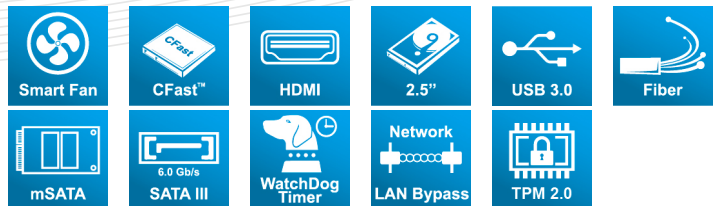


ANR-SKB2Nx-ACN

Networking 1U Rackmount

- Intel® Xeon® E3 / Kabylake-S / Skylake-S Embedded SKUs
- Intel® C236 PCH
- 6x GbE Copper w/ 3-pair Bypass + 2x SFP
- Exp. NIMs
- Single PSU



User Manual

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

Disclaimer

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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: 100-003

Date: Dec. 15, 2022

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.

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1. Introduction

ANR-SKB2Nx-ACN series support 6 copper GbE and 2 SFP (by sku) ports for network application and PCIe x8 slot for the expansion cards.

1.1. Specifications

System

Model Name	<ul style="list-style-type: none"> • ANR-SKB2N1-ACN (Support 1x NIM) • ANR-SKB2N2-ACN (Support 2x NIMs) 															
Thermal Solution	<ul style="list-style-type: none"> • SYS FAN (Smart Fan Control) 															
CPU	<ul style="list-style-type: none"> • Intel® Skylake-S Xeon® E3-1268 v5 • Intel® Skylake-S Pentium™ G4400 • Intel® Kabylake-S Xeon® E3-1275 v6 • Intel® Kabylake-S Core™ i7-7700 															
Chipset	<ul style="list-style-type: none"> • Intel® C236 PCH 															
System Memory	<ul style="list-style-type: none"> • 2x UDIMM DDR4 (up to 32GB) 															
BIOS	<ul style="list-style-type: none"> • Support Console Re-direction • Support bypass function default setting as below: <table border="1" data-bbox="468 794 1064 954"> <thead> <tr> <th>Status</th> <th>Normal</th> <th>Bypass</th> </tr> </thead> <tbody> <tr> <td>SYS (ON)</td> <td>V</td> <td></td> </tr> <tr> <td>SYS (OFF)</td> <td></td> <td>V</td> </tr> <tr> <td>WDT (Timeout)</td> <td></td> <td>V</td> </tr> <tr> <td>PWR (Lost)</td> <td colspan="2">Remained prior status</td> </tr> </tbody> </table> • Support PXE Boot from RJ45 LAN[1:6] 	Status	Normal	Bypass	SYS (ON)	V		SYS (OFF)		V	WDT (Timeout)		V	PWR (Lost)	Remained prior status	
Status	Normal	Bypass														
SYS (ON)	V															
SYS (OFF)		V														
WDT (Timeout)		V														
PWR (Lost)	Remained prior status															
BIOS function	<ul style="list-style-type: none"> • Support SSID 															

Network Interface

Ethernet (on-board)	<ul style="list-style-type: none"> • 6x GbE Copper, Intel® I210 (10/100/1000Mbps), LAN[1:6] • 2x SFP, Intel® I210-IS (10/100/1000Mbps), LAN[7:8]
LAN bypass (3-pair)	<ul style="list-style-type: none"> • (1st LAN bypass) by LAN[1:2] • (2nd LAN bypass) by LAN[3:4] • (3rd LAN bypass) by LAN[5:6]

Storage

HDD	<ul style="list-style-type: none"> • 2x 2.5" Internal HDD Bay
mSATA	<ul style="list-style-type: none"> • 1x mSATA socket (support Full-size module)

CFast	• 1x CFast Socket
--------------	-------------------

Others

Watchdog Timer	• Software Programmable 0 ~ 255 Secs. (0=Disable Timer)
-----------------------	--

Battery	• Lithium Battery, 3V 220mAH (CR2032)
----------------	---------------------------------------

Hardware Monitoring	• CPU Voltage • CPU & SYS Temperature • FAN Speed
----------------------------	---

Security & Mgmt.	• On-board TPM 2.0
-----------------------------	--------------------

OS support	• Linux Kernel 4.4 or above, (64-bit)
-------------------	---------------------------------------

Expansion I/O

PCIe Slot	• 1x PCIe Gen3 (x8 slot, x8 Signal via CPU)
------------------	---

Mechanical & Environment

Dimensions	• 440 (W) * 44 (H) * 358 (D) mm
-------------------	---------------------------------

Operating Temperature	• 0 ~ 40°C (32 ~ 104°F)
------------------------------	-------------------------

Storage Temperature	• -20 ~ 80°C (-4 ~ 176°F)
----------------------------	---------------------------

Relative Humidity	• 0 ~ 90% @40°C, non-condensing
--------------------------	---------------------------------

Power Supply Unit	• 1x Single PSU
--------------------------	-----------------

Power Requirements	• ATX circuit as AT mode
---------------------------	--------------------------

EMC & Safety

Certifications	• CE, FCC Class A, RoHS 2
-----------------------	---------------------------

Vibration Test	• IEC 60068-2-64, 5~500Hz, 3GRMS
-----------------------	----------------------------------

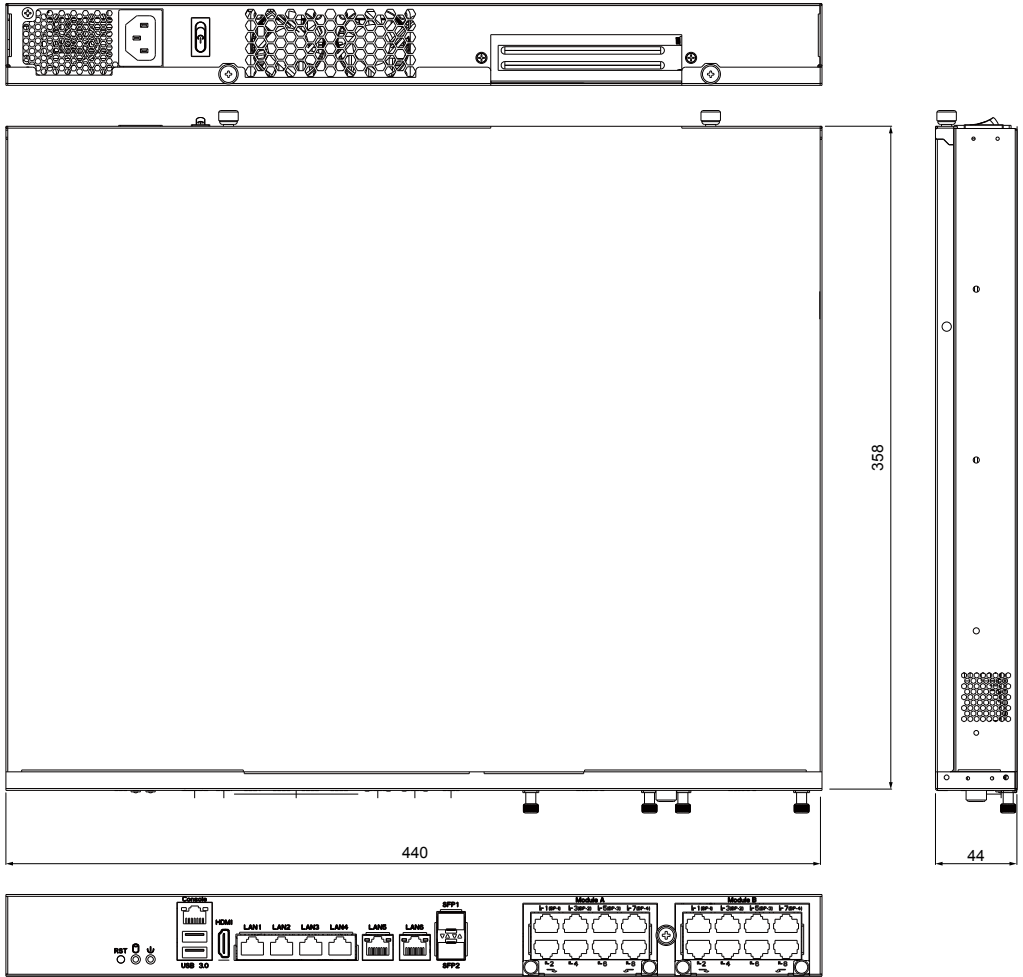
Drop Test	• ISTA-2A 2006
------------------	----------------

1.2. Packing List

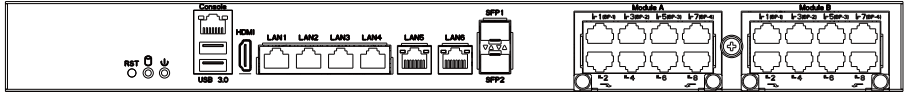
Check if the following items are included in the package.

	Item	Q'ty
<input type="checkbox"/>	ANR-SKB2Nx-ACN	1
<input type="checkbox"/>	SATA Cable	2
<input type="checkbox"/>	CD Utility	1
<input type="checkbox"/>	Console Cable (RJ45)	1
<input type="checkbox"/>	Power Cord	1
<input type="checkbox"/>	Rack Bracket	2
<input type="checkbox"/>	Box Packing	1
<input type="checkbox"/>	Screw Pack	1

1.3. Layout & Dimension



1.4. Front Panel



COM1_USB3_1

Standard USB 3.0 & Yost RJ45 Console Port

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

HDMI1

Standard HDMI Connector



LAN1 ~ LAN4

LAN5, LAN6

Standard IEEE802.3 & RJ45 connector

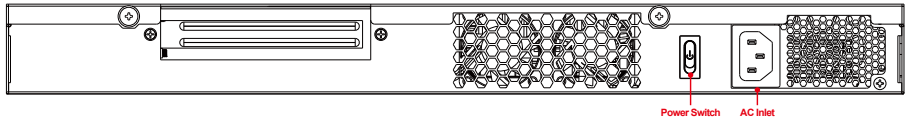
	LED		10	100	1000
	Left	Link	Green	Green	Green
		Active	Blinking	Blinking	Blinking
Right	Speed	OFF	Yellow	Green	

SFP1-2

Standard SFP connector for 1Gbps Fiber

	LED		10	100	1000
	Left	Link	Green	Green	Green
		Active	Blinking	Blinking	Blinking
Right	Speed	OFF	OFF	Green	

1.5. Rear Panel



- **AC Inlet**
Redundant AC power inlet.
- **Power Switch**
Power on/off switch.

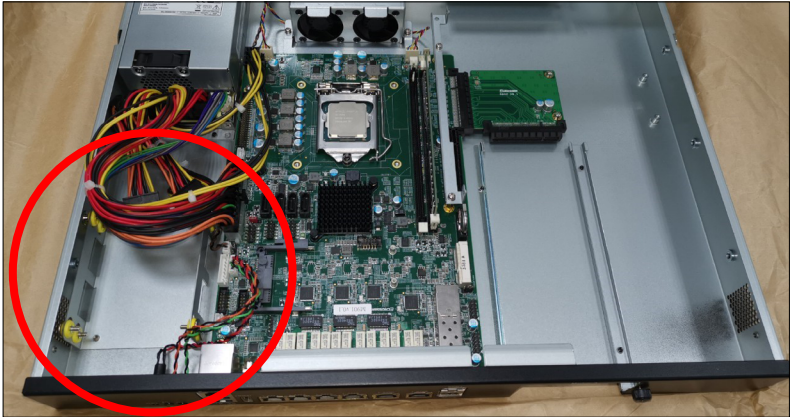
2. Components Assembly

Please follow the instruction to install the inner modules.

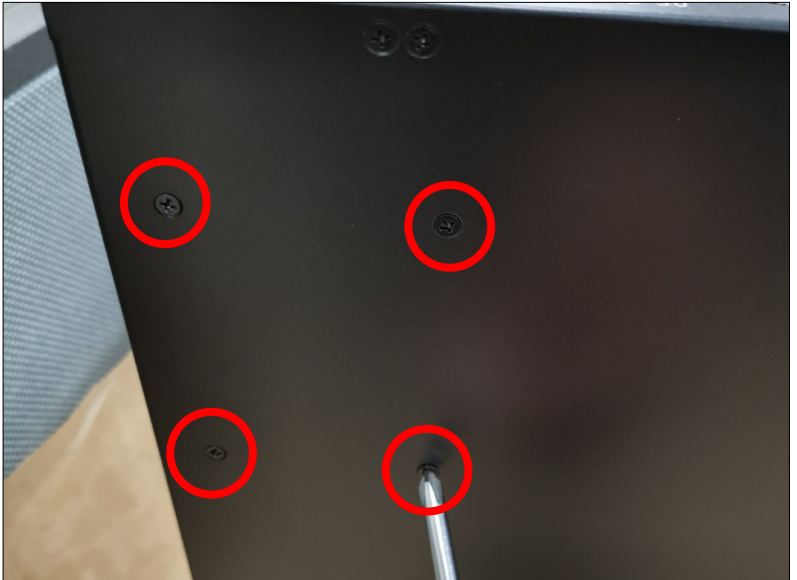
2.1. HDD Installation

To install your HDD into the system:

Step 1: Remove the chassis top cover. The HDD bracket location is easy to be located.



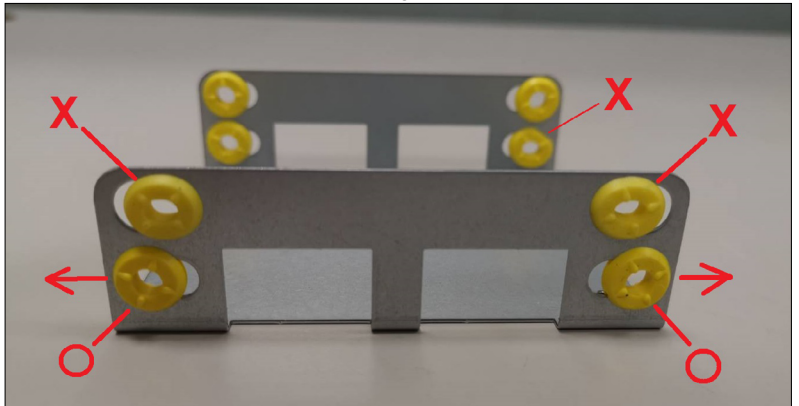
Step 2: Remove the four screws that fasten the HDD bracket from the chassis bottom cover.



Prepare the screw pack. There should be 8 screws in the pack.



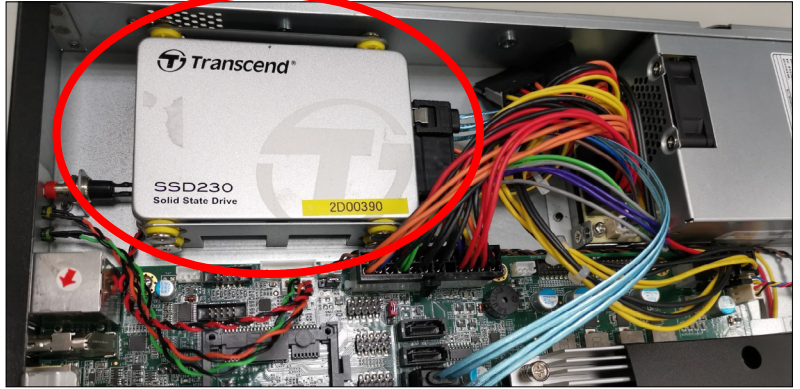
Mount the anti-vibration rubber ring as shown. Push the rubber ring sideward. Do not leave the rubber ring inward.



Step 3: Assemble your SSD as shown here.



- Step 4: Install the SSD that had been assembled with bracket to the chassis. Connect the SATA signal and SATA power cable. Close the top cover.



2.2. NIM Module Insertion

To install the NIM module into the system:

Step 1: Remove the screw that lock the dummy cover on **Module A** slot.



Step 2: Open the dummy cover.



- Step 3: Insert your NIM module into the **Module A** slot. Firmly push it all the way in.



- Step 4: Push the latch left. This will lock the module.



Step 5: Use your fingers to lock back the screw.



Or you may use a screw driver to lock back the screw.

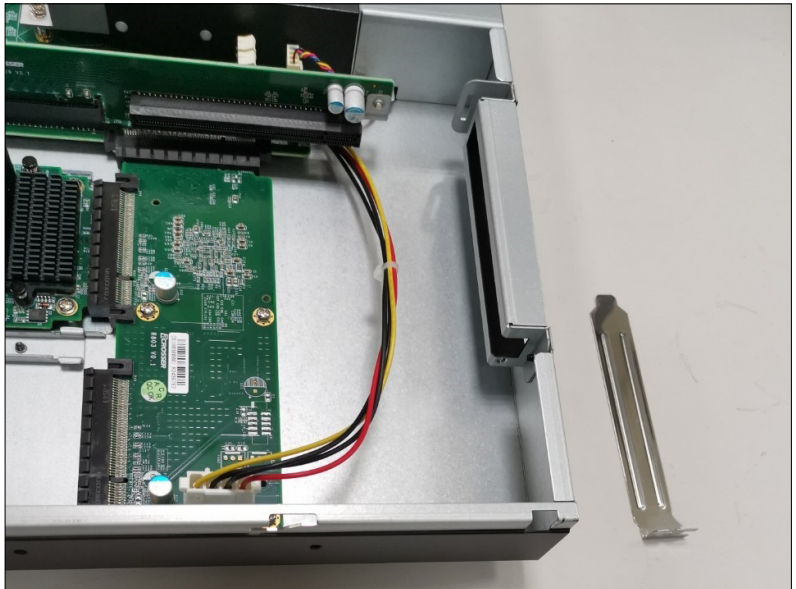


2.3. PCIe Card Installation

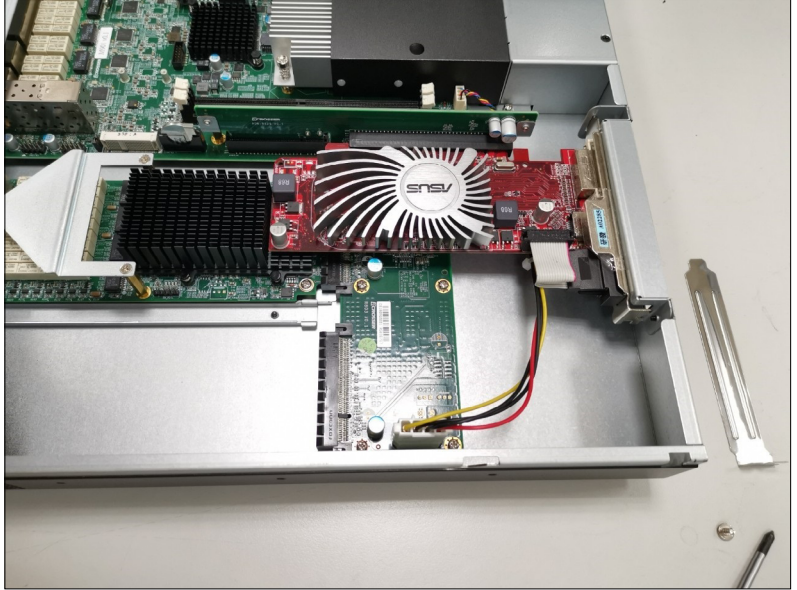
Step 1: Remove the screw that lock the cover shield.



Step 2: Take out the cover shield.



Step 3: Install your PCIe card. Pay attention to its orientation.

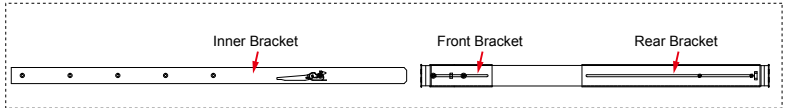
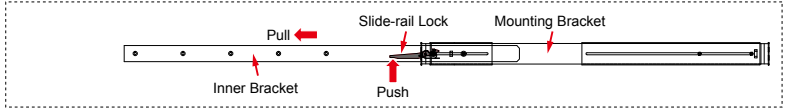


Step 4: Secure the PCIe card by #1 head screw driver.



2.4. Rack Installation

Step 1: Pull out each inner bracket from the slide-rail kits until it locks in the extended position. Push the slide-rail lock to release the inner bracket from the mounting bracket. Do the same to the other bracket.



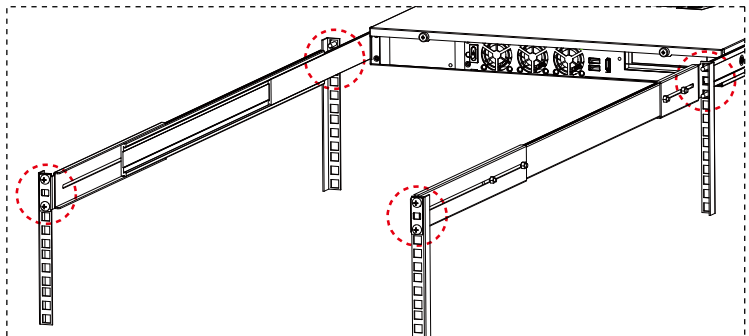
Step 2: Secure both left and right 1U mounting ears to the server's front panel chassis with your Phillips screwdriver.



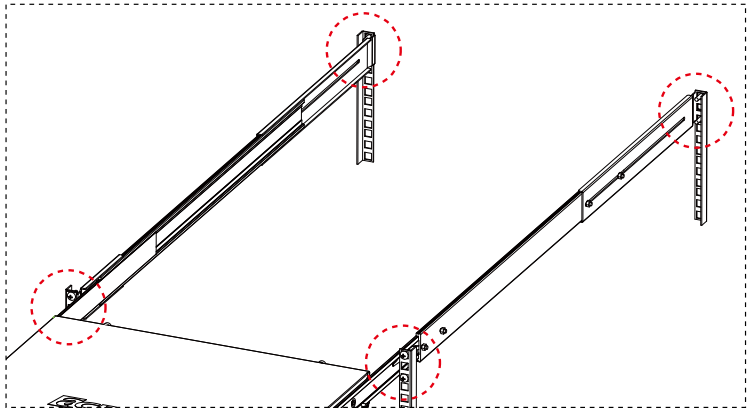
- Step 3: Secure both left and right inner brackets by screws to each of the server's left and right side with your Phillips screwdriver.



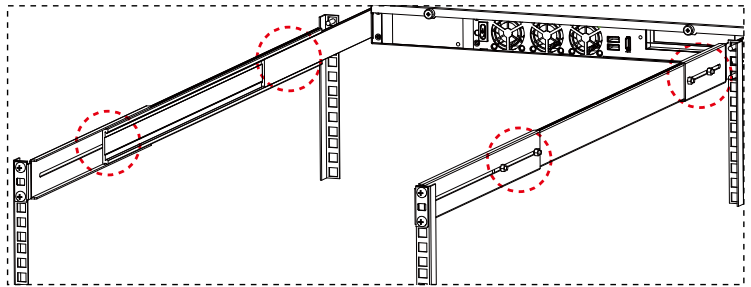
- Step 4: Determine which rack hole numbers to use.
(a) If your rack has threaded mounting holes in the rack posts, determine whether the threads are metric or standard. Select the appropriate screws from the package included in the mounting kit.
(b) If your rack does not have threaded mounting holes, the mounting screws are secured with caged nuts.
- Step 5: Loosely attach the front slide-rail to the front right rack-post using two screws into the upper and lower holes. Do not tighten the screws yet.
- Step 6: Adjust the length of the slide-rail by sliding the rear bracket flange to reach the outside edge of the rear rack-post. Loosely attach the rear bracket to the rear right rack-post with two screws.
- Step 7: Attach the second slide-rail to the left rack-post in a similar manner. Again, do not tighten the screws.



- Step 8: Fully extend the front and rear brackets to where it reaches the rack-post. Now tighten the screws to lock the ends of the rails in place with your Phillips screwdriver.



- Step 9: Tighten the four screws that fasten each of the front and rear brackets with your 6-point hex wrench.



- Step 10: Slide the chassis all the way into the rack until the chassis mounting ears are against the front posts. Tighten the chassis mounting ears to the rack posts each by using one screw into the middle hole.



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
- Chipset 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.

```

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.
Main  Advanced  Chipset  Security  Boot  Save & Exit

BIOS Information
American Megatrends
Core Version          4.6.5.3
Compliance           UEFI 2.4; PI 1.2
Project Name         M901
Release Version      100-001
Build Date and Time  01/01/2018 11:22:33

Processor Information
Name
Brand String
Frequency            2100 MHz
Processor ID
Stepping            D2
Number of Processors 4Core(s) / 8Thread(s)

Total Memory         4096 MB (DDR3)
Memory Frequency    1333 MHz

ME FW Version

System Date          [Thu 01/01/2018]
Ststem Time         [11:22:33]

Set the Date. Use Tab to
switch between Date
elements.

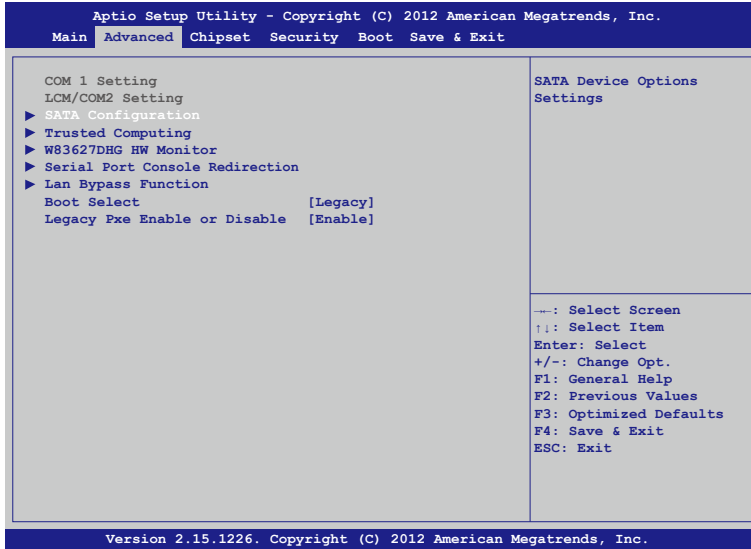
--: Select Screen
+: Select Item
Enter: Select
+/-: Change Opt.
F1: General Help
F2: Previous Values
F3: Optimized Defaults
F4: Save & Exit
ESC: Exit

Version 2.15.1226. Copyright (C) 2012 American Megatrends, Inc.
    
```

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.

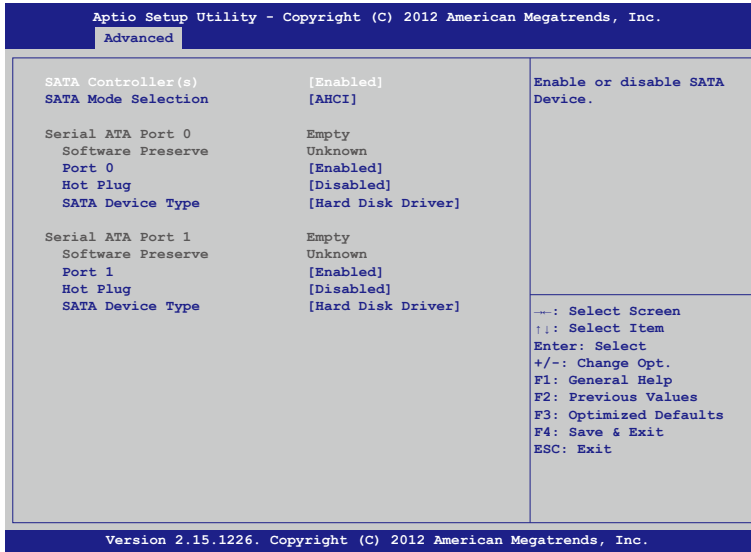
- **System Date**
Set the system date. Note that the 'Day' automatically changes when you set the date.
- **System Time**
Set the system time.

3.2. Advanced Setup



3.2.1. SATA Configuration

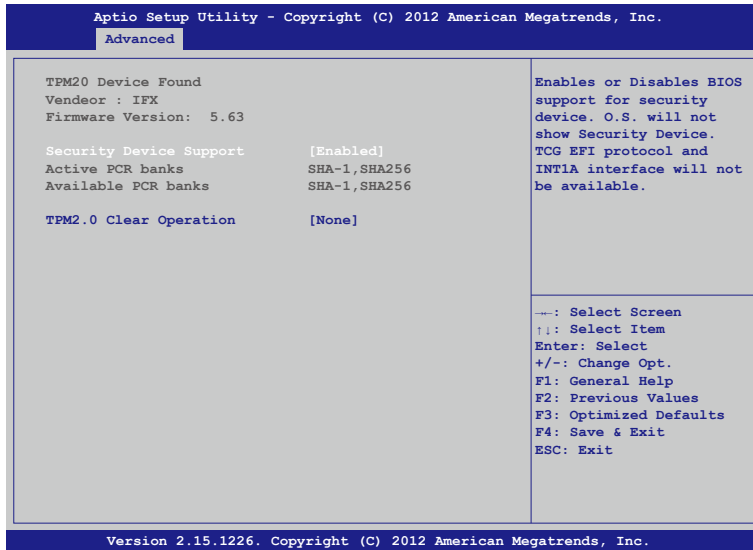
SATA device options settings.



- **SATA Controller(s)**
Enable or disable SATA device.
- **SATA Mode Selection**
Determines how SATA controller(s) operate.
- **Port 0, Port 1**
Enable or disable SATA port.
- **Hot Plug**
Designates this port as Hot Pluggable.
- **SATA Device Type**
Identify the SATA port is connected to Solid State Drive or Hard Disk Drive.

3.2.2. Trusted Computing

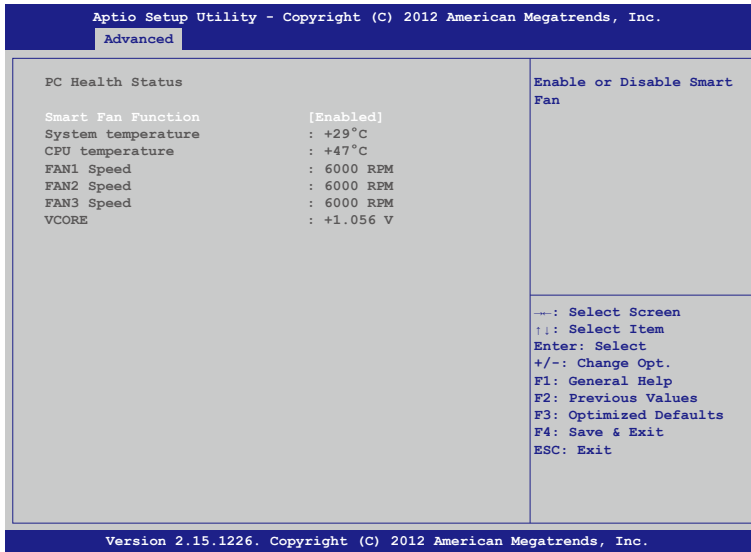
Set trusted computing settings



- **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.
- **SHA-1 PCR Bank**
Enables or Disables SHA-1 PCR Bank.
- **SHA256 PCR Bank**
Enables or Disables SHA256 PCR Bank.

3.2.3. W83627DHG HW Monitor

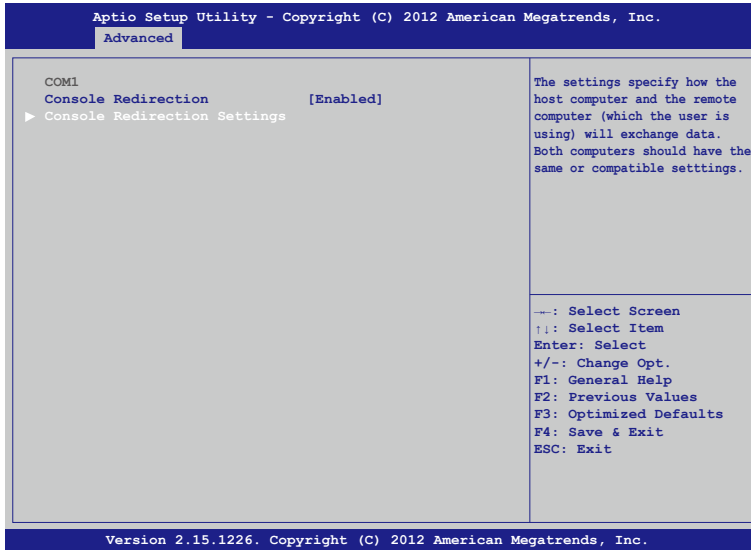
Display hardware monitor status.



- **Smart Fan Function**
Enable or disable the smart fan function.
- **System temperature**
This item displays the system temperature.
- **CPU temperature**
This item displays the CPU temperature.
- **FAN1 Speed**
This item displays the System 1 Fan speed.
- **FAN2 Speed**
This item displays the System 2 Fan speed.
- **FAN3 Speed**
This item displays the System 3 Fan speed.
- **VCORE**
This item displays the VCORE voltage.

3.2.4. Serial Port Console Redirection

Set serial port console redirection.



- **Console Redirection**
Enable/Disable Console Redirection.
- **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.

3.2.5. Lan Bypass Function

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.

Advanced

PIC NAME	SKB1N1ACN	
PIC Version	010-001	
PIC 1-1 POWER ON	[NORMAL]	
PIC 1-1 POWER OFF	[PASS]	
PIC 1-1 WATCH DOG TIMEOUT	[PASS]	
PIC 1-2 POWER ON	[NORMAL]	
PIC 1-2 POWER OFF	[PASS]	
PIC 1-2 WATCH DOG TIMEOUT	[PASS]	
PIC 1-3 POWER ON	[NORMAL]	
PIC 1-3 POWER OFF	[PASS]	
PIC 1-3 WATCH DOG TIMEOUT	[PASS]	

---: Select Screen
 ↑: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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3.3. Chipset Setup

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.

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

DVMT Pre-Allocated	[64M]	Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.
--------------------	-------	--

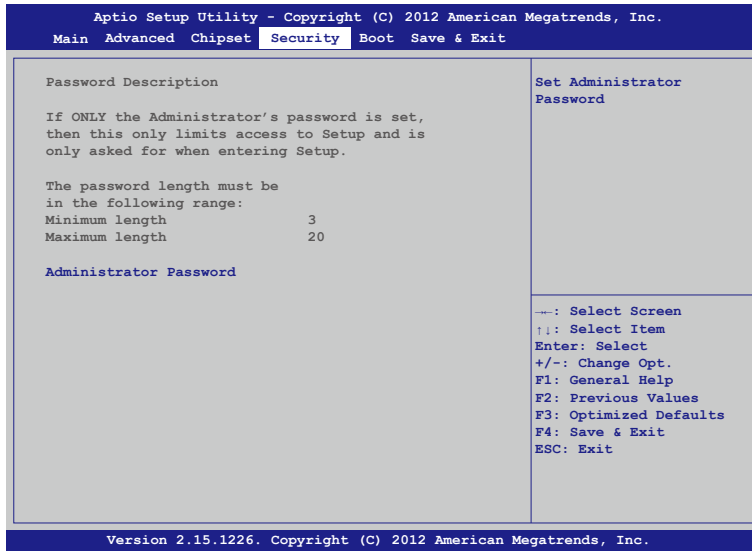
---: Select Screen
 ↑: Select Item
 Enter: Select
 +/-: Change Opt.
 F1: General Help
 F2: Previous Values
 F3: Optimized Defaults
 F4: Save & Exit
 ESC: Exit

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- **DVMT Pre-Allocated**

Select DVMT 5.0 Pre-Allocated (Fixed) Graphics Memory size used by the Internal Graphics Device.

3.4. Security Setup



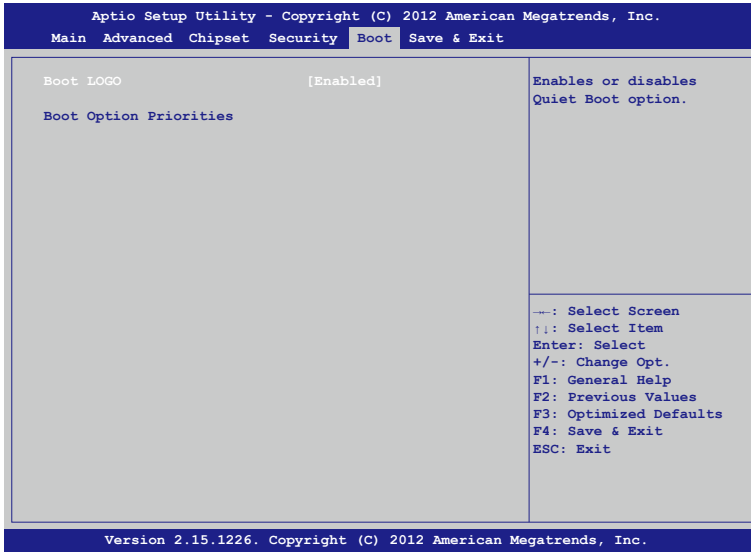
Once a password is effective, you have to enter the administrator password or user password before you access into the BIOS setup interface.

- **Administrator Password**

This item allows you to configure an administrator Password. Press <Enter> to create a new password, type the password, then press <Enter> again, and then you will be require to type the password again for confirmation. At last, press <F4> then <Enter> to save and reboot the system to make the password effective.

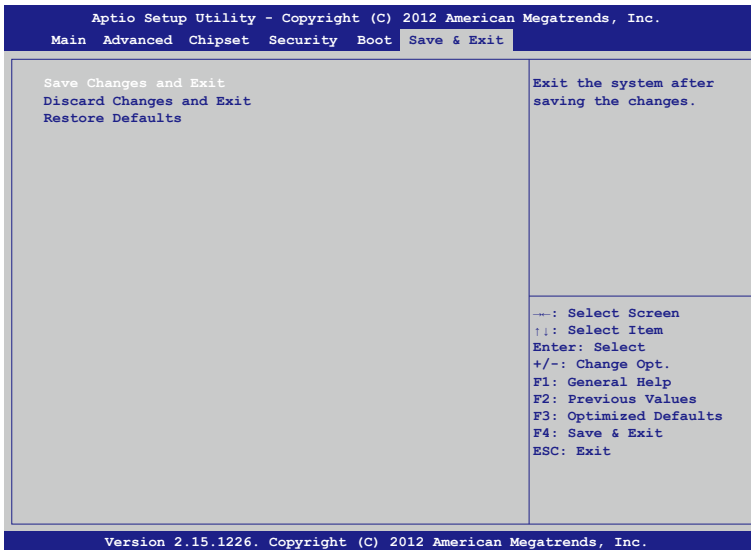
The administrator password allows you to make changes to all BIOS settings.

3.5. Boot Setup



- **BOOT LOGO**
 Enables or disables Quiet Boot option.

3.6. Save & Exit Setup



- **Save Changes and Exit**

Press <Enter> on this item and select [Yes]. This saves the changes to the CMOS and exits the BIOS Setup program. Select [No] or press <Esc> to return to the BIOS Setup Main Menu.

- **Discard Changes and Reset**

Press <Enter> on this item and select [Yes]. This exits the BIOS Setup without saving any changes made in BIOS Setup to the CMOS. Select [No] or press <Enter> to return to the BIOS Setup Main Menu.

- **Restore Defaults**

Press <Enter> on this item and select [Yes] to load the default settings of the BIOS. The BIOS default settings help the system to operate in optimum state. Always load the Optimized defaults after updating the BIOS or after clearing the CMOS values.

4. Software Installation and Programming Guide

4.1. Introduction

4.1.1. Environment

This test utility develop based on kernel 4.4 or above (Ubuntu 18.04.1 Desktop 64bit).

4.1.2. GPIO

ANR-SKB2N1ACN provides GPIO interface. Users can use the GPIO APIs to control GPO Pin.

4.1.3. Watchdog

ANR-SKB2N1ACN 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

Three pairs of LAN ports on ANR-SKB2N1ACN implement 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.

4.1.5. LCD Control Module

The LCM (short for LCD Control Module) APIs provide interfaces to control the module. By invoking these APIs, programmers can implement the applications which have the functions listed below:

1. Clear LCM screen.
2. Turn on or off the cursor on the screen (text mode only).
3. Move the cursor on the screen (text mode only).
4. Turn on or off the backlight on the screen (LCD panel only).
5. Get the identification of the pressed key of the LCM.
6. Show the text on the screen (text mode only).
7. Get LCM PIC Version.
8. Back space on the screen.
9. Get the LCM mode (text or graphic).
10. Set cursor Position (Graphic mode only).
11. Get cursor Position (Graphic mode only).
12. Graphic write on LCM (Graphic mode only).

4.2. File Descriptions

4.2.1. GPIO/Watchdog/LAN Bypass Subsystem/LCM

1. TestUtility.exe

The Watchdog, LAN Bypass Subsystem, LCM Control Module, 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. 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 ~ pin3 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 ~ pin3 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 time value 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:	Int get_wdt_count(void)
Description:	This function reads the value of the watchdog time counter.
Parameters:	None.
Return Value:	This function returns the value of the time counter.

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: Successful, -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: bypass, 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: bypass, 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: bypass, 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: Successful, -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: bypass, 1: normal, -1: fail.

4.3.4. LCD Control Module

Syntax:	i32 clrscrLcm(void)
Description:	Clear the screen of the LCM.
Parameters:	None.
Return Value:	0 after the screen is cleared.

Syntax:	i32 cursorLcm(bool mode)
Description:	<p>According to the argument 'mode', show the cursor on the LCM screen or eliminate the cursor on the LCM screen. The position of the cursor is unchanged.</p> <p>mode = true, show the cursor.</p> <p>mode = false, eliminate the cursor.</p>
Parameters:	None.
Return Value:	0 after the cursor has been shown or eliminated.

Syntax:	i32 cursorActionLcm(i32 type)
Description:	<p>According to the argument 'type', move the cursor to the indicated position. The displayed text is not altered.</p> <p>type = HOME, move the cursor to row 0, column 0.</p> <p>type = MOVERIGHT, move the cursor to the column which is to the right of its original position if the original column < 15.</p> <p>type = MOVELEFT, move the cursor to the column which is to the left of its original position if the original column > 0.</p> <p>type = MOVEBACK, move the cursor to the column which is to the left of its original position and delete the character at the new position if the original column > 0.</p>
Parameters:	None.
Return Value:	0 after the cursor is moved.

Syntax:	i32 displayLcm(bool mode)
Description:	<p>Show the text on the LCM screen or eliminate the text on the LCM screen. The content of the text is not altered.</p> <p>mode = true, show the text.</p> <p>mode = false, eliminate the text.</p>
Parameters:	None.
Return Value:	0 after the text has been shown or eliminated.

Syntax:	i32 getKeyLcm(void)
Description:	Scan the LCM and return the identification of the pressed direction key.
Parameters:	None.
Return Value:	'UP' if the 'up' direction key is pressed. 'RIGHT' if the 'right' direction key is pressed. 'LEFT' if the 'left' direction key is pressed. 'DOWN' if the 'down' direction key is pressed. 'NONE' if none of the keys is pressed.

Syntax:	i32 getPositionLcm(i32 *row, i32 *column)
Description:	Get the position of the cursor and write the coordinate to the memory pointed at by arguments 'row' and 'column'.
Parameters:	None.
Return Value:	0 if the request for the coordinate has been served.

Syntax:	i32 setPositionLcm(i32 row, i32 column)
Description:	Set the position of the cursor according to the arguments 'row' and 'column'.
Parameters:	None.
Return Value:	0 after the position has been set. -1 if the argument 'row' or 'column' meets any of the following conditions: (1) row is not 0. (2) row is not 1. (3) column is less than 0. (4) column is greater than 15.

Syntax:	i32 showLcm(i32 length, u8 *info)
Description:	Start from the current position of the cursor; print the text pointed at by 'info' to the LCM screen. The number of characters to be printed is at most 'length'. If the remaining columns available for printing the text is less than 'length', the number of the characters to be printed is: 16 – (column number of the current position of the cursor).
Parameters:	None.
Return Value:	0 after the text is printed.

Syntax:	i32 getLCMPICVER(unsigned char *ver)
Description:	This function can get LCM PIC Version.
Parameters:	lcm pic version will save the unsigned char pointer parameters.
Return Value:	None.

Syntax:	int setBacklight(int mode)
Description:	This function can set LCM backlight, but only support LCD panel, not support OLED panel.
Parameters:	mode: 0: Turn off backlight, 1: Turn on backlight
Return Value:	None.

4.3.5. 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 can I find the serial number of this product?*

- The serial number (S/N) is a label printed with alpha-numeric character. You can find the S/N label on the bottom of this product or on its packing box.

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

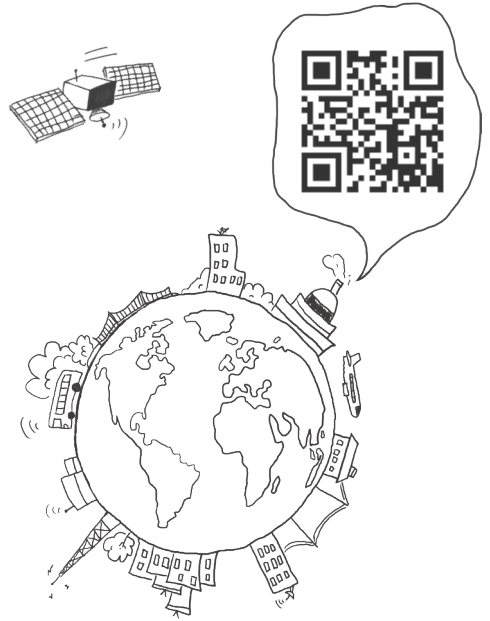
- CPU Type: _____
- Memory Size: _____
- Storage Device (e.g. HDD, CF, or SSD): _____
- Additional Peripherals (e.g. Graphic Card): _____
- Operating System & Version (e.g. Windows 7 Embedded): _____
- Special API or Driver: _____
(If yes, please provide it for debug.)
- Running Applications: _____
- 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>
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