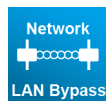


ANR-J190N2-C612

ANR-J180N2-C612

Bay Trail Networking 1U Rack Mount

Powered by Intel® Celeron® J1900/J1800
with 6x GbE LAN, and 2-pair Bypass LAN



User Manual

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

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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.

Ver: 100-002

Date: Oct. 23, 2017

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

The ANR-J190N2-C612 or ANR-J180N2-C612 is a rack-mount platform in networking appliance designed with Intel® Celeron® J1900 quad-core 2.00GHz, or J1800 dual-core 2.41GHz CPU, and 6x or 4x GbE LAN ports supporting up to 2 pairs bypass function.

1.1. Specifications

System

Thermal Solution	<ul style="list-style-type: none"> 1x System FAN
CPU	<ul style="list-style-type: none"> ANR-J190N2-C612 Intel® Celeron® Bay Trail J1900, Quad-core, clock speed 2.00GHz ANR-J180N2-C612 Intel® Celeron® Bay Trail J1800, Dual-core, clock speed 2.41GHz
System Memory	<ul style="list-style-type: none"> Support DDR3L Only, (Max. capacity: 8GB) 1x 204-pin SO-DIMM socket (non-ECC)
BIOS	<ul style="list-style-type: none"> AMI UEFI BIOS

Network Interface

Ethernet Chip	<ul style="list-style-type: none"> Intel® I211-AT
Ethernet	<ul style="list-style-type: none"> 6x PCIe x1 Intel GbE chip via RJ-45 Connectors 10/100/1000Mbps
LAN Bypass	<ul style="list-style-type: none"> 2-pair LAN Bypass Bypass1: LAN3/LAN4 Bypass2: LAN5/LAN6

Storage

CF	<ul style="list-style-type: none"> 1x CF Socket
SATA	<ul style="list-style-type: none"> 1x SATAII Connector 1x SATAII Power (JST 2.54mm, 1x4 pin)
HDD	<ul style="list-style-type: none"> 1x 2.5" HDD Bay on top cover

Expansion I/O

Mini PCIe Slot	<ul style="list-style-type: none"> 1x Mini PCI-e slot (PCI-e Signal Only)
-----------------------	--

Others

Watchdog Timer	<ul style="list-style-type: none">• Software Programmable 0 ~ 255 seconds (0=Disable Timer)
Battery	<ul style="list-style-type: none">• Lithium Battery, 3V 220mAH (CR2032)
Hardware Monitoring	<ul style="list-style-type: none">• CPU Voltage• CPU Temperature• System Temperature• RTC Battery Voltage• Fan Speed
OS Support	<ul style="list-style-type: none">• Windows 7 (32/64-bit)• Linux Kernel 3.11 (32/64-bit) or above

Mechanical & Environment

Chassis Dimension	<ul style="list-style-type: none">• 440(w) x 45(h) x 250(d) mm
Operating Temperature	<ul style="list-style-type: none">• 0 ~ 40°C (32 ~ 104°F)
Storage Temperature	<ul style="list-style-type: none">• -20 ~ 80°C (-4 ~ 176°F)
Relative Humidity	<ul style="list-style-type: none">• 0 ~ 90% @40°C, non-condensing

1.2. Packing List

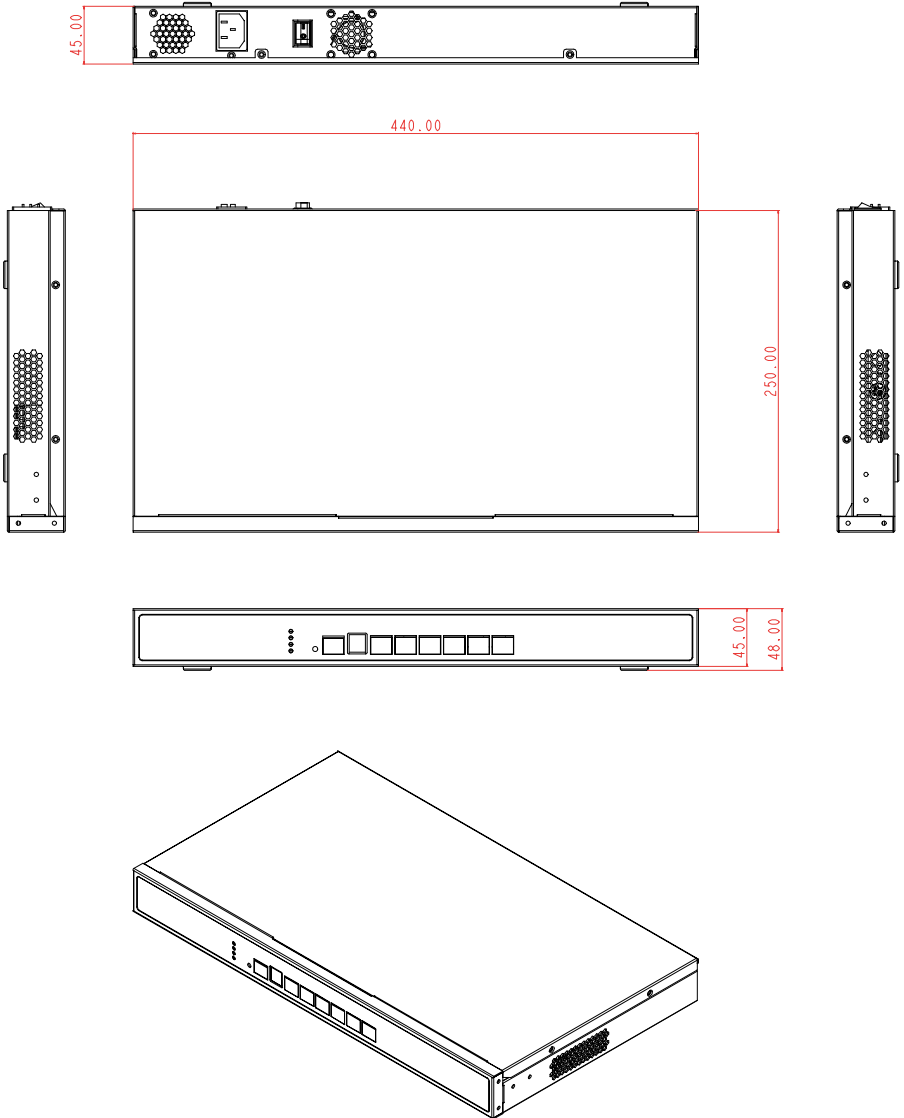
Check if the following items are included in the package.

- 1x ANR-J190N2-C612 or ANR-J180N2-C612 System
- 1x SATA Power Cable
- 1x SATA Cable
- 1x Console Cable (RJ45)
- 2x Bracket Ears with Screws
- 1x Driver CD

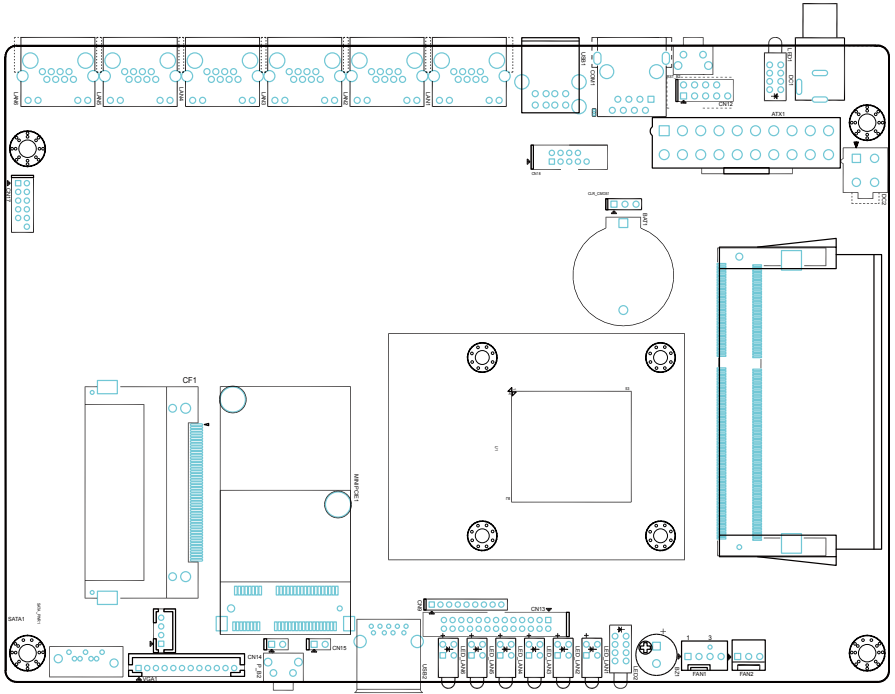
1.3. System Dissection

1.3.1. Dimension

(Unit: mm)

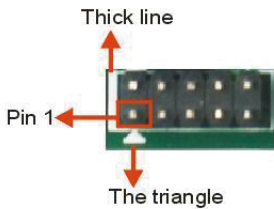


1.3.2. Board Layout



How to identify the first pin of a header or jumper?

Usually, there is a thick line or a triangle near the header's or jumper's pin 1.

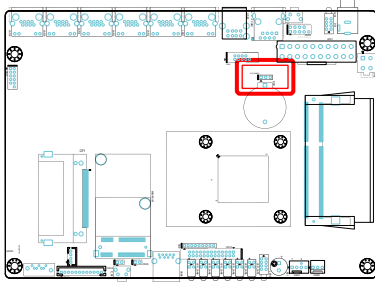


The square pad found on the back of the motherboard is usually used for pin 1.



1.3.3. Jumper Settings

CMOS Memory Clearing Jumper



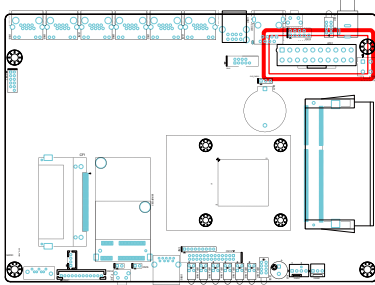
CLR_CMOS1	Pin #	Definition
	1-2 (default)	Normal
	2-3	Clear CMOS

If you encounter the following,

- a) CMOS data becomes corrupted.
 - b) You forgot the supervisor or user password.
- you can reconfigure the system with the default values stored in the ROM BIOS.

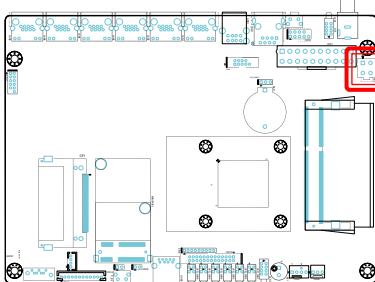
1.3.4. Onboard Headers/Connectors Pin Definition

ATX Power Input Connector



Pin #	Definition	Pin #	Definition
1	+ 3.3V	2	+ 3.3V
3	COM	4	+ 5V
5	COM	6	+ 5V
7	COM	8	PWR_OK
9	+ 5V_SBY	10	+ 12V
11	+ 3.3V	12	- 12V
13	COM	14	PWR_ON
15	COM	16	COM
17	COM	18	- 5V
19	+ 5V	20	+ 5V

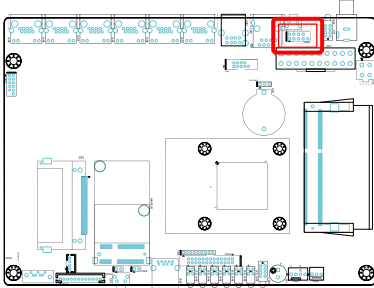
DC 12V Power Input Connector



DC2	Pin #	Definition
	1	GND
	2	GND
	3	+ 12V IN
	4	+ 12V IN

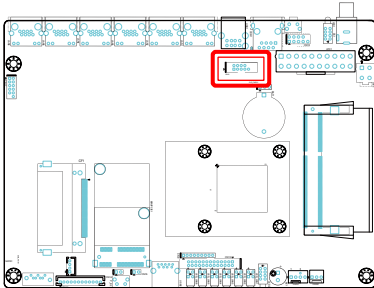
Note: DC2 only support DC12V power input. Please DO NOT use the ATX power connector on this motherboard, as it will cause unpredictable damage.

System LED Pin Header



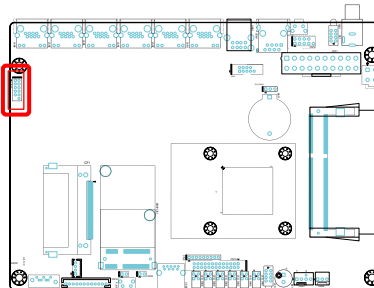
CN12	Pin #	Definition	Pin #	Definition
	1	+ 3.3V	2	Power LED#
	3	+ 3.3V	4	HD LED#
	5	Bypass1 LED# -Green	6	Bypass1 LED# -Red
	7	Bypass2 LED# -Green	8	Bypass2 LED# -Red
	9	+ 3.3V		

COM2 Connector



CN18 (COM2)	Pin #	Definition	Pin #	Definition
	1	DCD#	2	RXD
	3	TXD	4	DTR#
	5	GND	6	DSR#
	7	RTS#	8	CTS#
	9	RI#		

GPIO Connector



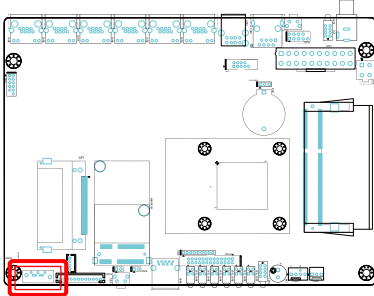
CN17	Pin #	Definition	Pin #	Definition
	1	SIO_ GPI15 (0XA00 Bit5)	2	SIO_ GPI33 (0XA02 Bit3)
	3	SIO_ GPI35 (0XA02 Bit5)	4	SIO_ GPI47 (0XA03 Bit7)
	5	GND	6	SIO_ GPO11 (0XA00 Bit1, H) ^[1]
	7	SIO_ GPO16 (0XA00 Bit6, H)	8	SIO_ GPO32 (0XA02 Bit2, H)
	9	SIO_ GPO50 (0XA04 Bit0, H)	10	+ 3.3V ^[2]
			12	N/C

Note:

[1] "H" or "L" means the default voltage is High or Low level.

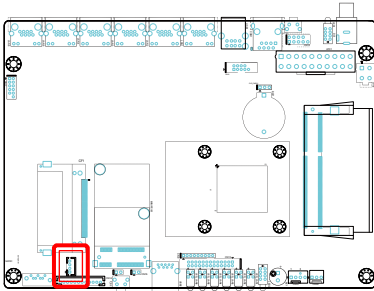
[2] The power on this Pin and GPIO output is 3.3V signaling by default, 5V is available if specified (resistor selectable).

SATA Connector



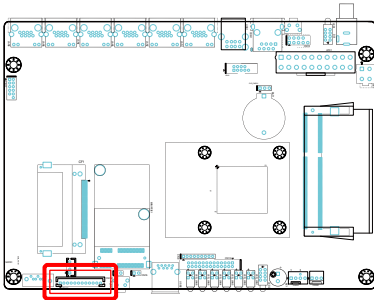
SATA1	Pin #	Definition	Pin #	Definition
	1	GND	6	SATA_RXP0
	2	GND	7	SATA_RXN0
	3	SATA_TXP0	8	GND
	4	SATA_TXN0	9	GND
	5	GND		


SATA Power Connector



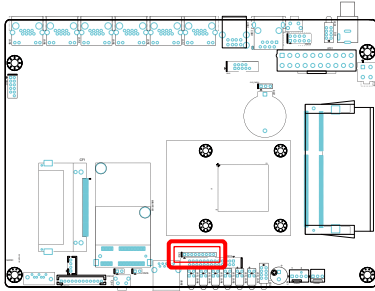
SATA_PWR1	Pin #	Definition	Pin #	Definition
	1	+ 12V	2	GND
	3	GND	4	+ 5V


VGA Output Connector



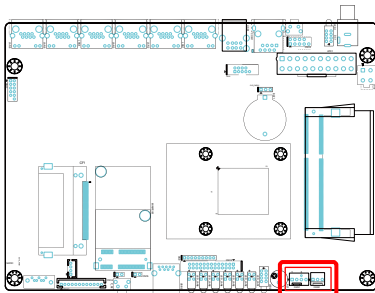
VGA1 			
Pin #	Definition	Pin #	Definition
1	GND	2	VSYNC
3	HSYNC	4	GND
5	RED	6	GND
7	GREEN	8	GND
9	BLUE	10	GND
11	DDC Data	12	DDC Clock

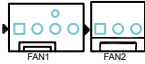
Debug Pin Header



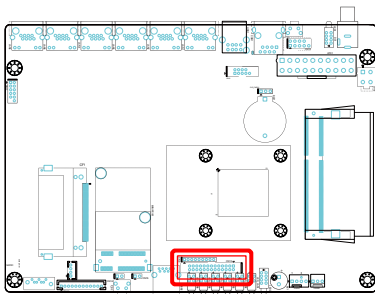
CN9 			
Pin #	Definition	Pin #	Definition
1	LFRAME#	2	LAD3
3	LAD2	4	LAD1
5	LAD0	6	GND
7	PCIRST	8	CLOCK
9	+ 3.3V		

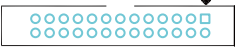
Fan Power Connector



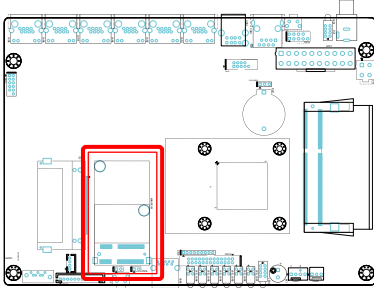
FAN1 (CPU_FAN1) FAN2 (SYS_FAN1) 			
Pin #	Definition	Pin #	Definition
1	GND	2	+ 12V
3	FAN Speed Detection	4	FAN Speed Control

LAN LED Pin Header

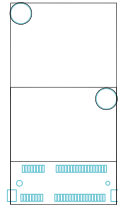


CN13 			
Pin #	Definition	Pin #	Definition
1	LAN1_ACT#	2	+ 3.3V
3	LAN1_LINK_1G#	4	LAN1_LINK_100M#
5	LAN2_ACT#	6	+ 3.3V
7	LAN2_LINK_1G#	8	LAN2_LINK_100M#
9	LAN3_ACT#	10	+ 3.3V
11	LAN3_LINK_1G#	12	LAN3_LINK_100M#
13	LAN4_ACT#	14	+ 3.3V
15	LAN4_LINK_1G#	16	LAN4_LINK_100M#
17	LAN5_ACT#	18	+ 3.3V
19	LAN5_LINK_1G#	20	LAN5_LINK_100M#
21	LAN6_ACT#	22	+ 3.3V
23	LAN6_LINK_1G#	24	LAN6_LINK_100M#
25	GND	26	GND

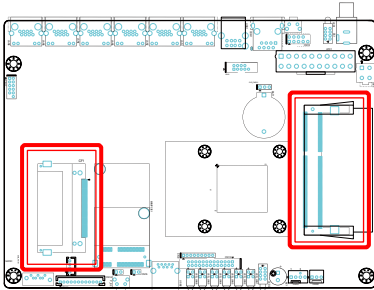
Mini PCI Express Slot



MINIPCI E1:



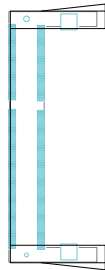
CF Card, SO-DIMM Socket



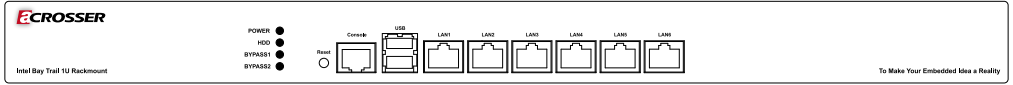
CF1:



DIMM1:



1.3.5. Front I/O



- **LED:** LED Indicators of Power, HDD, and LAN Bypass status
- **RESET:** Reset Button
- **Console:** RJ45 COM Port
- **USB:** 2 USB 2.0 Ports
- **LAN1 ~ LAN6:** 6 RJ45 LAN Ports

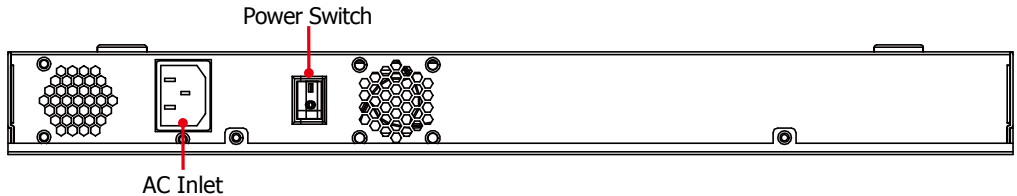
Status/HDD/Power LED Display

	LED	Light	Status
	POWER	Green	Power On
	HDD	Yellow	HDD Status
	BYPASS1	Green Red	Green: Bypass1 in Normal Status Red: Bypass1 in Bypass Status
	BYPASS2	Green Red	Green: Bypass2 in Normal Status Red: Bypass2 in Bypass Status

RJ45 LAN Ports

LAN1 ~ LAN6	LED	Function	Light	Status
	LED1	Link	Green	Data Transferring at 100Mbps
			Yellow	Data Transferring at 100Mbps
			Off	No Data, or Data Transferring at 10Mbps
	LED2	Activity	Green	Flashing while Transferring
			Off	No Data

1.3.6. Rear I/O



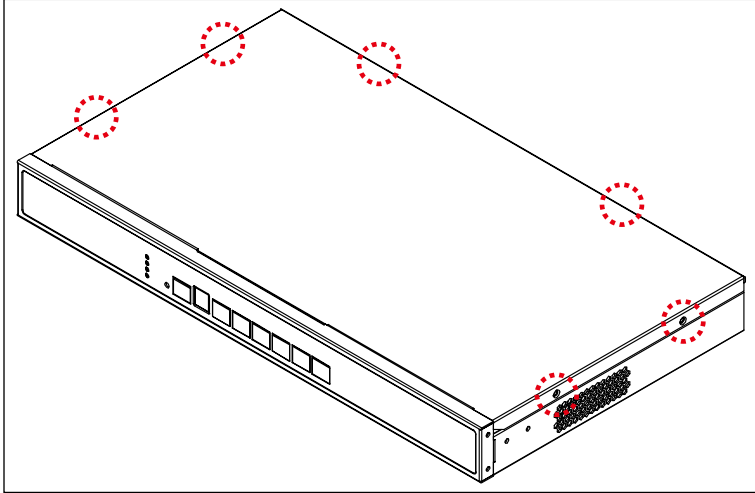
- **AC Inlet:** AC Power Socket
- **Power Switch:** Power On/Off Switch

2. Components Assembly

To install your components, you will have to remove the top cover first:

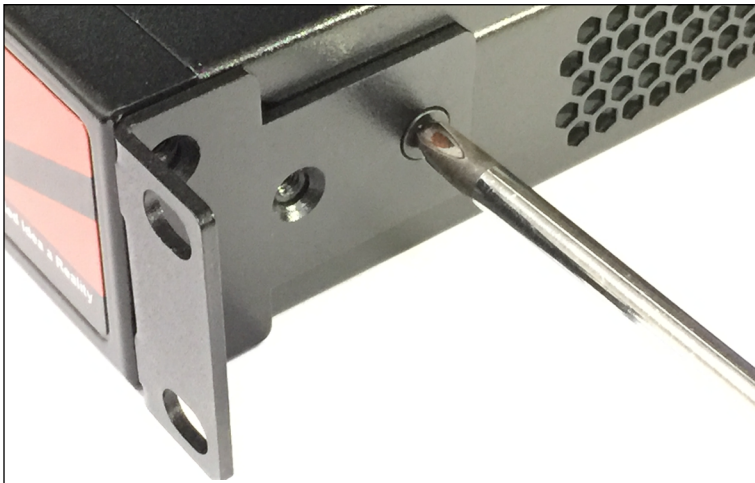
Step 1: Disconnect the power input.

Step 2: Remove all six screws that locks the top cover.



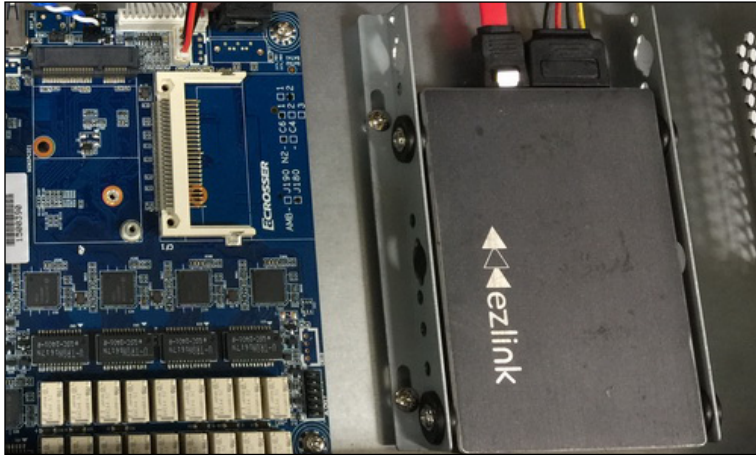
To install the bracket ears at both side:

Step 1: Lock the bracket ears with the screws in the package.



2.1. 2.5" HDD Installation

Step 1: Lock your disk with the screws that came with the disk.

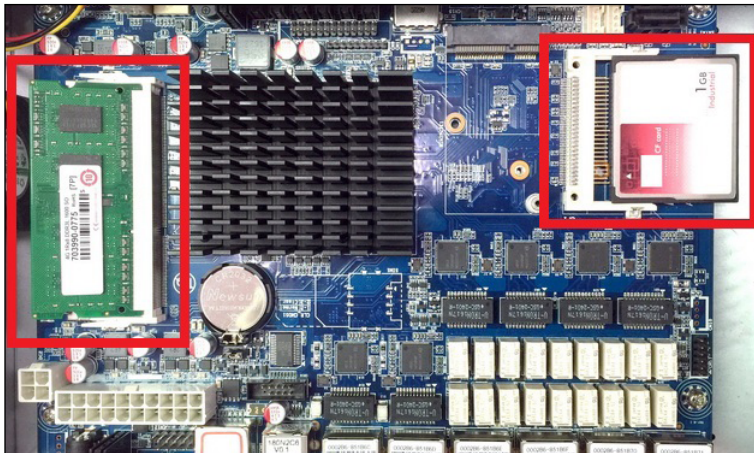


Step 2: Connect the SATA power/signal cable each from the disk to the [SATA_PWR1] and [SATA1] connector on mainboard.

2.2. Memory/CF Card Installation

Step 1: Carefully insert your Memory card into the [DIMM1] socket and push it into the locked position.

Step 2: Carefully insert your CF card into the [CF1] socket.



3. BIOS Settings

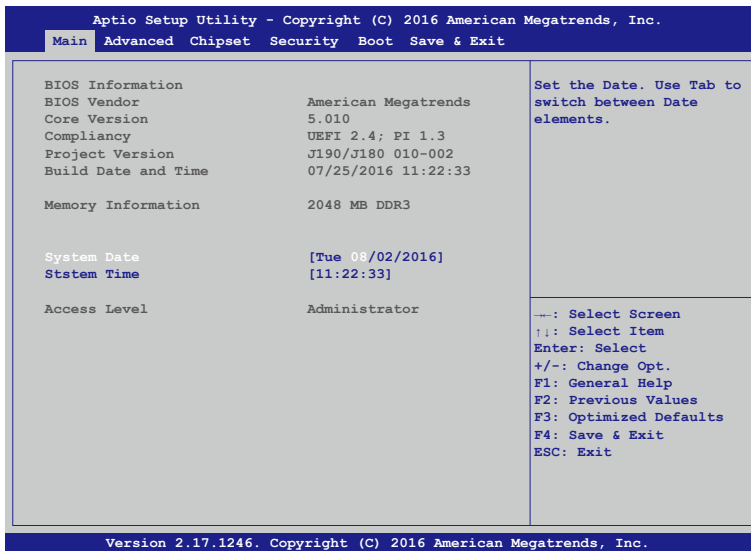
To access the BIOS Setup:

1. After power on, press <Delete> button during the P.O.S.T. (Power-on Self-Test) process.
2. Once you enter the BIOS Setup, the Main Menu will show up on the screen, in which you can use the arrow keys (<↑>, <↓>, <←>, <→>) to move or select the items, and press <Enter> button to accept or enter the sub-menu.

Note: Press <Delete> button to enter BIOS Setup program, Press <F7> button to show BBS.

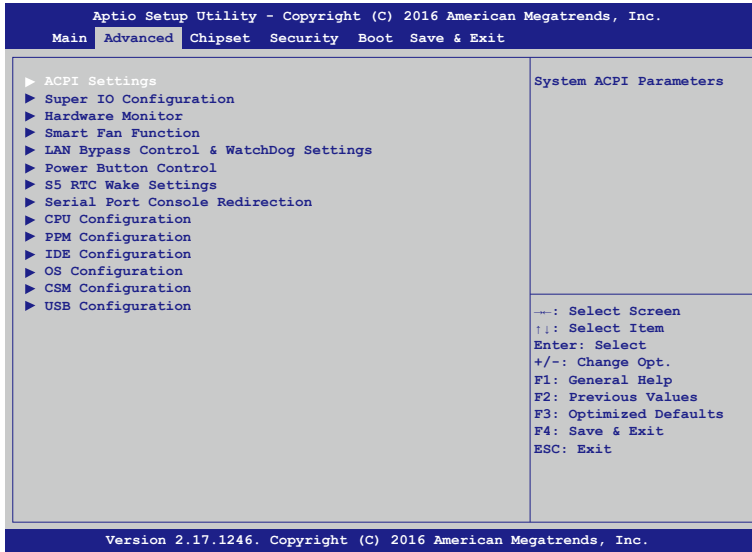
3.1. Main Setup

This page contains the basic information about the BIOS version, and you can set the system date and time manually.



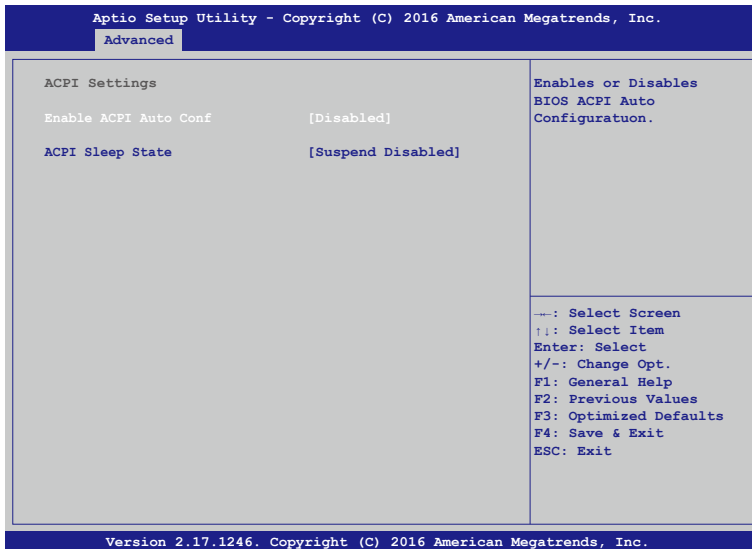
- **System Date**
Set the system date. The date format is Week (Read-Only), Month/Day/Year. Use <Tab> to switch the item between month, day and year. Either you can use the <+>/<-> key to change the value, or use the number keys to enter a new value for the date setting.
- **System Time**
Set the system time. The time format is Hour/Minute/Second. Use <Tab> to switch the item between hour, minute, second. Either you can use the <+>/<-> key to change the value, or use the number keys to enter a new value for the time setting.

3.2. Advanced Setup



3.2.1. ACPI Settings

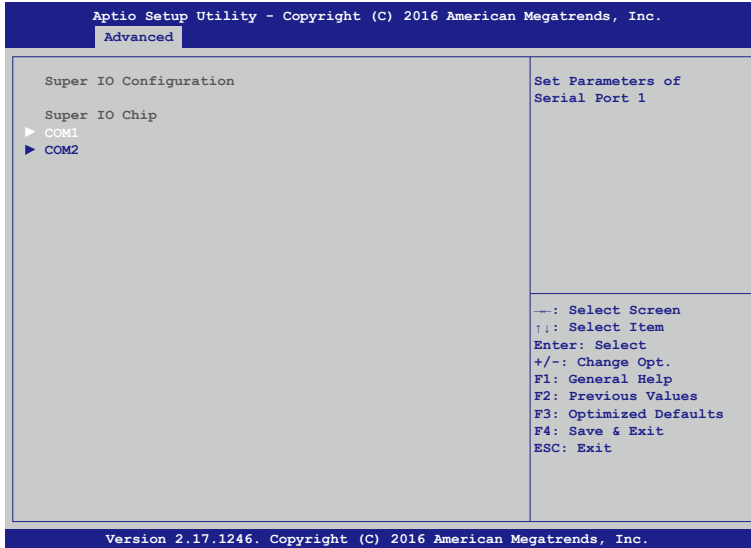
Set system ACPI parameters.



- **Enable ACPI Auto Configuration**
Enables or disables the BIOS ACPI auto configuration.
- **ACPI Sleep State**
Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.

3.2.2. Super IO Configuration

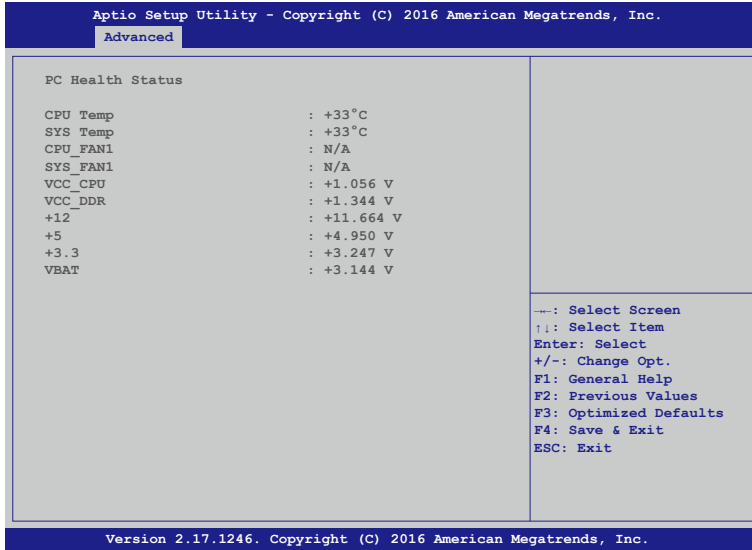
Set System super IO chip parameters.



- **COM1**
Set parameters of Serial Port 1.
- **COM2**
Set parameters of Serial Port 2.

3.2.3. Hardware Monitor

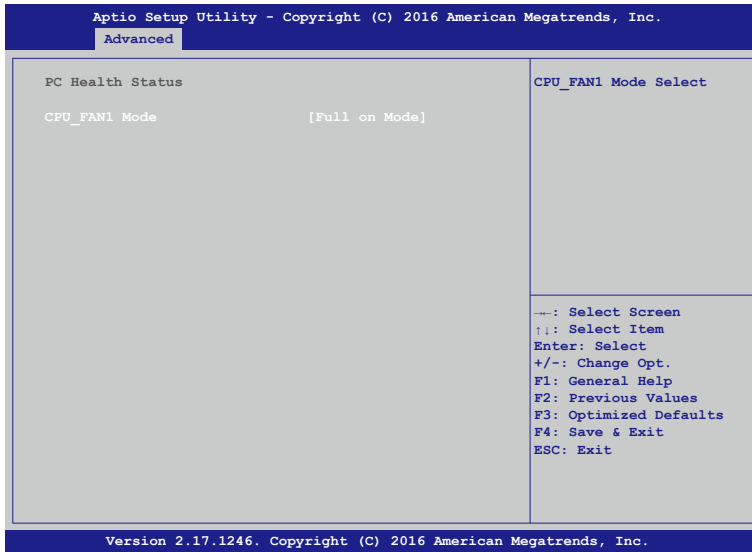
Display hardware monitor status.



- **CPU Temp**
This item displays the CPU temperature.
- **SYS Temp**
This item displays the system temperature.
- **CPU_FAN1**
This item displays the CPU fan speed
- **SYS_FAN1**
This item displays the SYSTEM fan speed
- **VCC CPU**
This item displays the CPU voltage level.
- **VCC_DDR**
This item displays the DDR voltage level.
- **+12V**
This item displays the 12V voltage level.
- **+5V**
This item displays the 5V voltage level.
- **+3.3V**
This item displays the 3.3V voltage level.
- **VBAT**
This item displays the battery voltage level.

3.2.4. Smart Fan Function

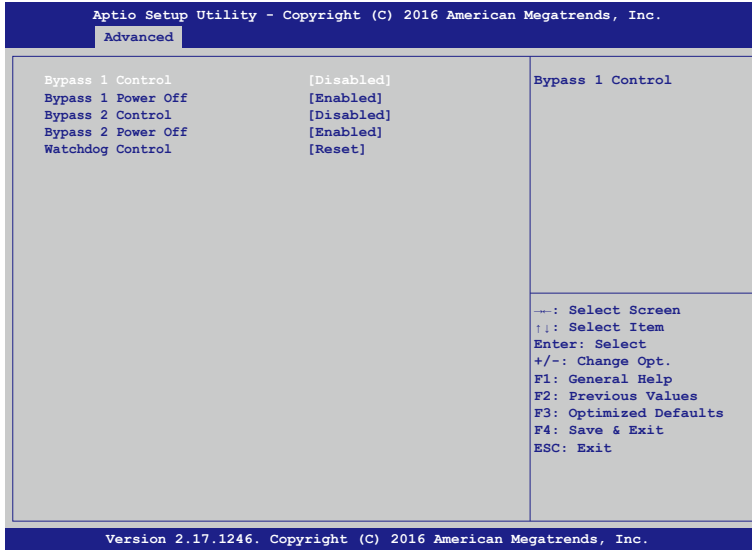
Set smart fan function.



- **CPU_FAN1 Mode**
This option selects the CPU_Fan1 mode.

3.2.5. LAN Bypass Control & WatchDog Settings

Set LAN bypass control and WatchDog parameters.



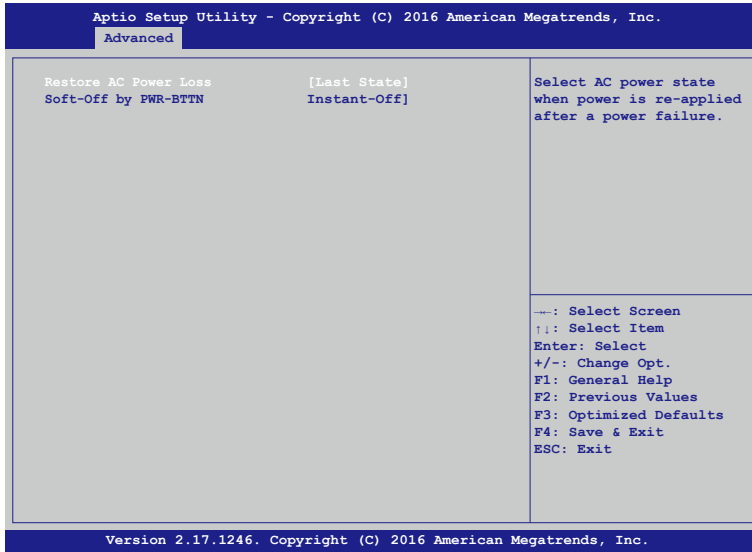
- **Bypass 1 Control**
LAN Bypass 1 Control.
- **Bypass 1 Power Off**
LAN Bypass 1 Power Off.
- **Bypass 2 Control**
LAN Bypass 2 Control.
- **Bypass 2 Power Off**
LAN Bypass 2 Power Off.
- **WatchDog Control**
WatchDog Control.

Bypass Behavior:

Item	BIOS SETUP		DC Power-on Bypass Status	DC Power-off Bypass Status
	Bypass Power Off	Bypass Control		
1	Disabled	Disabled	Normal	Open
2	Disabled	Enabled	Normal	Open
3	Enabled	Disabled	Normal	Bypass
4	Enabled	Enabled	Bypass	Bypass

3.2.6. Power Button Control

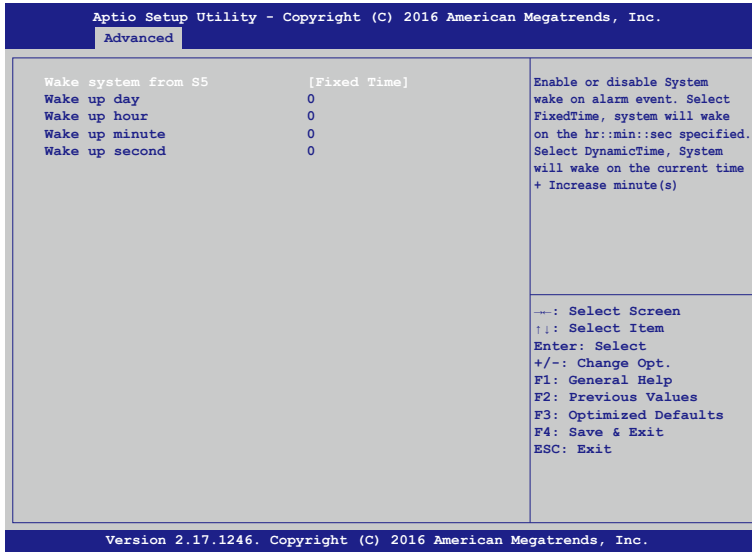
Set power button control function.



- **Restore AC Power Loss**
Select AC power state when power is reapplied after a power failure.
- **Soft-Off by PWR-BTTN**
 - [Instant-Off]:** The system will be shut down instantly while the power button is pressed.
 - [Delay 4 sec.]:** The system will be shut down only the power button is pressed and held at least 4 seconds.

3.2.7. S5 RTC Wake Settings

Enable system to wake up from S5 using RTC alarm.



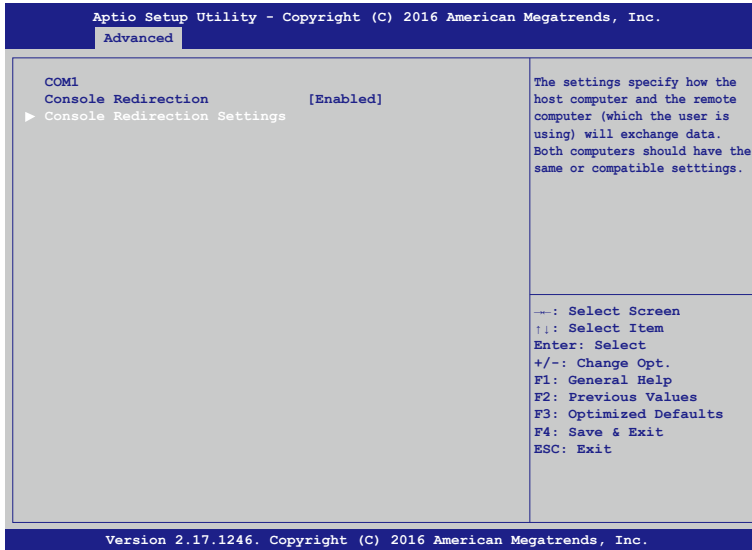
This Section allows you to wake up the system in a certain time. Select [Fixed Time] to set the timing to awake the system.

Use <↑>, <↓> to switch among the items [Day, Hour, Minute, and Second], and type the value in the selected item as you wish.

For example, if you want the system start up automatically at 14:25:26, the 13th day of each month, then you should enter 13, 14, 25, and 26 from top to bottom.

3.2.8. Serial Port Console Redirection

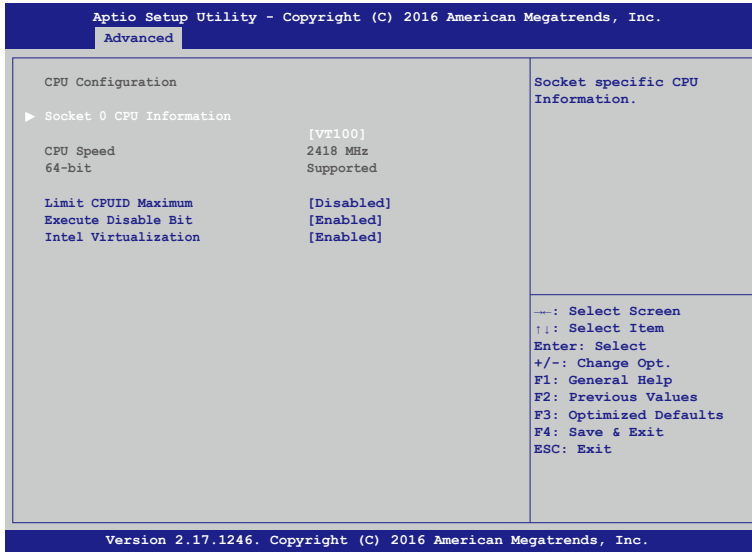
Set serial port console redirection.



- **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.

3.2.9. CPU Configuration

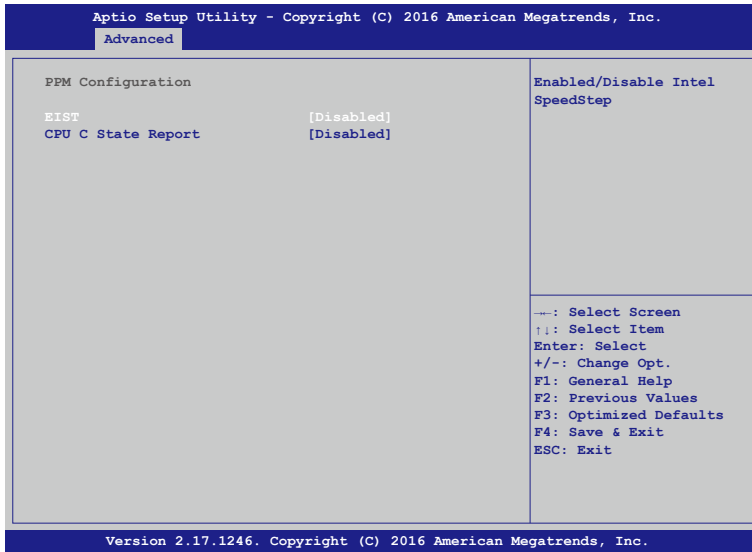
Set CPU configuration parameters.



- Socket 0 CPU Information**
 Socket specific CPU Information.
- Limit CPUID Maximum**
 Disabled for Windows XP.
- Execute Disable Bit**
 XD can prevent certain classes of malicious buffer overflow attacks when combined with a supporting OS (Windows Server 2003 SP1, Windows XP SP2, SuSE Linux 9.2, RedHat Enterprise 3 Update 3.)
- Intel Virtualization**
 When enabled, a VMM can utilize the additional hardware capabilities provided by Vanderpool Technology.

3.2.10. PPM Configuration

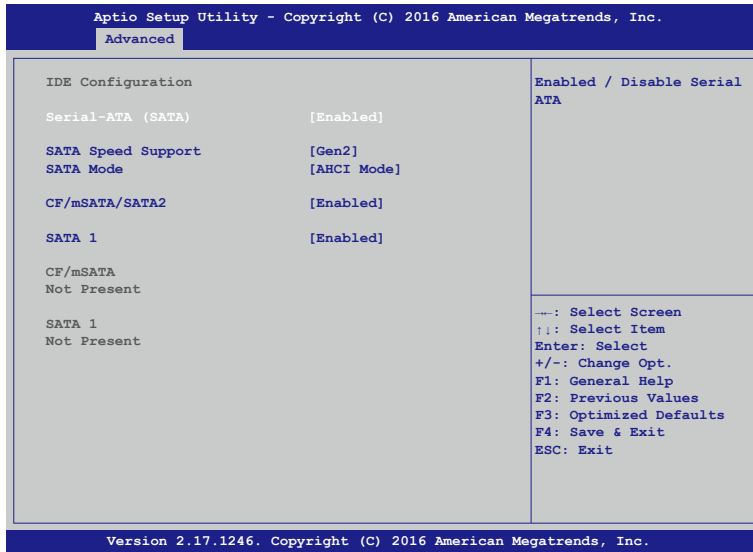
Set PPM configuration parameters.



- **EIST**
Enable/Disable Intel SpeedStep.
- **CPU C State Report**
Enable/Disable CPU C state report to OS.

3.2.11. IDE Configuration

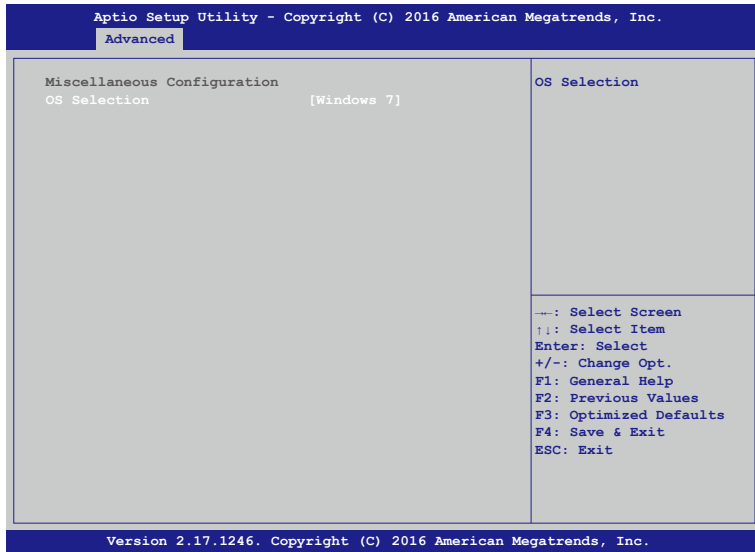
Set IDE devices configuration.



- **Serial-ATA (SATA)**
Enable/Disable Serial ATA.
- **SATA Speed Support**
SATA speed support Gen1 or Gen2.
- **SATA Mode**
Configure the SATA controllers mode.
- **CF/mSATA/SATA2**
Enable/Disable Serial ATA port 0.
- **SATA1**
Enable/Disable Serial ATA port 1.

3.2.12. OS Configuration

Set OS configuration parameters.



- **OS Selection**

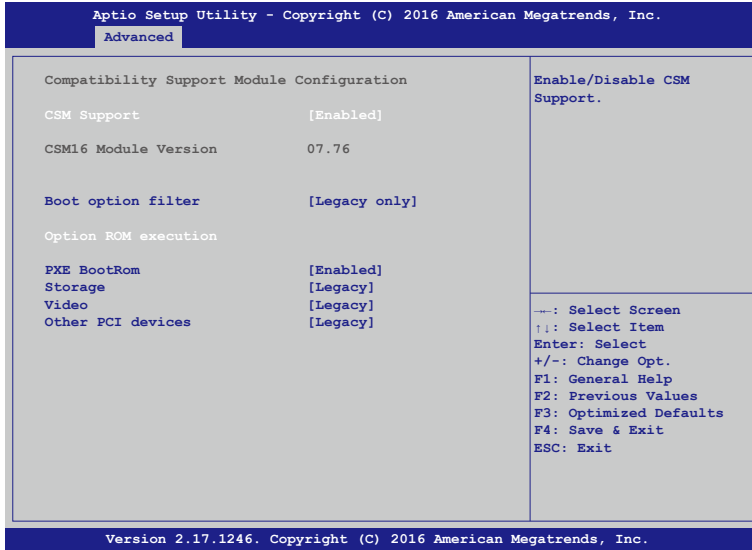
This item allows you to select the proper Operating System.

[Windows 7]: Select this configuration for installing **Win 7** or **Fedora 20**. (Default settings)

[Windows 8.X]: Select this configuration for installing **Win 8.X** or **Ubuntu 14.04**.

3.2.13. CSM Configuration

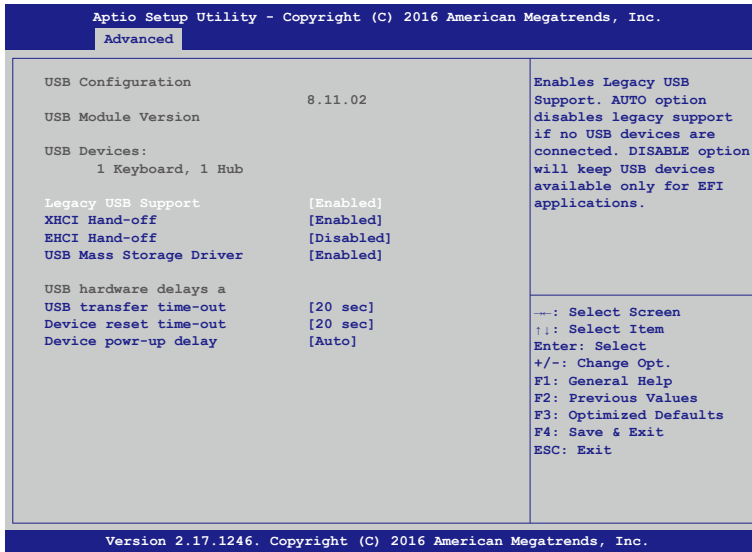
Set CSM configuration parameters.



- **CSM Support**
Enable/Disable CSM support.
- **Boot Option filter**
This option controls Legacy/UEFI ROMs priority.
- **PXE BootRom**
This option controls the execution of UEFI and Legacy PXE OpROM.
- **Storage**
This option controls the execution of UEFI and Legacy Storage OpROM.
- **Video**
This option controls the execution of UEFI and Legacy Video OpROM.
- **Other PCI devices**
This option determines OpRom execution policy for devices other than Network, Storage, or Video.

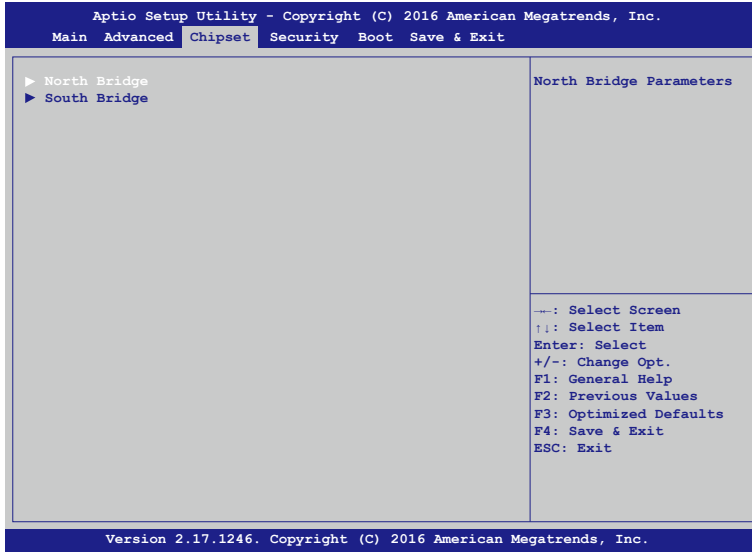
3.2.14. USB Configuration

Set USB configuration parameters.



- **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.
- **XHCI Hand-off**
This is a workaround for OSeS without XHCI hand-off support. The XHCI ownership change should be claimed by XHCI driver.
- **EHCI Hand-off**
This is a workaround for OSeS without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.
- **USB Mass Storage Driver Support**
Enable/Disable USB Mass Storage Driver Support.
- **USB transfer time-out**
The time-out value for Control, Bulk, and Interrupt transfers.
- **Device reset time-out**
USB mass storage device start unit command time-out.
- **Device power-up delay**
Maximum time the device will take before it properly reports itself to the Host Controller. 'Auto' Uses default value: for a Root port it is 100 ms, for a Hub port the delay is taken from Hub descriptor.

3.3. Chipset Setup

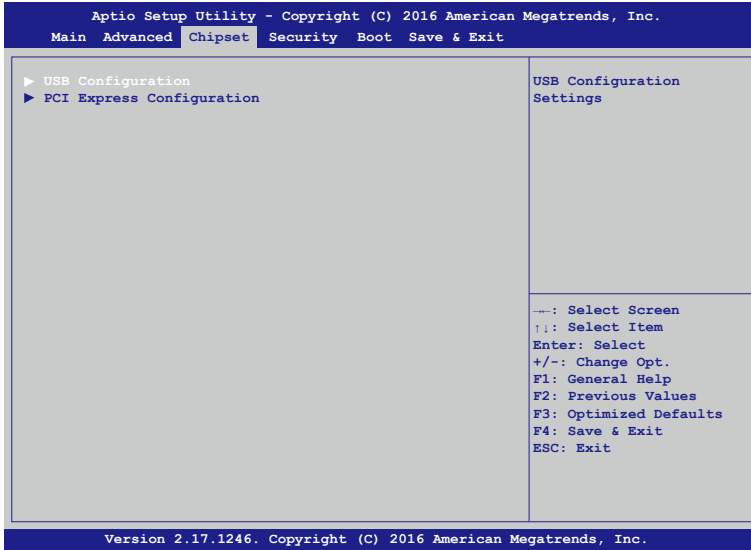


3.3.1. North Bridge



- **DVMT Pre-Allocated**
Select DVMT 5.0 Pre-Allocated (fixed) Graphics Memory size used by the Internal Graphics Device.
- **DVMT Total Gfx Mem**
Select DVMT 5.0 Total Graphic Memory size used by the Internal Graphics Device.

3.3.2. South Bridge



- **USB Configuration**

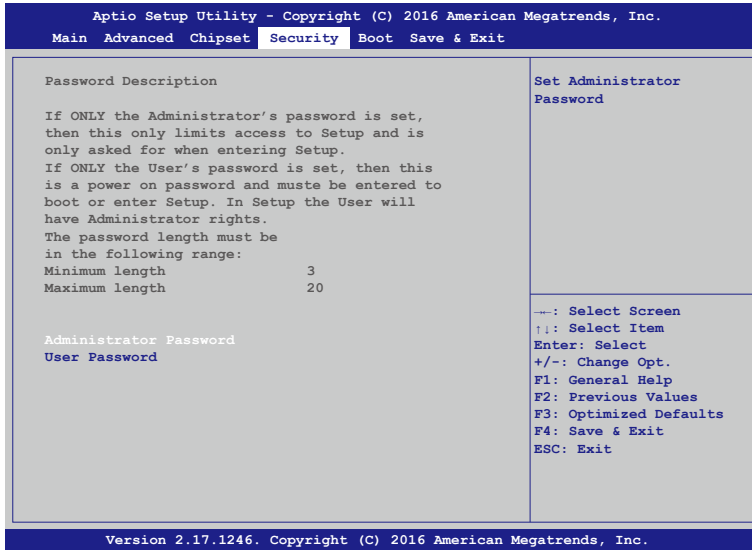
[XHCI Mode]: Mode of operation of XHCI controller.

[USB2 Link Power Manag]: Enables or disables the USB2.0 Link Power Management.

[USB 2.0(EHCI) Support]: Enables or disables the USB2.0 function, and only can be enabled while the XHCI mode is disabled.
- **PCI Express Configuration**

[PCI Express Port 0~3]: Enables or disables each of the PCI Express Port 0 ~ Port 3 in the Chipset.

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.
- User Password**

This item allows you to configure a user 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 user password only allows you to make changes to certain BIOS settings.

Note 1: The length of the password must be between 3~20 characters.

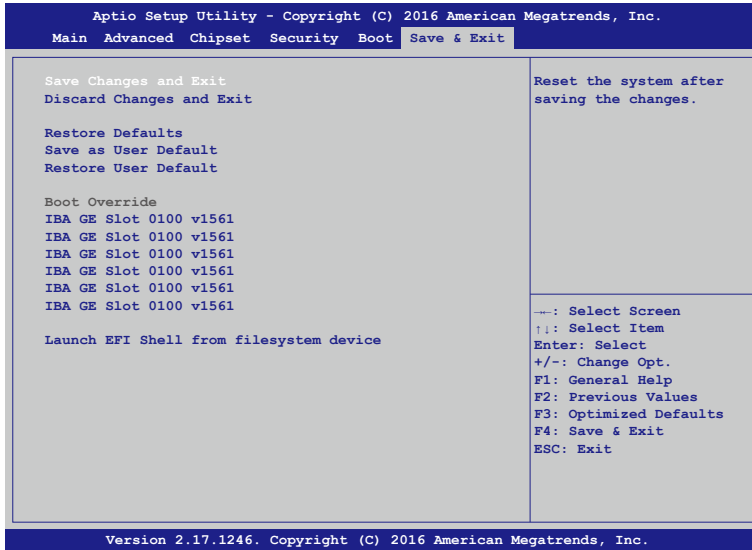
Note 2: To cancel the password, you must press <Enter> on the item (Administrator Password / User Password) and type in the correct password first, then press <Enter> without entering any password, and press <Enter> again as promotion about password cleanup conformation.

3.5. Boot Setup



- Setup Prompt Timeout**
 Number of seconds to wait for setup activation key. 65535(0xFFFF) means indefinite waiting.
- Bootup NumLock State**
 Select the keyboard NumLock state.
- FullScreen Logo**
 Enables or disables Quiet Boot option.
- Fast Boot**
 Enables or disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.
- Boot Option #1**
 Set the system boot order.
- Network Device BBS Priorities**
 Set the order of the legacy devices in this group.

3.6. Save & Exit Setup



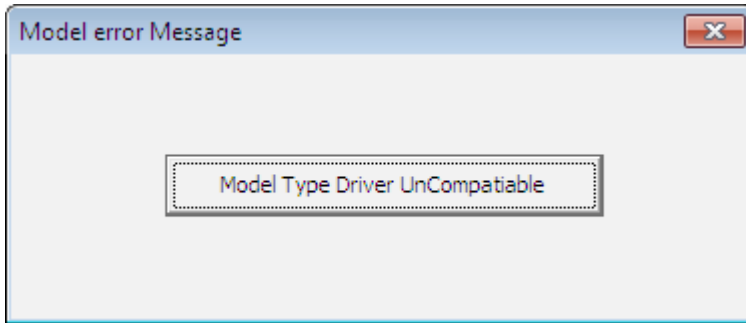
- **Save Changes and Reset**
Press <Enter> on this item and select [Yes]. This saves the changes to the CMOS and exits the BIOS Setup program. Select [No] or press <Esc> to return to the BIOS Setup Main Menu.
- **Discard Changes and Reset**
Press <Enter> on this item and select [Yes]. This exits the 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.
- **Save as User Default**
Save to current BIOS settings as user-defined default settings.
- **Restore User Default**
Load the User-define default settings for all BIOS options.

4. Driver and Utility Installation

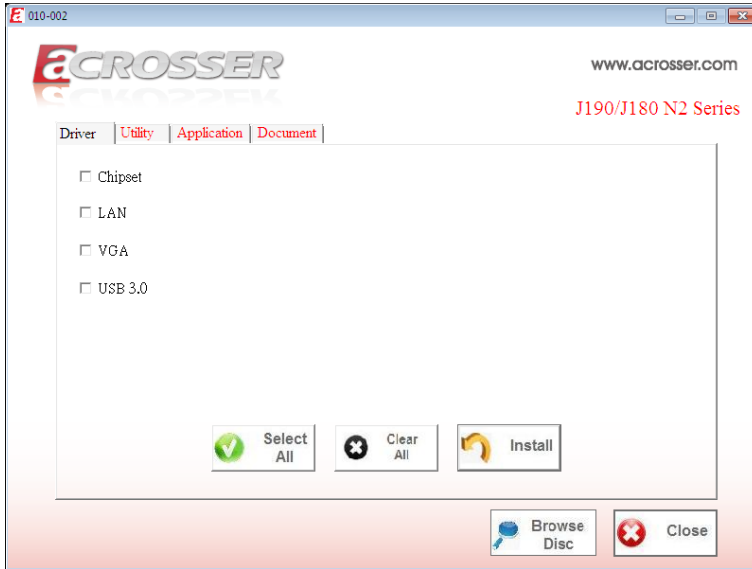
4.1. Driver CD Interface Introduction

Acrosser provides a Driver CD compiled with all the drivers, utilities, applications and documents this product may need. For Windows environment, it can be guided by the setup program automatically. For Linux environment, the related files can be found at folder "J190N2\Utility\Linux".

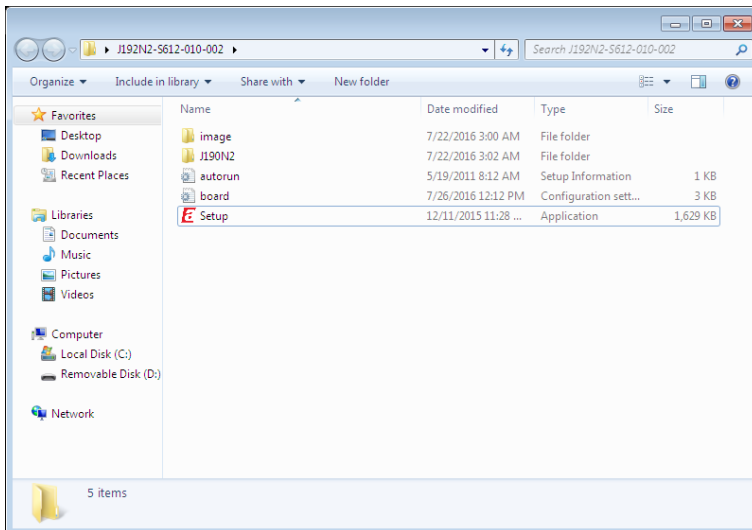
Put the Driver CD into your CD-ROM drive. The Driver CD will automatically detect the mainboard information to see if they are matched. The following error messages appear if you use an incorrect Driver CD version with your mainboard. Please find the correct Driver CD to proceed.



Put the correct Driver CD of your mainboard into your CD-ROM drive. The following installation screen should appear.

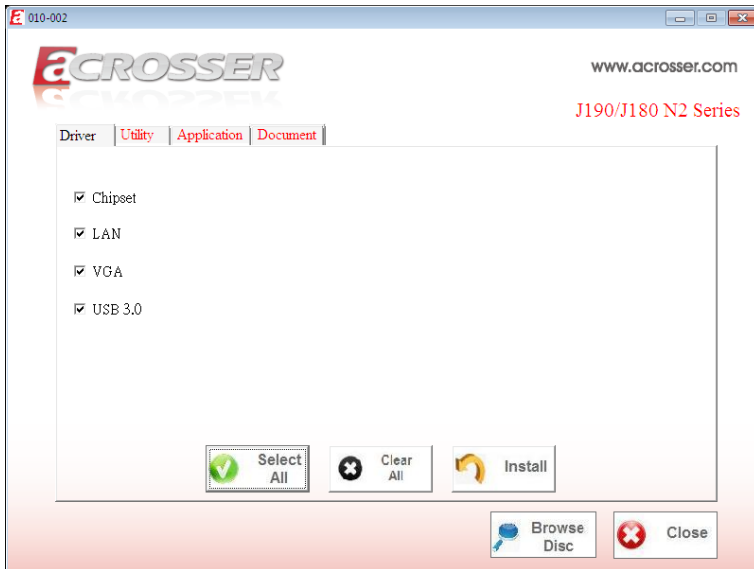


If not, enter the root folder of the Driver CD, run the execution file “Setup.exe”.



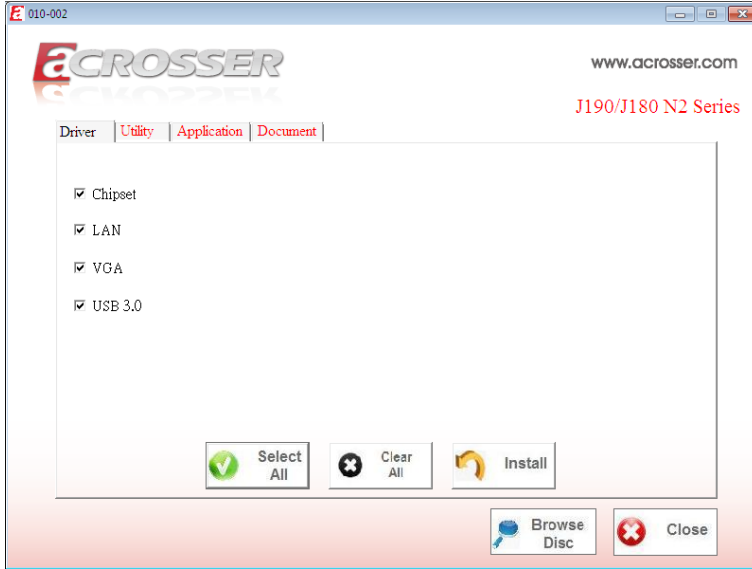
4.2. Driver Installation Page

Step 1: Select the “**Driver**” tab. Click the “**Select All**” button to select all the driver checkboxes, and then click “**Install**” button to start installing all the selected drivers.

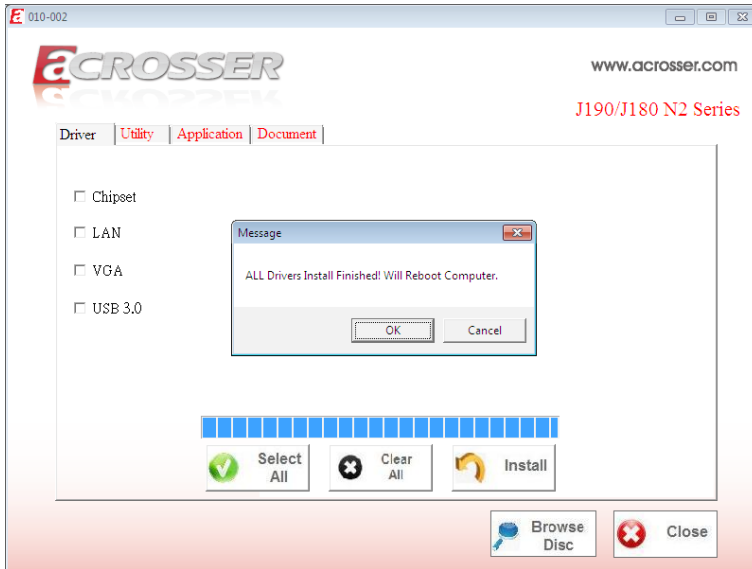


Note: Select the “**Clear All**” button will clear all the selections, and then you can select the driver you want to install one by one, but the “**Chipset**” driver has to be installed before installing all the others.

Step 2: The driver installation started.

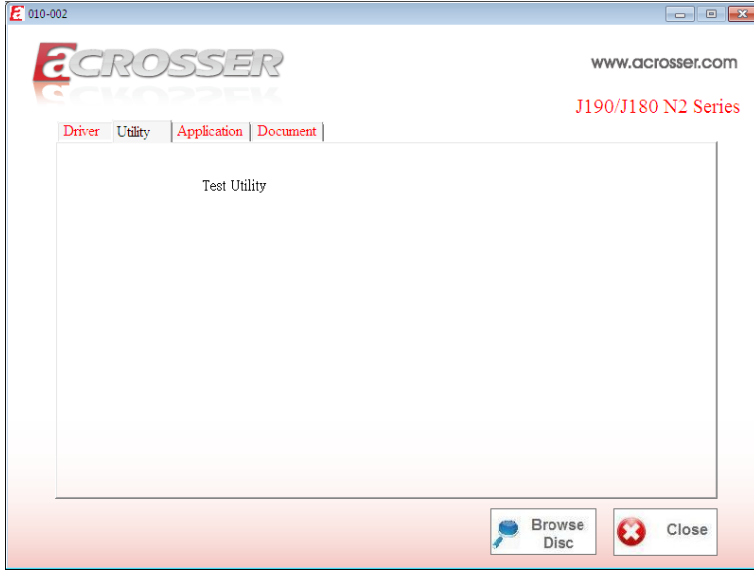


Step 3: The driver installation finished. The configuration will be valid after reboot.

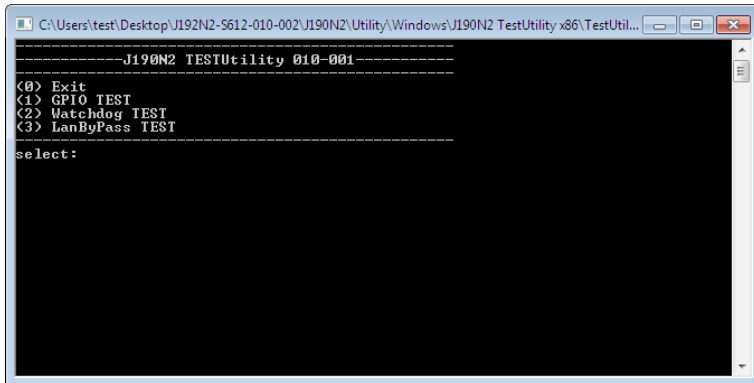


4.3. Utility Installation Page

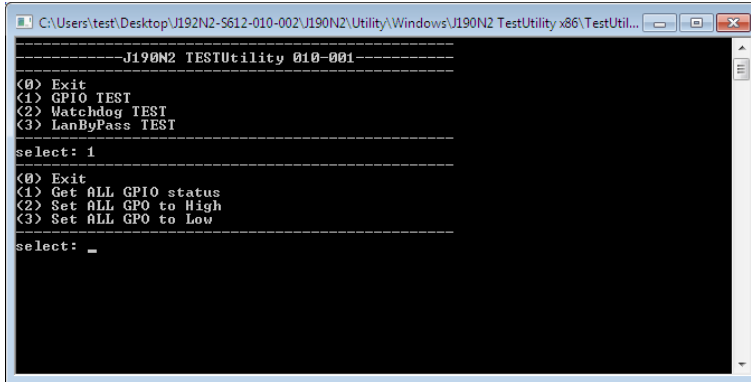
Step 1: Select the “Utility” tab. Click the “Test Utility” box.



Step 2: The “Test Utility” screen appears.



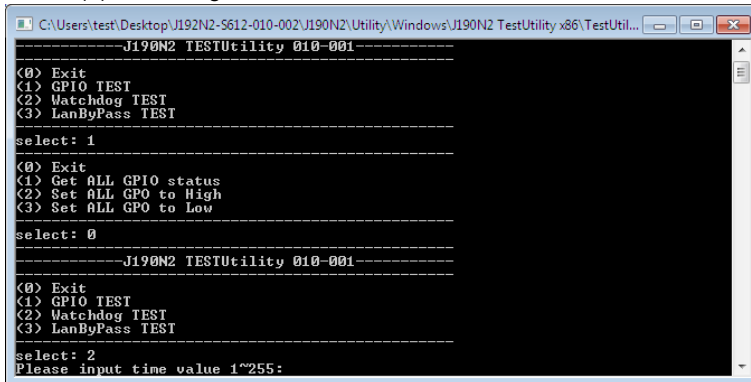
Select (1) GPIO TEST:



```

C:\Users\test\Desktop\J192N2-5612-010-002\J190N2\Utility\Windows\J190N2 TestUtility x86\TestUtil...
-----J190N2 TESTUtility 010-001-----
<0> Exit
<1> GPIO TEST
<2> Watchdog TEST
<3> LanByPass TEST
-----
select: 1
<0> Exit
<1> Get ALL GPIO status
<2> Set ALL GPO to High
<3> Set ALL GPO to Low
-----
select: _
    
```

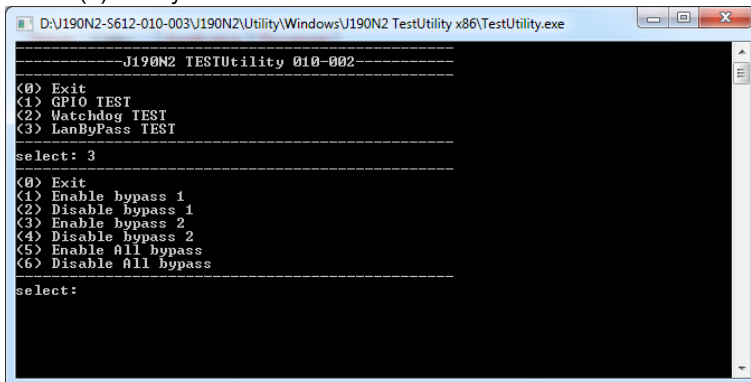
Select (2) Watchdog TEST:



```

C:\Users\test\Desktop\J192N2-5612-010-002\J190N2\Utility\Windows\J190N2 TestUtility x86\TestUtil...
-----J190N2 TESTUtility 010-001-----
<0> Exit
<1> GPIO TEST
<2> Watchdog TEST
<3> LanByPass TEST
-----
select: 1
<0> Exit
<1> Get ALL GPIO status
<2> Set ALL GPO to High
<3> Set ALL GPO to Low
-----
select: 0
-----J190N2 TESTUtility 010-001-----
<0> Exit
<1> GPIO TEST
<2> Watchdog TEST
<3> LanByPass TEST
-----
select: 2
Please input time value 1^255:
    
```

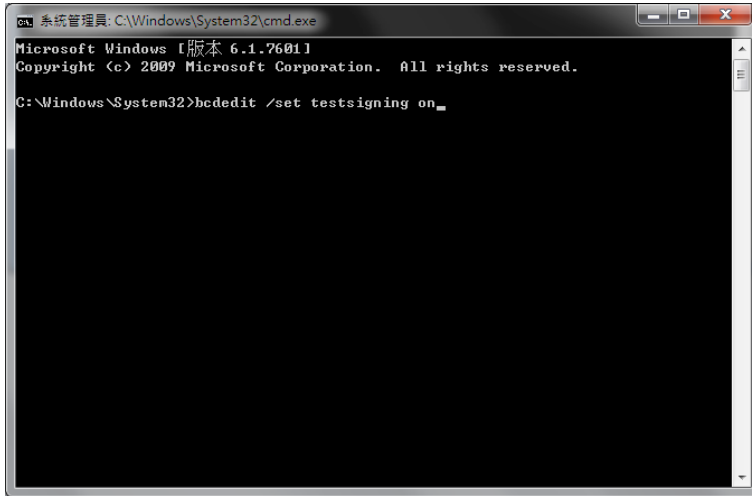
Select (3) LanByPass TEST:



```

D:\J190N2-5612-010-003\J190N2\Utility\Windows\J190N2 TestUtility x86\TestUtility.exe
-----J190N2 TESTUtility 010-002-----
<0> Exit
<1> GPIO TEST
<2> Watchdog TEST
<3> LanByPass TEST
-----
select: 3
<0> Exit
<1> Enable bypass 1
<2> Disable bypass 1
<3> Enable bypass 2
<4> Disable bypass 2
<5> Enable All bypass
<6> Disable All bypass
-----
select:
    
```

For Windows 64-bit OS, enter the cmd.exe command, type “**bcdedit /set testsigning on**” to enter the Windows test mode.



Reboot the system after executed this command.

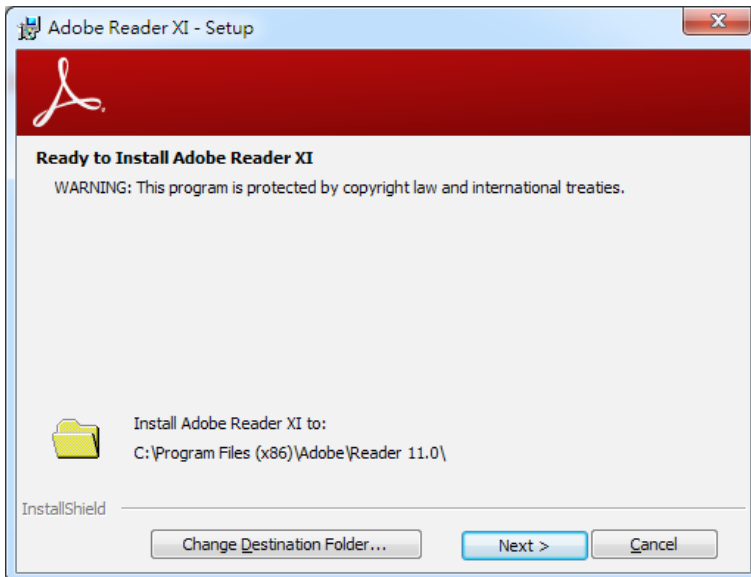
4.4. Application Installation Page

Step 1: Select the “Application” tab. Click the “Acrobat Reader XI” box.



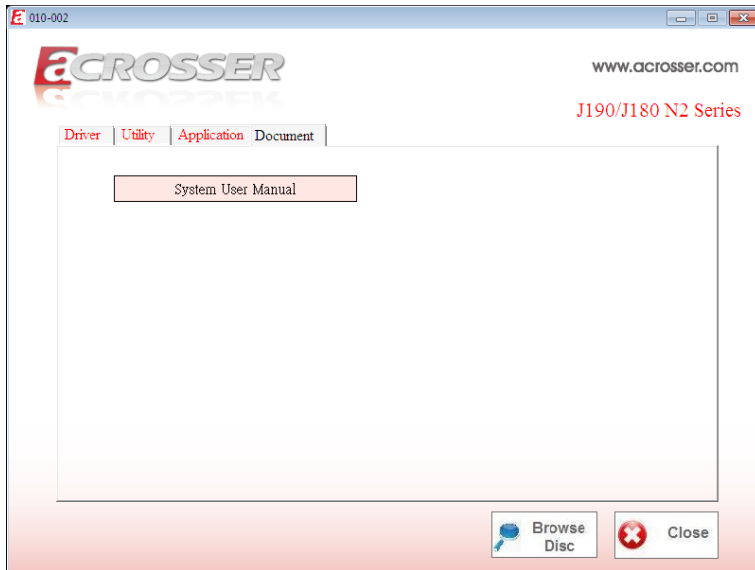
Note 1: The “**Acrobat Reader**” is used for reading the user manual of PDF format.

Note 2: The “**Modules Driver**” is used for installing the optional WiFi module.



4.5. Document Page

The user manual is stored in the “**Document**” folder.



Note: To read the PDF file, you will have to install “**Acrobat Reader**” first. Please refer to the “**Application Installation Page**”.

5. Software Installation and Programming Guide

5.1. Introduction

5.1.1. GPIO

The J190/J180 N2 Series provides GPIO interface. Users can use the GPIO APIs to Control GPO Pin.

5.1.2. Watchdog

The J190/J180 N2 Series provides 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.

5.1.3. LAN Bypass Subsystem

Two pairs of LAN ports on J190/J180 N2 Series implements the bypass function. Users can invoke the LAN Bypass APIs to control the bypass states of the LAN ports.

5.2. File Descriptions

5.2.1. GPIO/Watchdog/LAN Bypass Subsystem

On Linux and Windows platform

1. Static library
2. Dynamic library
3. Header file
4. Executable file

5.3. API List and Descriptions

5.3.1. GPIO

Syntax:	Get_gpi_status(int pin)
Description:	Get the status of GPIO input pins and output pins status.
Parameters:	This function takes a pointer to an unsigned char variable as the parameter. The pin0 ~ pin3 is the status of the input 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.

5.3.2. Watchdog

Syntax:	Void wdt_start(int _timevalue)
Description:	This function read the value of the watchdog time counter.
Parameters:	The parameter 'val' is the value to set to watchdog timer register. The range is 1 ~ 255.
Return Value:	None.

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

5.3.3. LAN Bypass Subsystem

Syntax:	void set_bypass1(int value)
Description:	Set first pair is Bypass or Normal.
Parameters:	Set value 0 is Normal, 1 is Bypass.
Return Value:	None.

Syntax:	void set_bypass2(int value)
Description:	void set_bypass2(int value)
Parameters:	Set value 0 is Normal, 1 is Bypass.
Return Value:	None.

6. 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

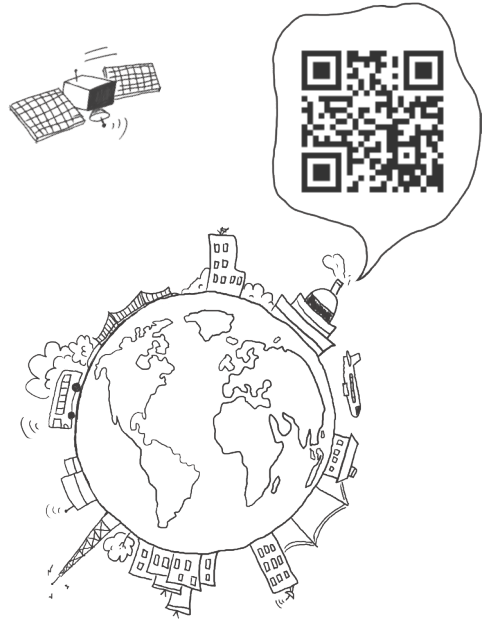
- CPU Type: _____
- Memory Size: _____
- Storage Device (e.g. HDD, CF, or SSD): _____
- Additional Peripherals (e.g. Graphic Card): _____
- Operating System & Version (e.g. Windows 7 Embedded): _____
- Special API or Driver: _____
(If yes, please provide it for debug.)
- Running Applications: _____
- 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>
- Acrosser FAX Number --- 886-2-29992887

To Make Your **Embedded** Idea a Reality



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