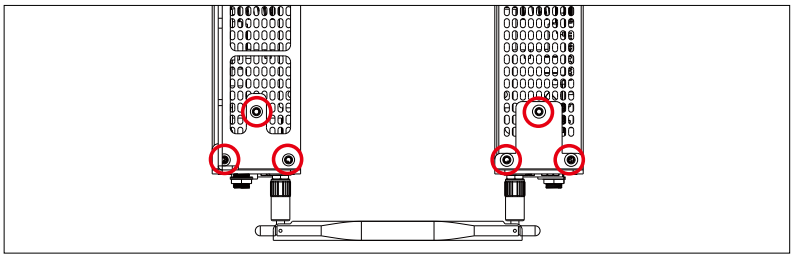
Step 1: To install the M.2, you will have to remove the fixing screw first, and then have it fastened after inserting the module.



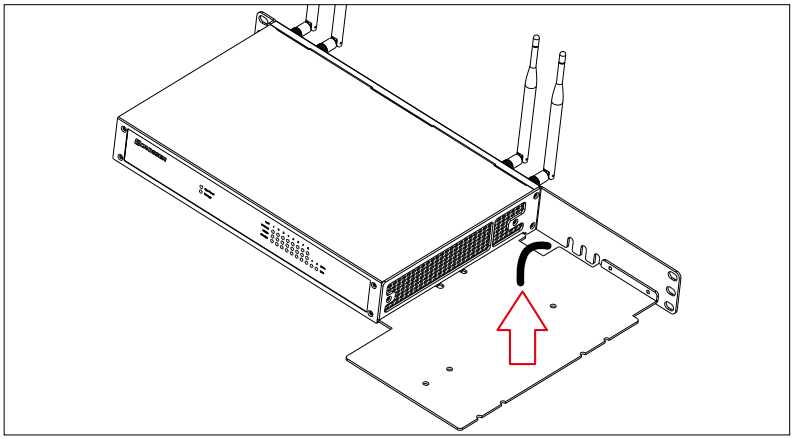
2.3. Adapter Installation Description

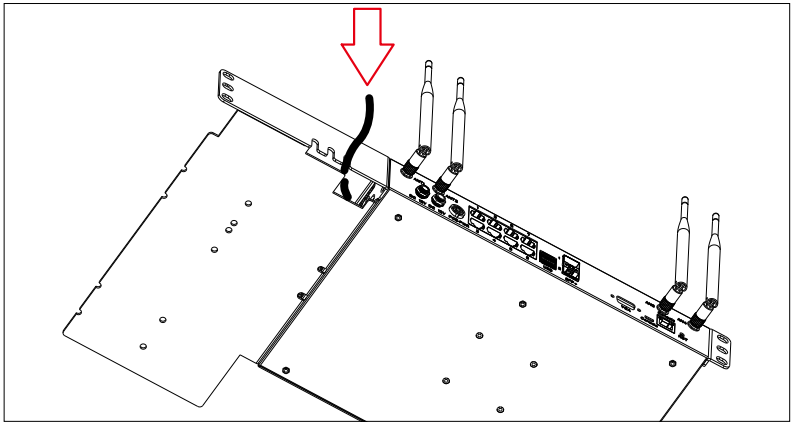
To install the power adapter:

Step 1: Use a Phillips screwdrive to affix the ear bracket to both sides of the chassis each with 3 screws.



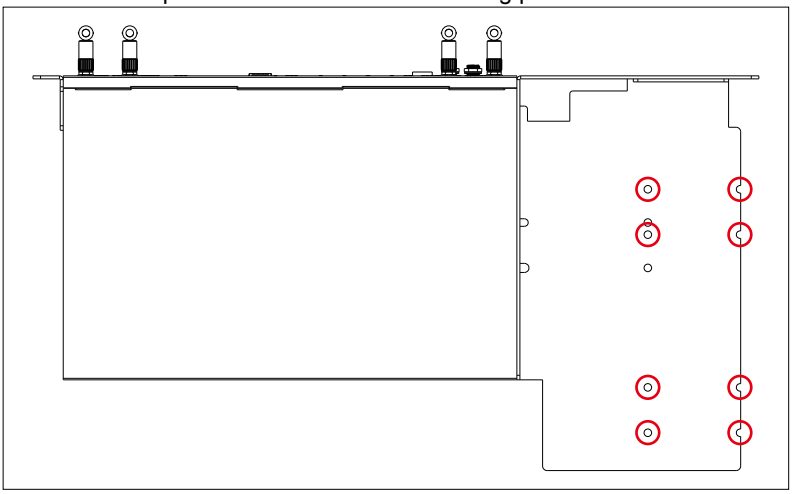
Step 2: Put the power adapter on the holding plate, pass its DC-out cable through the hole on the ear bracket, and plug it in the DC 12V jack of the front chassis.





Step 3: Arrange the remaining power cord.

Step 4: Fasten the adapter with cable ties to the holding plate.



3. BIOS Settings

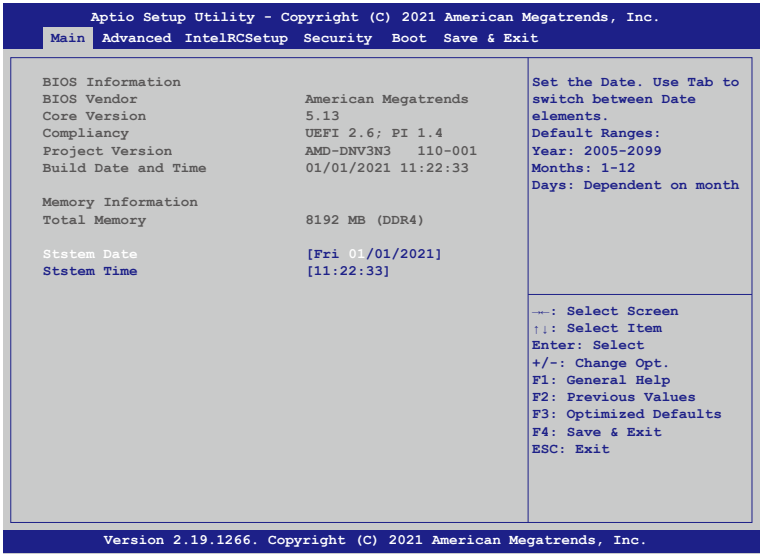
This chapter describes the BIOS menu displays and explains how to perform common tasks needed to get the system up and running. It also gives detailed explanation of the elements found in each of the BIOS menus. The following topics are covered:

- Main Setup
- Advanced Setup
- IntelRCSetup Setup
- Security Setup
- Boot Setup
- Save & Exit Setup

Once you enter the Award BIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. Use the arrow keys to highlight the item and then use the <Pg Up> <Pg Dn> keys to select the value you want in each item.

3.1. Main Setup

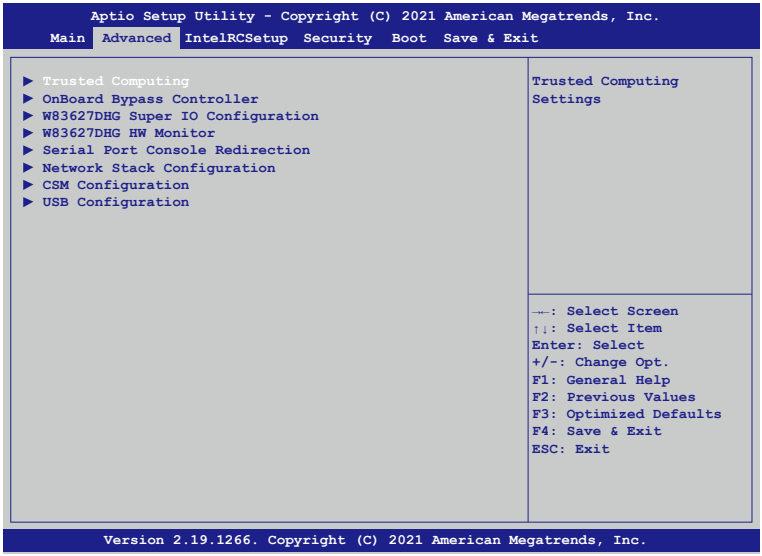
The BIOS setup main menu includes some options. Use the [Up/Down] arrow key to highlight the option, and then press the <**Enter**> key to select the item and configure the functions.



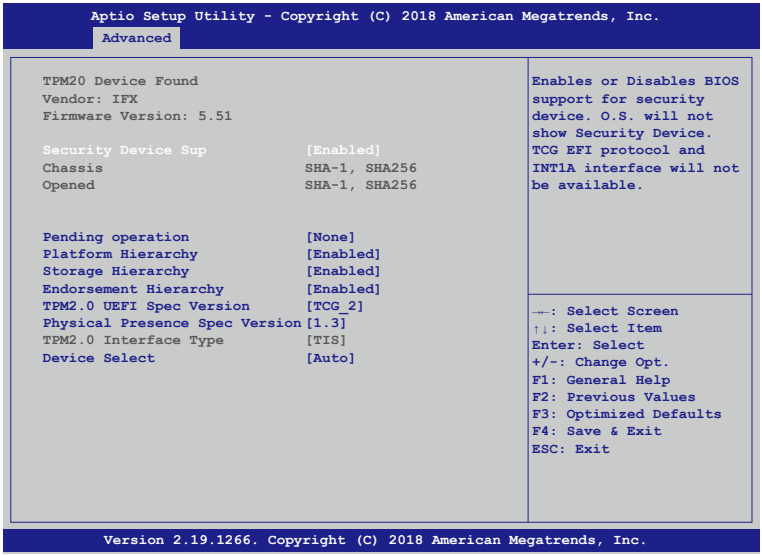
Note: *Listed at the bottom of the menu are the control keys. If you need any help with the item fields, you can press <**F1**> key, and it will display the relevant information.*

- **Total Memory**
  This item displays the total size of memory available in the system.
- **System Date/System Time**
  Use this option to change the system date and time. Highlight System Date or System Time using the arrow keys. Enter new values using the keyboard. Press the key or the arrow keys to move between fields. The date must be entered in MM/DD/YYYY format. The time is entered in HH:MM:SS format.

3.2. Advanced Setup



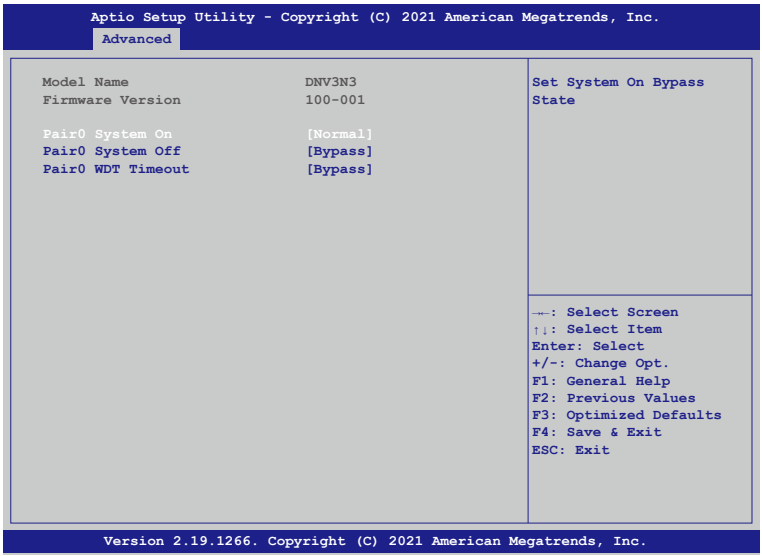
3.2.1. Advanced Setup: Trusted Computing



- **Security Device Suppor**
  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.

- **Pending operation**
  Schedule an Operation for the Security Device. NOTE: Your Computer will reboot during restart in order to change state of Security Device.
- **Platform Hierarchy**
  Enable or Disable Platform Hierarchy.
- **Storage Hierarchy**
  Enable or Disable Storage Hierarchy.
- **Endorsement Hierarchy**
  Enable or Disable Endorsement Hierarchy.
- **TPM2.0 UEFI Spec Version**
  Select the TCG2 Spec Version Support,
  TCG_1_2 : the Compatible mode for Win8/Win10.
  TCG_2 : Support new TCG2 protocol and event.
- **Physical Presence Spec Version**
  Select to Tell O.S. to support PPI Spec Version 1.2 or 1.3. Note some HCK tests might not support 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.

3.2.2. Advanced Setup: OnBoard Bypass Controller

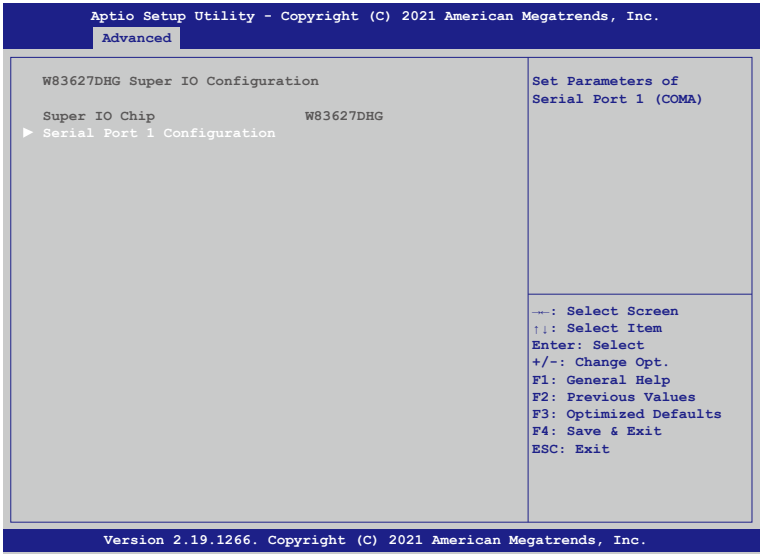


- **Pair0 System On**
  Each Pair Lan[a] and Lan[b] Bypass State Setting, System On /System off /WDT timeout State.

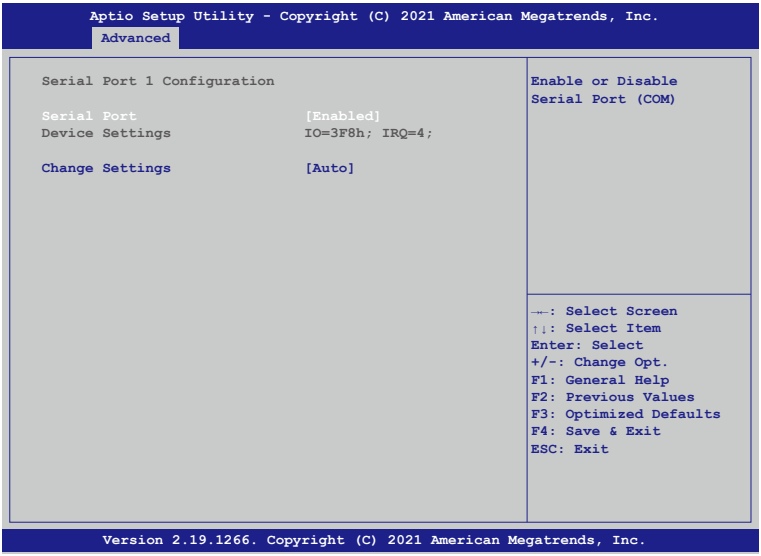
  [Normal] Lan[a] and Lan[b] work on normal mode.

  [Bypass] Lan[a] data will bypass to Lan[b].

3.2.3. Advanced Setup: W83627DHG Super IO Configuration



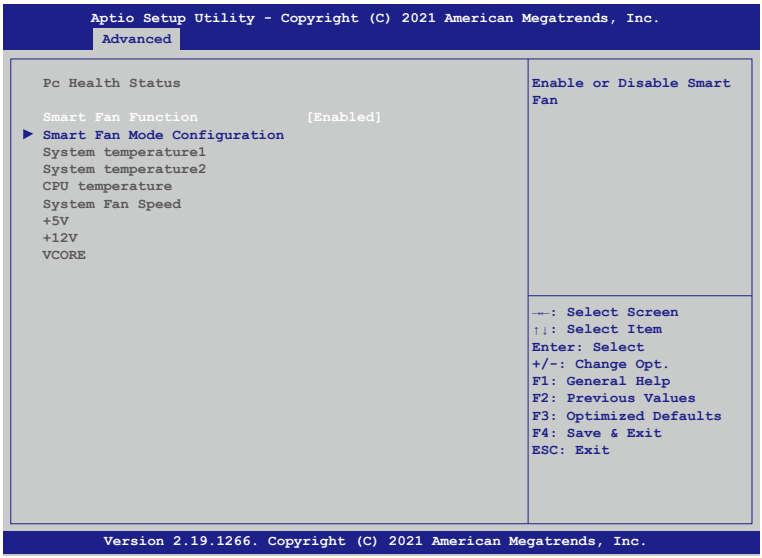
- **Serial Port 1 Configuration**
  Set Parameters of Serial Port 1 (COMA).



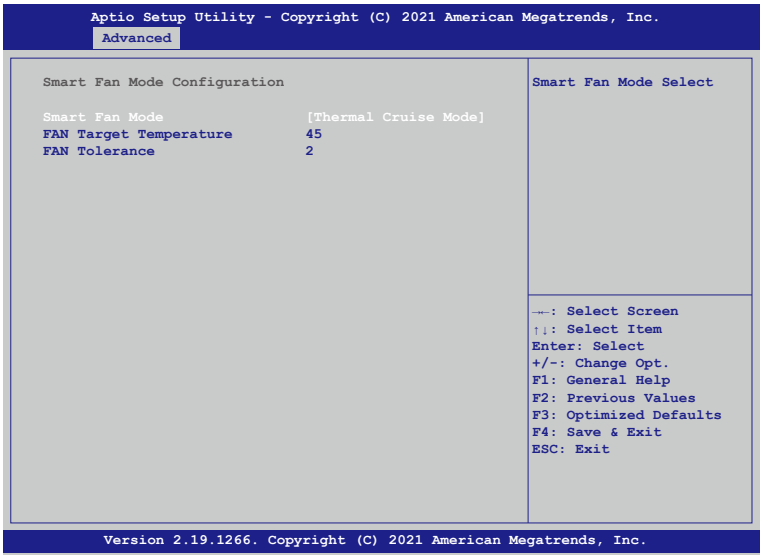
- **Serial Port**
  Select Enabled to enable the onboard serial port.
- **Change Settings**
  This option specifies the base I/O port address and the interrupt Request address of Serial Port.

  Select [Auto] to let the BIOS automatically assign the base I/O and IRQ address.

3.2.4. Advanced Setup: W83627DHG HW Monitor



- **Smart Fan Mode Configuration**
  Enable or Disable Smart Fan.



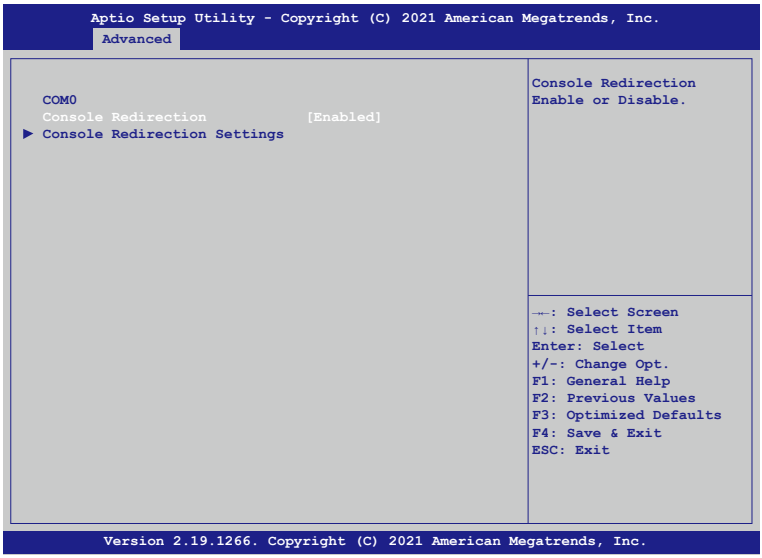
- **Smart Fan Mode**
  [Thermal Cruise Mode] : You can adjust FAN Target Temperatur and FAN Tolerance manually. If CPU temp is lower than target temp-tolerance, the fan will run at low fan

speed. If CPU temp ishigherer than target temp+tolerance, the fan will run at full fan speed.

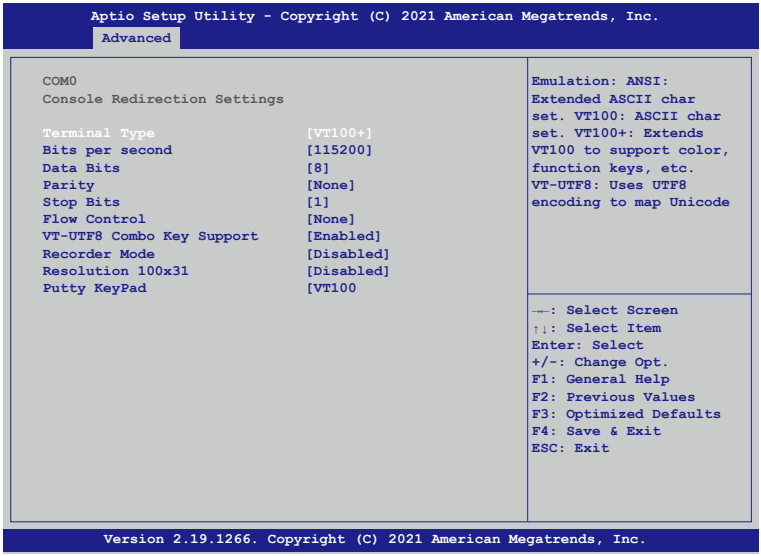
[Manual Mode] : You can set fixed fan speed.

- **FAN Target Temperature**
  Input a target temperature between 0 ~ 127°C.
- **FAN Tolerance**
  Input a target temperature tolerance.

3.2.5. Advanced Setup: Serial Port Console Redirection



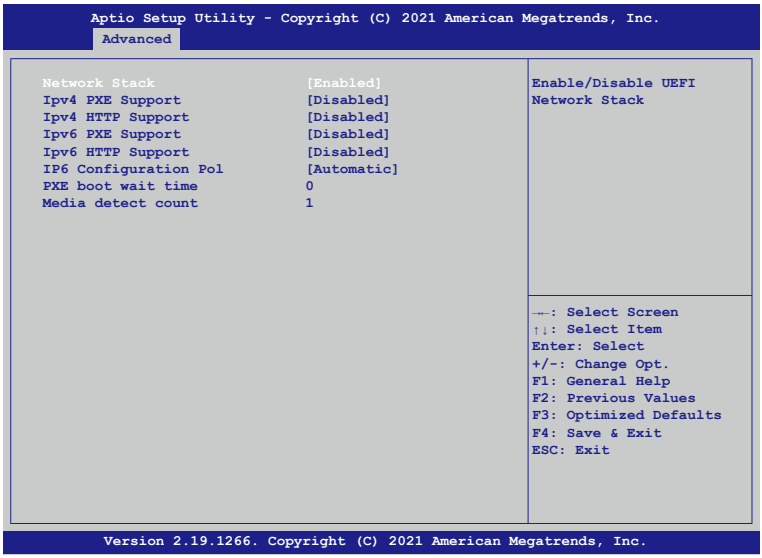
- **Console Redirection**
  Use this option to enable or disable Console Redirection. If this item is set to Enabled, you can select a COM Port to be used for Console Redirection.



- **Terminal Type**
  Use this item to select the preferred terminal emulation type for out-of-band management.
- **Bits per second**
  Use this item to select the serial port transmission speed. The speed used in the hostcomputer and the client computer must be the same. Long or noisy lines may require lowertransmission speed. he options include [9600], [19200], [57600] and [115200].
- **Data Bits**
  Use this item to set the data transmission size. he options include [7] and [8] (Bits).
- **Parity**
  Use this item to select the parity bit. he options include [None], [Even], [Odd], [Mark] and [Space].
- **Stop Bits**
  The item indicates the end of a serial data packet. he standard setting is [1] Stop Bit. Select [2] Stop Bits for slower devices.
- **Flow Control**
  Use this item to set the f low control to prevent data loss from buffer overf low. Whensending data, if the receiving bufers are full, a “stop” signal can be sent to stop the datalow. Once the bufers are empty, a “start” signal can be sent to restart the low. Hardwarelow uses two wires to send start/stop signals. he options include [None] and [HardwareRTS/CTS].

- **VT-UTF8 Combo Key Support**
  Use this item to enable or disable the VT-UTF8 Combo Key Support for ANSI/VT100 terminals.
- **Recorder Mode**
  Use this item to enable or disable Recorder Mode to capture terminal data and send it astext messages.
- **Resolution 100x31**
  Use this item to enable or disable extended terminal resolution support.
- **Putty KeyPad**
  Use this item to select Function Key and Keypad on Putty.

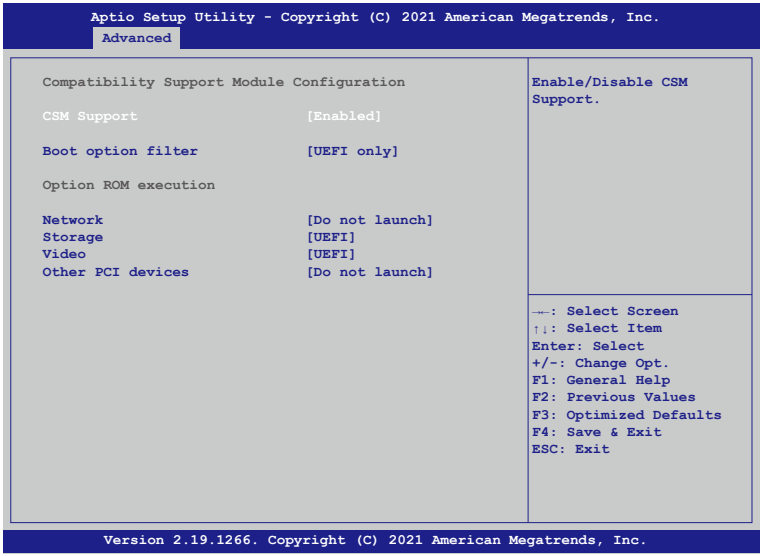
3.2.6. Advanced Setup: Network Stack Configuration



- **Ipv4 PXE Support**
  Enable or disable the Ipv4 PXE support.
- **Ipv4 HTTP Support**
  Enable or disable the Ipv4 HTTP support.
- **Ipv6 PXE Support**
  Enable or disable the Ipv6 PXE support.
- **Ipv6 HTTP Support**
  Enable or disable the Ipv6 HTTP support.
- **PXE boot wait time**
  Click ESC key to cancel the PXE boot wait time.

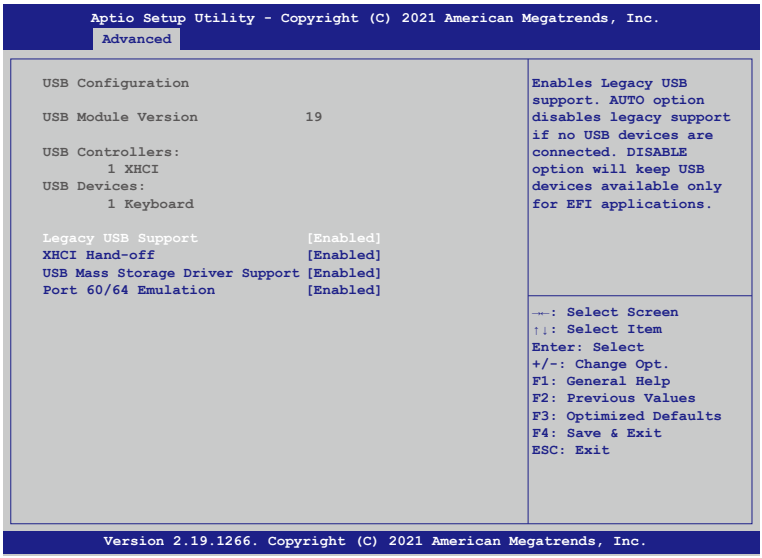
- **Media detect count**
  Set up the media detecting wait time by seconds.

3.2.7. Advanced Setup: CSM Configuration



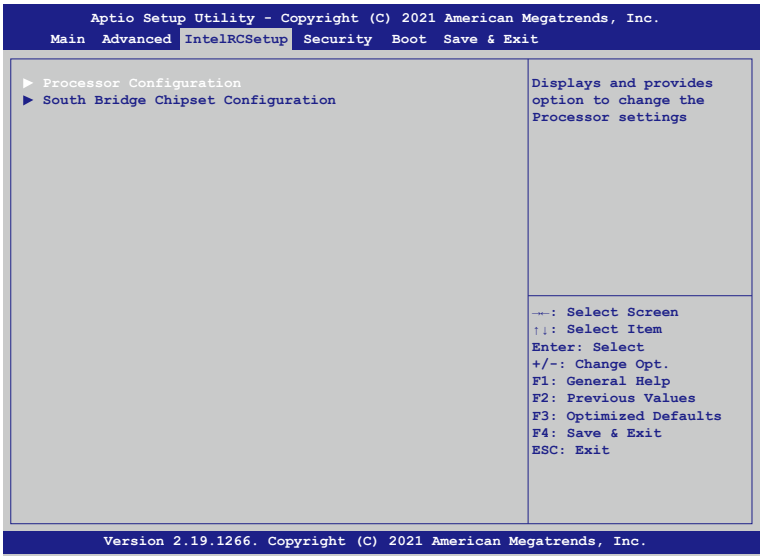
- **CSM Support**
  Use this feature to set the compatibility Option ROM. The options are Enabled, and Disabled. Disabled is the default option.
- **Boot option filter**
  Use this item to control the Legacy/UEFI memory sequence. Options are: [UEFI and Legacy], [Legacy only], [UEFI only].
- **Network**
  This item provides control of the operation UEFI and regular PXE/Storage/Video, ramdomly read memory (OpROM). Options are: [UEFI], [Legacy], [Do not Launch].

3.2.8. Advanced Setup: USB Configuration



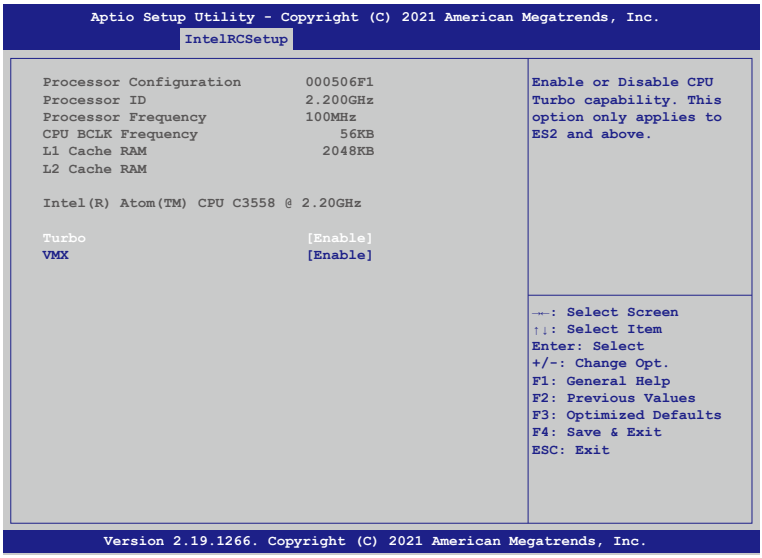
- **Legacy USB Support**
  Select Enabled to support onboard legacy USB devices. Select Auto to disable legacy support if there are no legacy USB devices present. Select Disable to have all USB devices available for EFI applications only.
- **XHCI Hand-off**
  This is a work-around solution for operating systems that do not support XHCI (Extensible Host Controller Interface) hand-off. The XHCI ownership change should be claimed by the XHCI driver.
- **USB Mass Storage Driv**
  Select Enabled for USB Mass Storage Driver support.
- **Port 60/64 Emulation**
  Select Enabled for I/O port 60h/64h emulation support, which in turn, will provide complete legacy USB keyboard support for the operating systems that do not support legacy USB devices.

3.3. IntelRCSetup



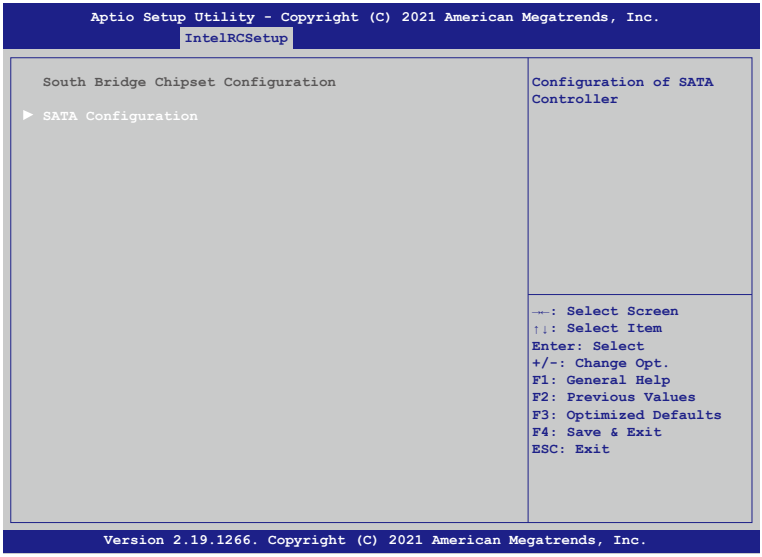
- **Processor Configuration**
  Displays and provides option to change the Processor Settings.

3.3.1. IntelRCSetup: Processor Configuration

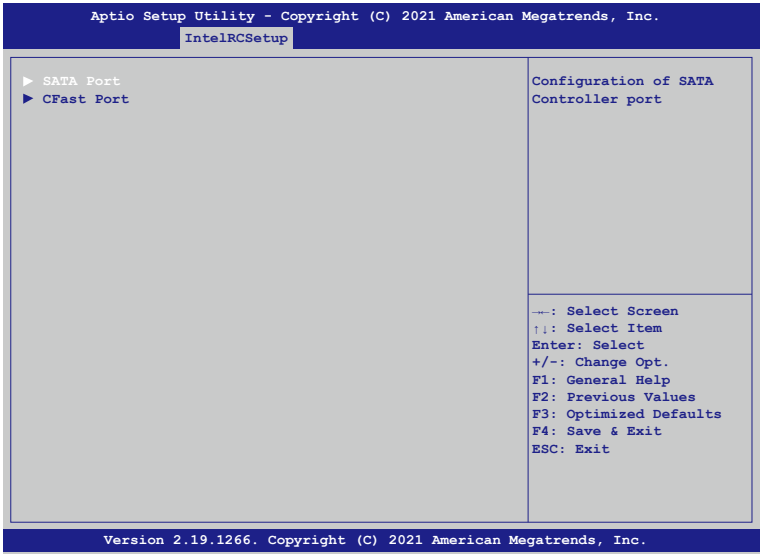


- **Turbo**
  This feature allows processor cores to run faster than marked frequency in specific conditions.
- **VMX**
  Enable or Disable Intel Virtual Machine Extensions (VMX) for IA-32 processors that support Intel® Vanderpool Technology.

3.3.2. IntelRCSetup: South Bridge Chipset Configuration

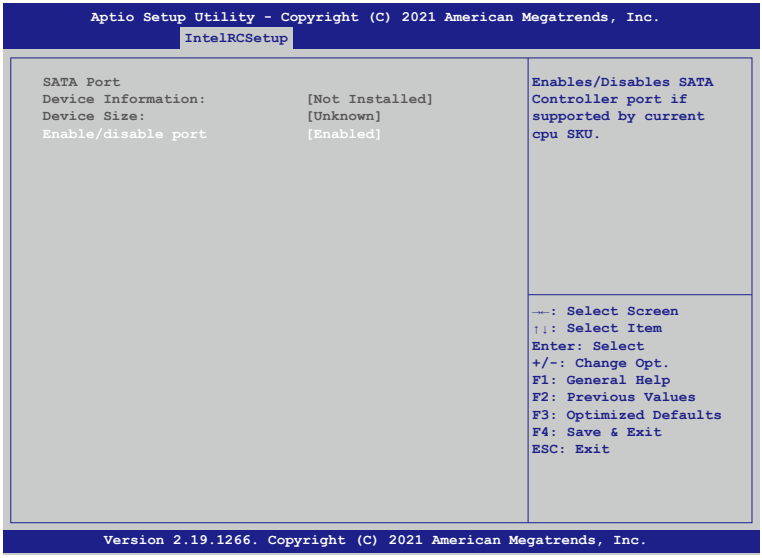


- **SATA Configuration**
  Configuration of SATA Controller.



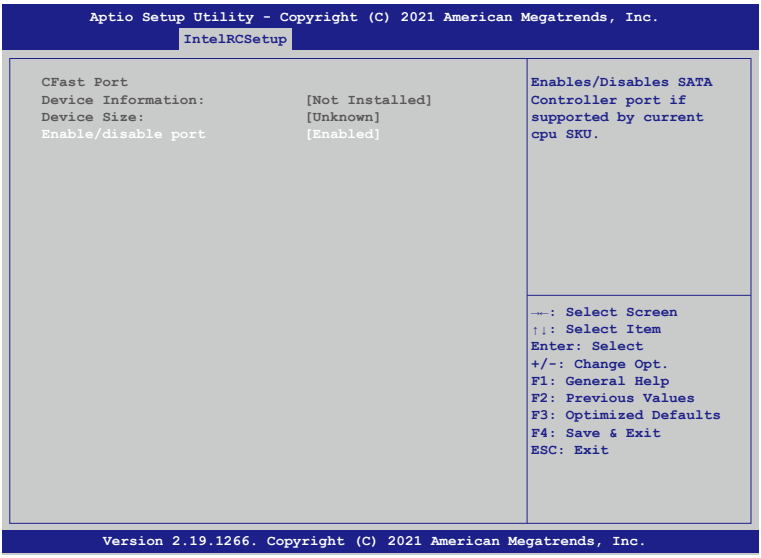
- **SATA Port**
  Configuration of SATA Controller port.

3.3.3. IntelRCSetup: SATA Port



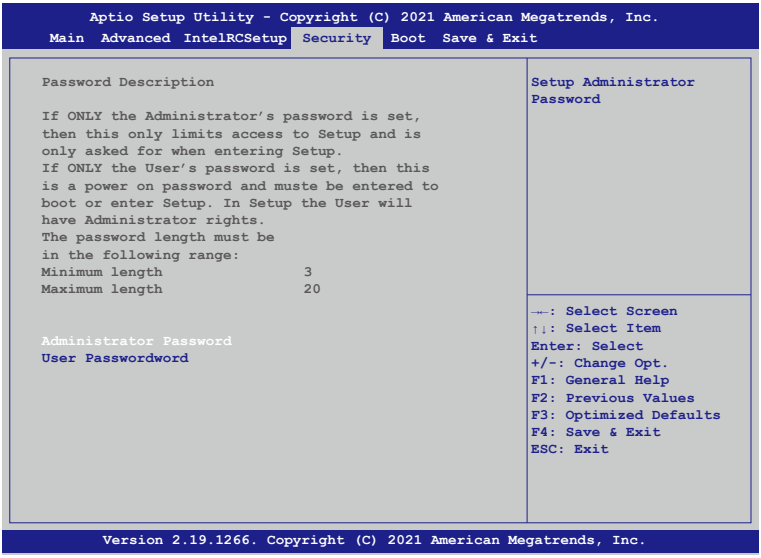
- **Enable/disable port**
  Enables/Disables SATA Controller port if supported by current cpu SKU.

3.3.4. IntelRCSetup: CFast Port



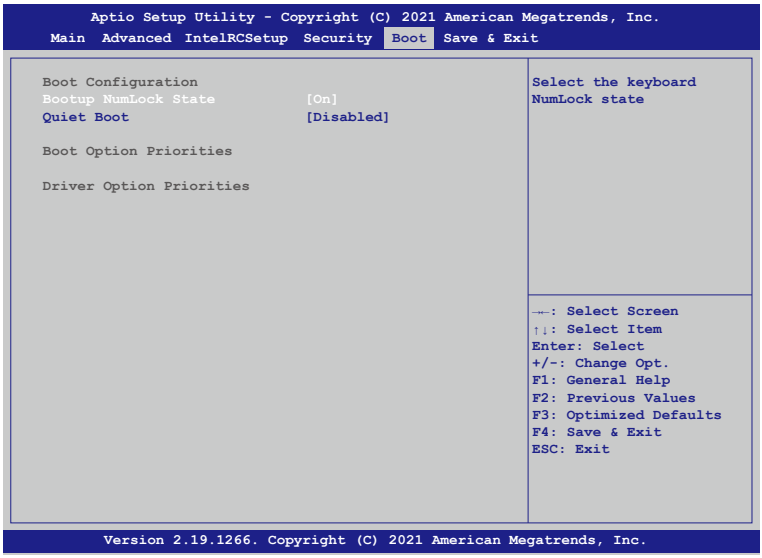
- **Enable/disable port**
  Enables/Disables SATA Controller port if supported by current cpu SKU.

3.4. Security Setup



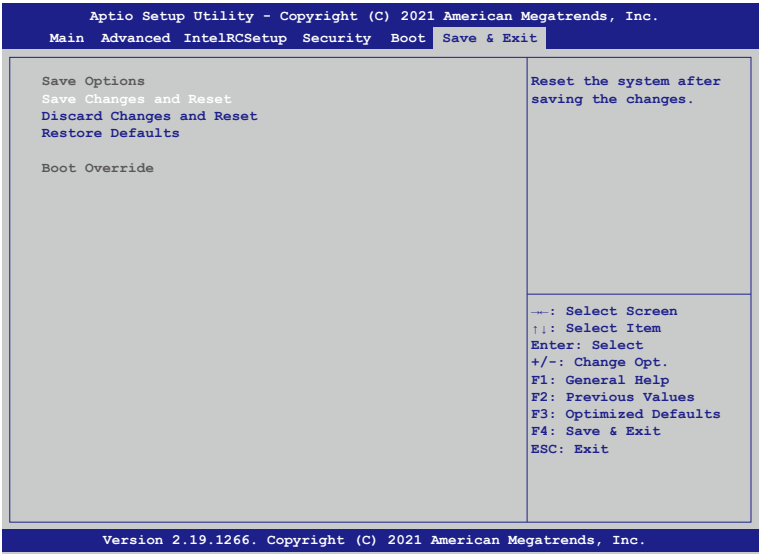
- **Setup Administrator Password**
  Press Enter to create a new, or change an existing Administrator password.
- **User Password**
  Press Enter to create a new, or change an existing User password.

3.5. Boot Setup



- **Bootup NumLock State**
  This feature selects the Power-on state for the Numlock key.
- **Quiet Boot**
  Use this feature to select the screen display between POST messages or the OEM logo at bootup. Select Disabled to display the POST messages. Select Enabled to display the OEM logo instead of the normal POST messages.
- **Boot Option Priorities**
  This feature allows the user to specify which devices are boot devices and the order of priority from which the systems boots from during startup.

3.6. Save & Exit Setup



- **Save Changes and Reset**
  When you have completed the system configuration changes, select this option to save all changes made and reset the system.
- **Discard Changes and Exit**
  Select this option to quit the BIOS Setup without making any permanent changes to the system configuration and reboot the computer. Select Discard Changes and Exit from the Exit menu and press <Enter>.
- **Restore Optimized Defaults**
  To set this feature, select Restore Optimized Defaults and press <Enter>. These are factory settings designed for maximum system performance but not for maximum stability.
- **Boot Override**
  This feature allows the user to override the Boot Option Priorities sequence in the Boot menu and immediately boot the system with another device specified by the user. This is a onetime override.

4. Software Installation and Programming Guide

4.1. Introduction

4.1.1. Environment

This test utility develop is based on kernel 4.8 above (Ubuntu 18.04.1 Desktop 64bit).

4.1.2. GPIO

The AND-DNV3N3-xxR series provides GPIO interface. Users can use the GPIO APIs to control GPO Pin.

4.1.3. Watchdog

The AND-DNV3N3-xxR series provides a Watchdog Timer. Users can use the Watchdog APIs to configure and to access the Watchdog timer. The Watchdog timer can be set to 1~255 seconds. Setting the timer to zero disables the timer. The remaining seconds of the timer to reboot can be read from the timer.

4.1.4. LAN Bypass Subsystem

Two pairs of LAN ports on AND-DNV3N3-xxR series implements the bypass function. Users can invoke the LAN Bypass APIs to control the bypass states of the LAN ports.

1. Get bypass firmware version.
2. Set bypass wdt.
3. Set bypass wdt action.
4. Get bypass wdt action.
5. Set bypass power on action.
6. Get bypass power on action.
7. Set bypass power off action.
8. Get bypass power off action.
9. Set bypass current action.
10. Get bypass current action.

4.2. File Descriptions

4.2.1. GPIO/Watchdog/LAN Bypass Subsystem Module

1. TestUtility.exe

The GPIO,Watchdog , Lan Bypass,. Console user interface bin binary.

2. Libw83627.h

This file includes the declarations of the APIs and macro definitions.

3. Libw83627.a

The static library for linux.

4. Libw83627.so

The dynamic library for linux.

5. Install_driver

This file is linux shell script file. Run this file can help you install environment and modprobe driver on linux.

6. readme

Use this utility first. Please read the readme file first.

4.3. API List and Descriptions

4.3.1. GPIO

Syntax:	Get_gpi_status(int pin)
Description:	Get the status of GPIO input pins status.
Parameters:	This function fills in an integer variable as the parameter. The pin0 ~ pin1 is the status of the input pins.
Return Value:	1: HIGH, 0: LOW.

Syntax:	Get_gpo_status(int pin)
Description:	Get the status of GPIO output pins status.
Parameters:	This function fills in an integer variable as the parameter. The pin0 ~ pin1 is the status of the output pins.
Return Value:	1: HIGH, 0: LOW.

Syntax:	Set_gpo(int pin, int value)
Description:	Set the status of GPIO output value.
Parameters:	Set value 0 is Low, 1 is High
Return Value:	If the function sets the values successfully, it returns 0 or -1, any other returned value stands for error.

4.3.2. Watchdog

Syntax:	Void wdt_start(int _timevalue)
Description:	This function gets the watchdog timer register to the timevalue and starts to count down.
Parameters:	The parameter 'val' is the value to set to watchdog timer register. The range is 1 ~ 255.
Return Value:	This function returns the value of the time counter and returns it to the caller as an unsigned integer.

Syntax:	Void wdt_stop(void)
Description:	This function sets the watchdog timer stop.
Parameters:	None.
Return Value:	None.

4.3.3. LAN Bypass Subsystem

Syntax:	int get_bypass_firmware_ver(char *ver)
Description:	This function can get bypass firmware version and data to save in char 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:	This function can set which pair bypass Wdt timer.
Parameters:	pair: 1-4 , time: 1-255(sec), 0:stop.
Return Value:	0: Successful, -1: fail.

Syntax:	int set_bypass_wdt_action(int pair, int action)
Description:	This function can set which pair bypass Wdt time up action.
Parameters:	pair: 1-4 , action: 0:bypass, 1:normal
Return Value:	0: bybpass, 1: normal, -1: fail.

Syntax:	int get_bypass_wdt_action(int pair)
Description:	This function can get which pair bypass Wdt time up action.
Parameters:	pair: 1-4
Return Value:	0: bybpass, 1: normal, -1: fail.

Syntax:	int set_bypass_poweron_action(int pair, int action)
Description:	This function can set which pair bypass power on action.
Parameters:	pair: 1-4, action: 0: bypass, 1: normal.
Return Value:	0: Successful, -1: fail.

Syntax:	int get_bypass_poweron_action(int pair)
Description:	This function can get which pair bypass power on action.
Parameters:	pair: 1-4.
Return Value:	0: bybpass, 1: normal, -1: fail.

Syntax:	int set_bypass_poweroff_action(int pair, int action)
Description:	This function can set which pair bypass power off action.
Parameters:	pair: 1-4, action: 0: bypass, 1: normal.
Return Value:	0: Successful, -1: fail.

Syntax:	int get_bypass_poweroff_action(int pair)
Description:	This function can get which pair bypass power off action.
Parameters:	pair: 1-4.
Return Value:	0: bybpass, 1: normal, -1: fail.

Syntax:	int set_bypass_current_action(int pair, int action)
Description:	This function can set which pair bypass current action.
Parameters:	pair: 1-4, action: 0: bypass, 1: normal.
Return Value:	0: bybpass, -1: fail.

Syntax:	int get_bypass_current_action(int pair)
Description:	This function can get which pair bypass current action.
Parameters:	pair: 1-4.
Return Value:	0: bybpass, 1: normal, -1: fail.

4.3.4. Notes

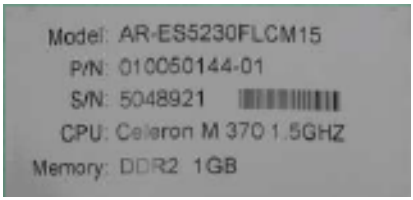
Syntax:	int libw83627_init(void)
Description:	use the watchdog, gpio function before, must be call this function first.
Parameters:	None.
Return Value:	0: Successful, -1: Fail

Syntax:	void lib_close(void)
Description:	if watchdog, gpio fuction not use on your program, please call this function.
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 or side chassis.



(for reference only)

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 --- http://www.acrosser.com/inquiry.html
- Acrosser FAX Number --- 886-2-29992887

To Make Your
Embedded
Idea a Reality

Acrosser Headquarters

241新北市三重區光復路一段61巷26號10樓
10F., No.26, Ln. 61, Sec. 1, Guangfu Rd.,
Sanchong Dist., New Taipei City 241, Taiwan
(R.O.C.)
TEL: +886-2-29999000
FAX: +886-2-29992887 / +886-2-29993960

Acrosser Taichung Office

414台中市烏日區僑仁街8號10樓之1
10F.-1, No.8, Qiaoren St., Wuri Dist.,
Taichung City 414, Taiwan (R.O.C.)
TEL: +886-4-2337-0715
FAX: +886-4-2337-3422

Acrosser China Subsidiary

深圳市欣扬通电子有限公司
深圳市福田区泰然八路安华工业区6号楼7层
706室 (邮编: 518040)
Room 706, floor 7, building 6, Anhua Industrial
Zone, Tairan 8th Road, Futian District, Shenzhen,
China (Postal: 518040)
TEL: +86-755-83542210
FAX :+86-755-83700087

Acrosser Nanjing Office

欣扬通电子有限公司 南京办事处
江苏省南京市江宁区天元东路228号504室
(邮编: 211100)
Room 504, No. 228, Tian Yuan East Rd.,
Jiang Ning Dist., Nanjing City, Jiangsu Province,
China (Postal: 211100)
Mobile: 13611932003
TEL: +86-025-86137002
FAX: +86-025-86137003

Acrosser Beijing Office

欣扬通电子有限公司 北京办事处
北京市昌平区沙河镇沙阳路巩华新村8号楼2单元
1403室 (邮编: 102206)
Room 1403, Unit 2, Building 8, Gonghua Village,
Shahe Town, Changping District, Beijing, China
(Postal: 102206)
Mobile: 13311317329

Acrosser USA Inc.

8351 Elm Ave. Suite 107, Rancho Cucamonga,
CA91730, USA
TEL: +1-909-476-0071
FAX: +1-909-466-9951