



NanoPC

User's Manual

Trademark:

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Version:

User's Manual V1.0 for NanoPC.

Symbol description:



Note: Refers to important information that can help you to use NanoPC better, and tells you how to avoid problems.



Caution: Indicating a potential risk of hardware damage or physical injury may exist.



WEEE:

The use of this symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased this product.

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All images are for reference only, please refer to the physical product for specific features.

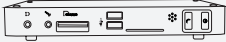
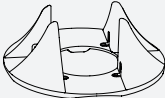
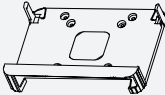
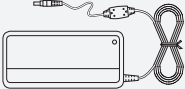
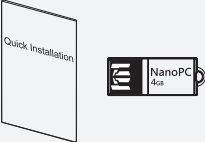
Safety Notice:

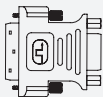


Before using this product, please read the below safety notice carefully, this will help to extend the product's lifecycle, and work normally.

- When NanoPC is working, please make sure its ventilation system is working.
- The power adapter is dissipating heat during normal use, please be sure not to cover it and keep it away from your body to prevent discomfort or injury by heat exposure.
- Please use the power adapter that comes with the product's package, wrong power adapter may damage your device.
- Make sure all the peripherals are properly connected before using NanoPC.
- This product should only be used in an environment with ambient temperatures between 0°C and 40°C.
- Always shut down the computer before installing or uninstalling the peripheral which does not support hot plug.
- Disconnect all peripherals before servicing or disassembling this equipment.
- Please do not disassemble this product by yourself, any disassembly not approved by the original manufacturer may result in malfunction, and void warranty.
- Risk of explosion if battery is replaced by an incorrect type, please dispose of used batteries according to the instructions.

Package Contents

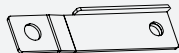
		
NanoPC	Seat Base	VESA Mount
		
Power Adapter	Power Cord	Easy Guide, USB Flash Disk
		
Opening Tool	Mini COM to COM cable (Optional)	Screws



DVI to VGA Adapter



Screws cover



Mini PCIe Half Card Support

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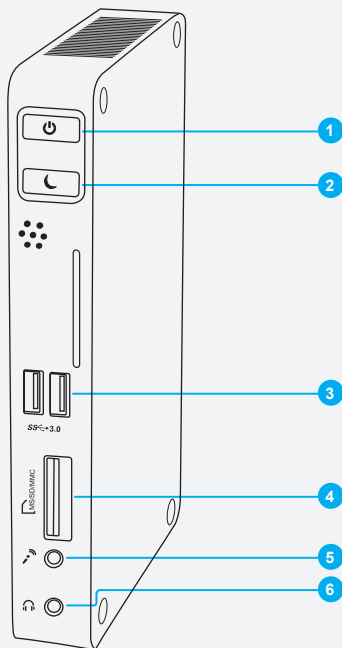
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Introduction

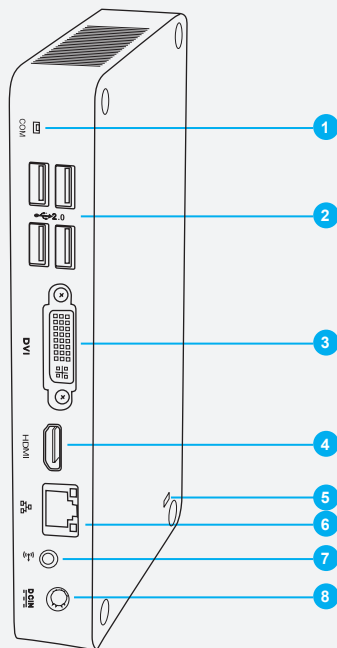
- Front Side View
- Back Side View
- DDR3/DDR3L jumper

1-1 Front Side View



- | | | |
|---|---|--|
| 1 |  | Power button with Power indicator LED
Press to turn your NanoPC on or off, the LED can indicate your system states. |
| 2 |  | Suspend Button
Enter suspend mode in operating system. |
| 3 |  | USB 3.0 port
This USB port supports the USB 3.0/2.0/1.0 specification. Use this port for USB devices such as keyboard, mouse, USB printer, USB flash drives and hard disk drives, etc. |
| 4 |  | Multi-Function card reader
This memory card reader supports MS/MS Pro SD/SDHC/SDXC/MMC memory cards used in devices like digital cameras, mobile phones, Media players and so on. |
| 5 |  | Microphone
Connects to a microphone or playback devices with optical connectors (3.5mm jack). |
| 6 |  | Headphone
Connects to a headphone. |

1-2 Back Side View

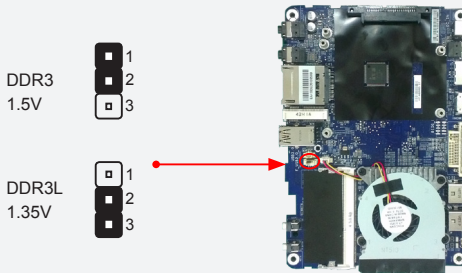


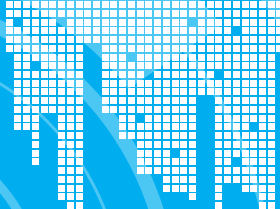
1	COM	COM port Use this port for devices such as Point Of Sales. Connect Point Of Sales that uses Mini COM to COM cable to this port.
2	USB 2.0	USB 2.0 port This USB port supports the USB 2.0/1.0 specification. Use this port for USB devices such as keyboard, mouse, USB printer, USB flash drives and hard disk drives, etc.
3	DVI	DVI Port Connect monitor or TV that uses DVI connector to this port. By using the DVI to VGA adapter that comes with your product, you can also connect a VGA-compatible devices such as a monitor or projector.
4	HDMI	HDMI port The HDMI (High-Definition Multimedia Interface) port supports Full-HD display devices. Connect monitor or TV that uses HDMI connector to this port.
5		Kensington lock Attach a Kensington security system or a compatible security lock to secure your NanoPC in place.
6	RJ45	RJ-45 LAN port Supports 10/100/1000Mb/s Ethernet network. Connect network cable to access Internet.
7	Line In	Line out Connects to powered analog speakers or recording devices with optical connectors (3.5mm jack).
8	DC IN	Power input port Connect power cord that come with your product.

1-3 DDR3/DDR3L jumper

Set the jumper to pins 1-2, it set to DDR3, the DDR3 Power is 1.5V.

Set the jumper to pins 2-3, it set to DDR3L, the DDR3L Power is 1.35V.





Placement and connecting

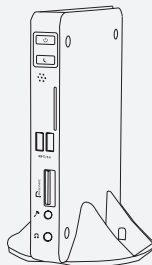
- Placement of NanoPC
- Connection of NanoPC



2-1 Placement of NanoPC

In Seat Base

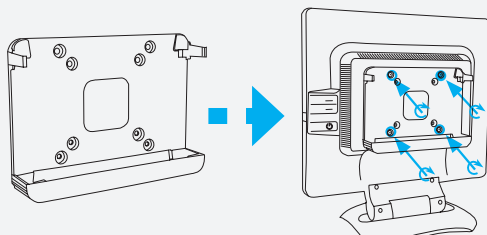
1. Place your NanoPC into the groove of the Seat Base.



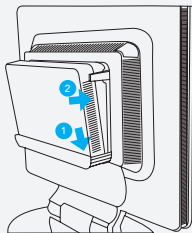
Installing to Display

This is the best space-saving way.

1. Use four screws to fasten the Vesa Mount onto the display back.



2. Fit the Nettop into the Vesa Mount with power button locating at the top for easy touch.

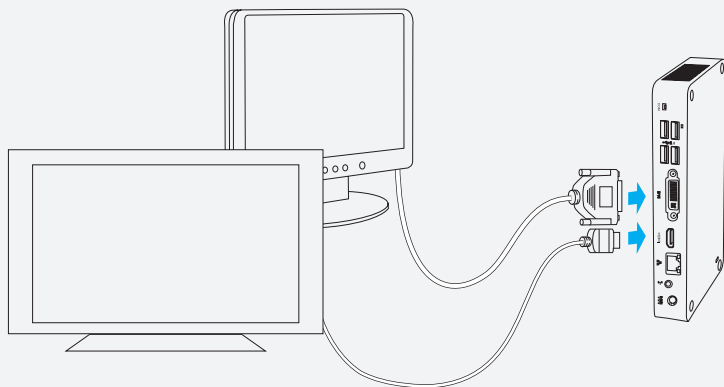


To fasten the VESA mount, your display must comply with VESA75 or VESA100 standard. The two groups of holes on your display have different space between, and they help you easily fasten the bracket onto your display.

2-2 Connection of NanoPC

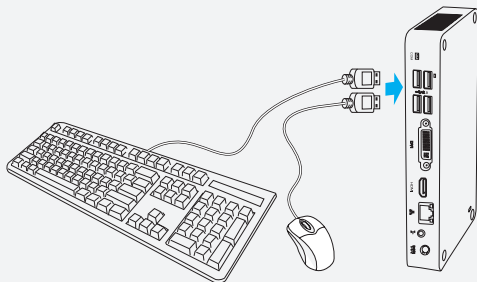
Connect display

Connect a display or TV that has HDMI port or DVI port to your NanoPC.



Connect USB devices

Connect USB devices to the USB ports, for example, mouse, keyboard devices.



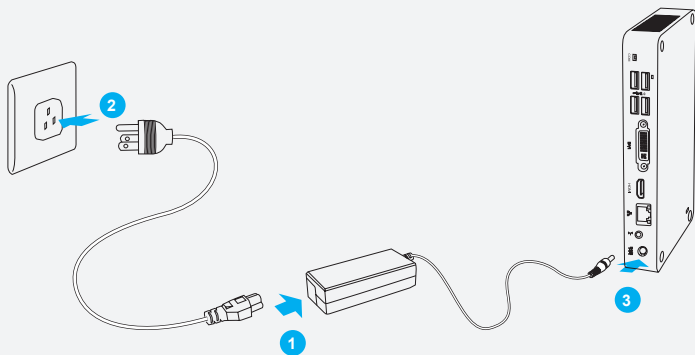
Connect network cable

Connect one end of a network cable to the RJ-45 LAN port, and the other end to a hub or switch.



Connect power cord

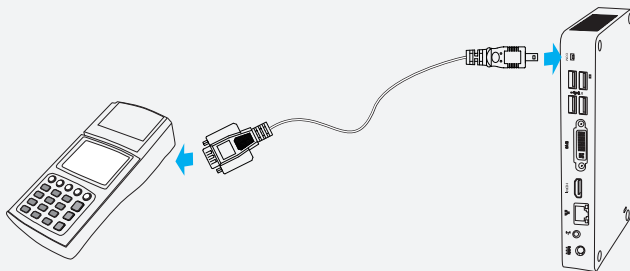
Connect the power adapter to the power input port of the NanoPC, and then press the power button to start it.



The power adapter is dissipating heat during normal use, please do not cover it and keep it away from your body to prevent injury from heat exposure.

Connect Point Of Sales

Connect one end of cable to the COM port, and the other end to a Point Of Sales.



BIOS Setup

- Enter BIOS Setup
- Main
- F-centre
- Advanced
- Boot
- Power
- Health
- Security
- Save & Exit



Enter BIOS Setup

The BIOS is the communication bridge between hardware and software, correctly setting up the BIOS parameters is critical to maintain optimal system performance. Power on the computer, when the message "Press to enter setup. Press <F7> to enter boot menu." appears at the bottom of the screen, you can press key to enter Setup.



We do not suggest that you change the default values in the BIOS Setup, and we shall not be responsible for any damage which resulted from the change you made.

Use the arrow right/left keys to select a specific function and go to the submenu. Each function is explained below:

Main

It displays the basic system configuration, such as CPU Name, memory size, system date, time and so on. They all can be viewed or set up through this menu.

F-Center

The advanced system features can be set up through this menu.

Advanced

The advanced system features can be set up through this menu.

Boot

Boot features can be set up through this menu. You can set the boot device priority and enable "Quiet Boot" feature here.

Power

All the items related with Green function features can be setup through this menu.

Health

This setup enables you to read/change fan speeds, and displays temperatures and voltages of your CPU/System.

Security

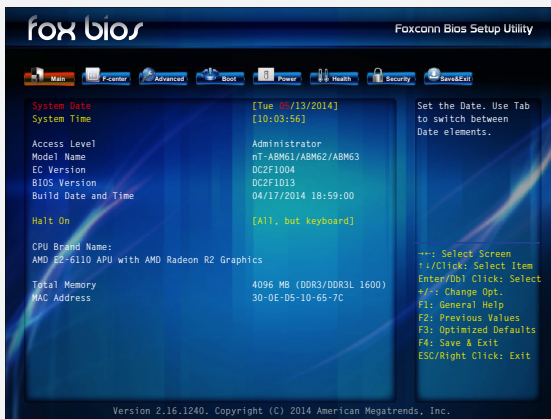
The Administrator/User password can be set up through this menu to prevent unauthorized use of your computer. If you set a password, the system will ask you to key in correct password before boot or access to Setup.

Save&Exit

The optimal performance settings can be loaded through this menu. However, it may offer better performance in some ways (such as less I/O cards, less memory ...etc.), still, it may cause problem

if you have more memory or I/O cards installed. It means, if your system loading is heavy, set to optimal default may sometimes come out an unstable system. What you need now is to adjust BIOS setting one by one, trial and error, to find out the best setting for your current system. You also can save or discard the changes and exit BIOS setup here.

Main



► System Date

<weekday><month><date> <year> format.

Day—weekday from Sun. to Sat., this message is automatically displayed by BIOS (Read Only).

Month—month from 1 to 12.

Date—date from 1 to 31.

Year—year, set up by users.

Use [ENTER], [TAB] or [SHIFT-TAB] to select a field. Use [+] or [-] to input the value.

► System Time

This item allows you to configure the desired time. Use [ENTER], [TAB] or [SHIFT-TAB] to select a field. Use [+] or [-] to input the value.

The three fields of the setting are <hour> : <minute> : <second> respectively.

► Access Level

It displays your current access level. If you enter system with a user password, it will display “User”. If

no password is set or you enter system with administrator password, this item will display "Administrator".

F-center



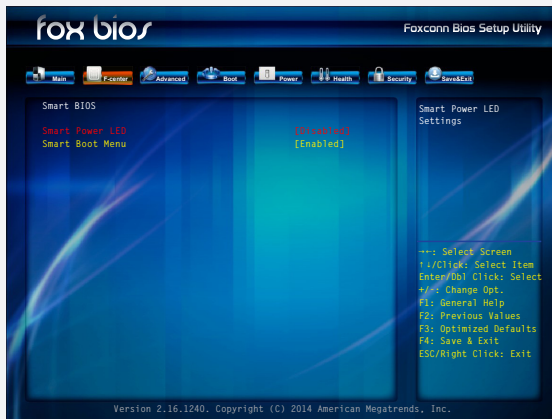
► Super BIOS Protect

To protect the system BIOS, there is a BIOS write-protection mechanism provided to prevent BIOS FLASH tool being improperly used to update BIOS or the vicious virus(such as CHI,etc) rewriting BIOS setup.

► Smart BIOS/Fox Intelligent Stepping/CPU Configuration

Press <Enter> to go to relative submenu.

Smart BIOS



► Smart Power LED

Smart Power LED is a feature built on your motherboard to indicate different states during Power On Self Test (POST). The LED is located at the front panel, and it displays POST state by different long-short blinking intervals. You can always leave this state enabled.

System Status	Power LED Status	Stop Blinking Condition
Normal	Always On	Always On
No Memory	Continue blinking On (1sec.), Off (1sec.)	Reboot & Memory OK
No Display	Continue blinking On (2sec.), Off (2sec.)	Reboot & Display OK
Post Error Message	Quick blinking twice (1/3sec. On, 1/3sec. Off), one long On (1sec.), continuously.	Enter Setup or Skip

BIOS SETUP

► Smart Boot Menu

When PC starts, it will ask you to press [Del] key to enter setup or press [F7] key to enter smart boot menu. If [Disabled] is selected, then pressing [F7] has no function. This also prevents user without password trying to get into your computer through smart boot menu.

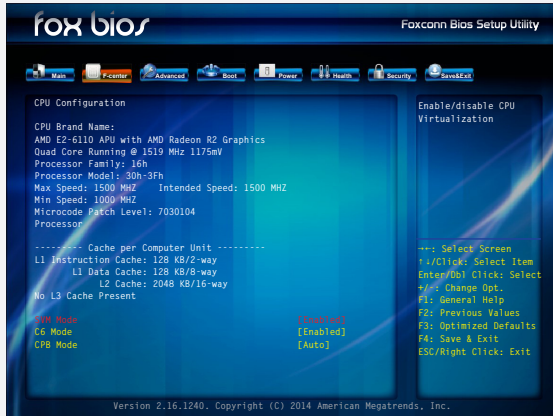
Fox Intelligent Stepping



► Spread Spectrum

If you enabled this function, it can significantly reduce the EMI (Electromagnetic Interference) generated by the system, so to comply with FCC regulation. But if overclocking is activated, you had better disable it.

CPU Configuration

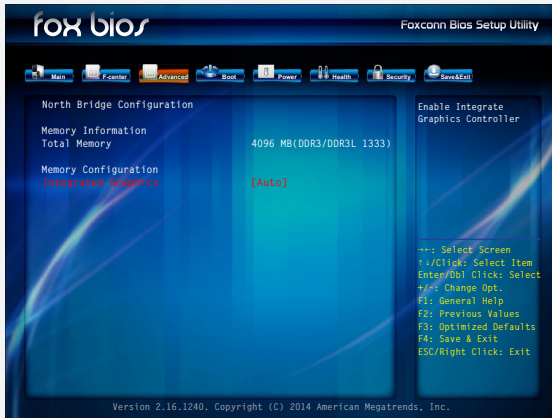


- ▶ SVM Mode
This item is used to enable or disable CPU Virtualization.
- ▶ CPU Mode
This item is used to enable or disable C6.
- ▶ CPB Mode
This item is used to disable or auto CPB.



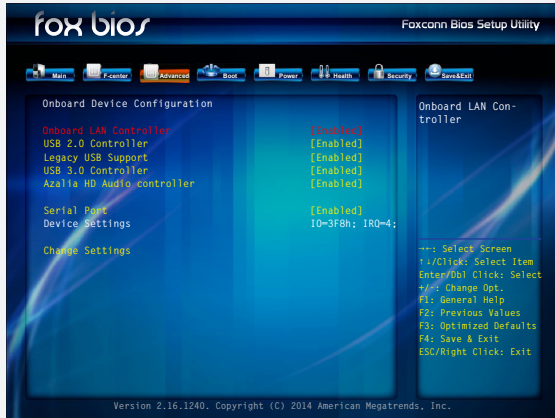
- North Bridge/Onboard Device Configuration/SATA Configuration/Trusted Computing/Network Stack
Press <Enter> to go to its submenu.

North Bridge



- **Total Memory**
This item displays the current using memory information.
- **Integrated Graphics**
This item allows you to determine whether to allocate memory for the integrated graphics controller from the system memory. Options: [Auto], [Manual].
[Auto]-Auto the integrated graphics controller.
[Manual]- Manual the integrated graphics controller.

Onboard Device Configuration



- ▶ Onboard LAN Controller
This item is used to enable or disable the onboard LAN controller
- ▶ USB 2.0 Controller
This item is used to enable or disable USB2.0(XHCI) Controller Support.
- ▶ Legacy USB Support
This item is used to enable the support for USB devices on legacy OS. If you have a USB keyboard or mouse, set to enabled.
[Enabled]: This option will enable the legacy USB support.
[Disabled]: This option will keep USB devices available only for EFI applications.
- ▶ USB 3.0 Controller
This item is used to enable or disable USB3.0(XHCI) Controller Support.
- ▶ Azalia HD Audio controller
This item is used to enable or disable the Azalia HD Audio Controller.
- ▶ Serial Port

This item is used to enable or disable the serial port (COM).

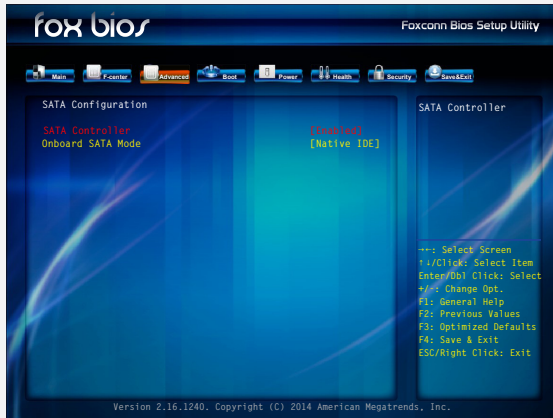
► Device Settings

This item shows the resource assigned to the serial port.

► Change Settings

This item is used to select an optimal settings for Super IO device.

SATA Configuration



► SATA Controller

This item is used to enable or disable the onboard SATA controller.

► Onboard SATA Mode

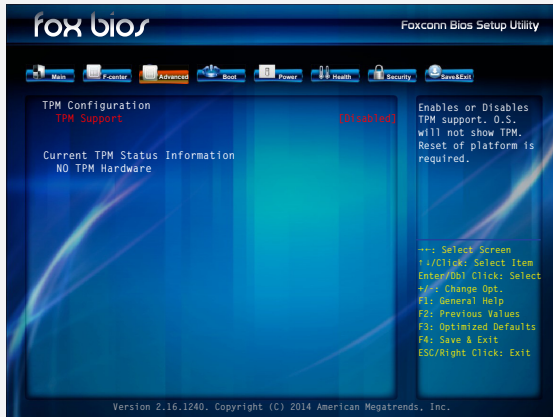
This item is used to set the operating mode of your SATA ports.

[Native IDE] - This configures the SATA ports to support native IDE mode.

[AHCI] - The Advanced Host Controller Interface (AHCI) specification describes the register level interface for a Host Controller for Serial ATA. The specification includes a description of the hardware/

software interface between system software and the host controller hardware. AHCI provides more advanced features including SATA features, but some SATA drives may not support AHCI, unless they are labeled with AHCI support in its specification. If your motherboard supporting AHCI, and you have a SATA device, which also supports AHCI, then you can select IDE option to have fair performance (only PATA, SATA level), or you can select AHCI to get its best performance.

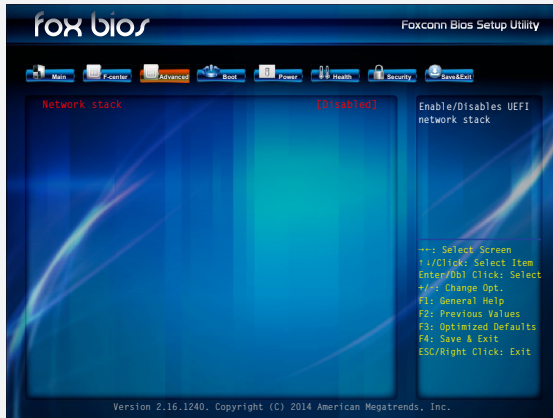
Trusted Computing



► TPM Support

This item is used to decide whether to support TPM (Trusted Platform Module) device function. Default option is [Disabled]. If you want to support TPM, first you need to install a TPM device on the motherboard and set this item to [Enabled], then save changing and reset your computer, otherwise the operation system can not show the relative information.

Network Stack



► Network stack

This item is used to enable/disable UEFI network stack.

The UEFI(Unified Extensible Firmware Interface)Network Stack implements the TCP/IP network interfaces such as SNP, MNP,ARP, IP, UDP, DHCP, MTFTP, and TCP.

Boot



- **Bootup Numlock State**
This item defines if the keyboard Num Lock key is active when your system is started. The available settings are: On (default) and Off.
- **Quiet Boot**
This item is used to enable/disable the quiet boot.
[Disabled] : Displays the normal POST messages.
[Enabled] : Displays OEM customer logo instead of POST messages.
- **Fast Boot**
This item is used to enable or disable boot with initialization of a minimal set of devices required to launch active boot option. This is no effect for BBS boot options.
- **Interrupt 19 Capture**
Enable this item can allow Option ROMs to trap Interrupt 19.
- **Set Boot Priority**

These items are used to set the system boot order.

- Hard Disk Drive BBS Priorities / CD/DVD ROM Drive BBS Priorities/USB Floppy Drive BBS Priorities / USB CD/DVD ROM Drive BBS Priorities / USB Hard Disk Drive BBS Priorities / USB KEY Drive BBS Priorities / NETWORK Device BBS Priorities / UEFI Boot Drive BBS Priorities

This items appear only when the devices are available. Use this items to specify the boot device priority sequence of the detected devices.

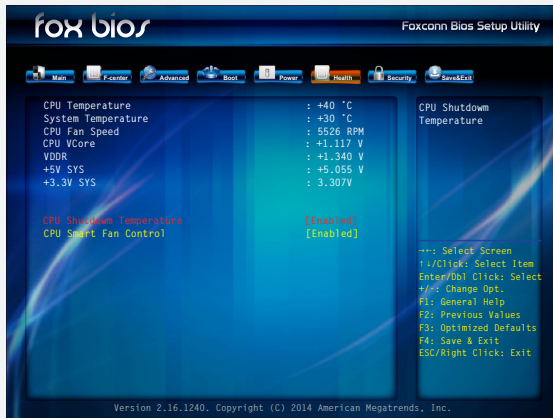


- ▶ Resume By USB Device(s)
This item is used to enable or disable the USB device(s) to generate a wake up.
- ▶ Resume By Onboard LAN
This item is used to enable or disable the onboard LAN to generate a wake up.
- ▶ Resume By RTC
This item is used to enable or disable RTC alarm event to generate a wake up.
RTC is system real time clock.
- ▶ RTC Alarm Date(Days)
When Resume by RTC is enabled, select a specific date to generate a wake up.
- ▶ RTC Alarm Time(HH:MM:SS)
When Resume by RTC is enabled, select a specific time to generate a wake up.
- ▶ Energy-using product
This item is used to configure the DeepSx Mode configuration.

► Restore AC Power Loss

This item is used to set which state the PC will take with when it resumes after an AC power loss.

Health



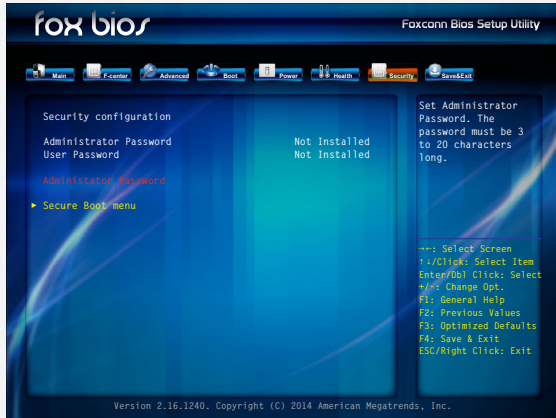
► CPU Shutdown Temperature

This item is used to set the system temperature upper limit. When the temperature exceeds the set value, the system will shut down automatically. This function works only when your operating system is supporting ACPI.

► CPU Smart Fan Control

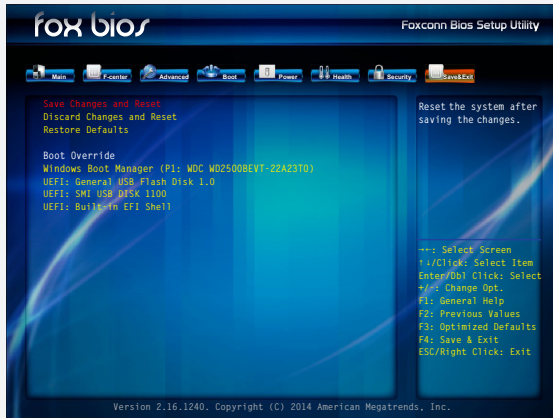
This option is used to enable or disable CPU smart fan function.

Security



- Administrator Password
This item is used to install or change administrator password.
After you input administrator password, it then will ask you to confirm the password.
- User Password
This item is used to install or change user password.
Only when there exists a Administrator password, then this setting can be activated.
- Secure Boot menu
Press <Enter> to go to its submenu.

Save & Exit



► Save Changes and Reset

If you select this option and press <Enter>, a message will be displayed in the screen.

Select [Yes] to save your changes and reset computer, select [No] or <ESC> to return to the main menu.

► Discard Changes and Reset

If you select this option and press <Enter>, a message will be displayed in the screen.

Select [Yes] to exit setup utility and reset computer without saving your modifications, select [No] or <ESC> to return to the main menu.

► Restore Defaults

Optimal defaults are the best settings of this motherboard.

Always load the Optimal defaults after updating the BIOS or after clearing the CMOS values.

Select this option and press Enter, it will pop out a dialogue box to let you load the defaults. Select <Yes> and then press <Enter> to load the defaults. Select <No> and press <Enter>, it will not load.

By this default, BIOS have set the optimal performance parameters of system to improve the performances of system components. But if the optimal performance parameters to be set cannot be supported by your hardware devices (for example, too many expansion cards were installed), the system might fail to work.

► **Boot Override**

BIOS auto detect the presence of connected devices, select the device you want to boot from and press <Enter>, then the system will directly boot from the selected devices. Select [Yes] to discard your modifications, select [No] or <ESC> to return to the menu.



Install OS

- Install Windows 8.1(64 bit)/Windows 7
- Install Drivers

What kinds of hardware and software you need here:

1. Windows 8.1(64 bit)/Windows 7 Install USB Disk or USB DVD-ROM drive and Windows 8.1(64 bit)/Windows 7 Install CD (Other purchase)
2. NanoPC USB Flash Disk (In this package)

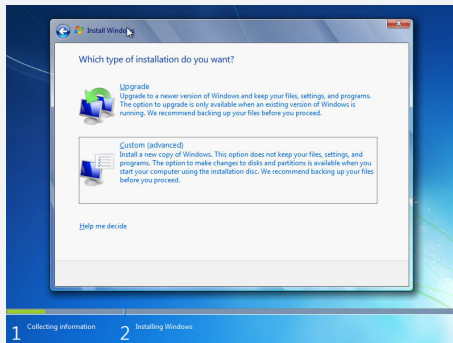
4-1 Install Windows 8.1(64 bit)/Windows 7

1. Connect the Windows 8.1(64 bit)/Windows 7 Install USB Disk (or USB DVD-ROM drive) to one USB port of NanoPC.
2. Press power on button to turn on your computer.
3. Put the Windows 8.1(64 bit)/Windows 7 Install CD into the USB DVD-ROM drive if you use the USB DVD-ROM drive.
4. Computer will choose the boot device by BIOS default and start loading the files for installing the OS.

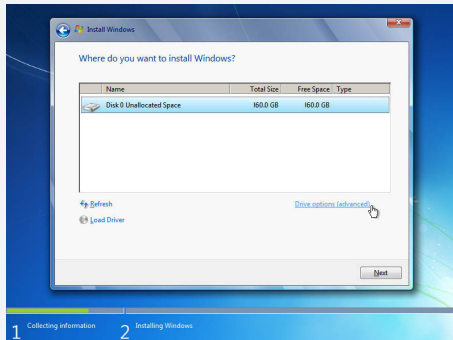


Please press key to enter BIOS Setup if you want to change the first boot device for installing the OS.

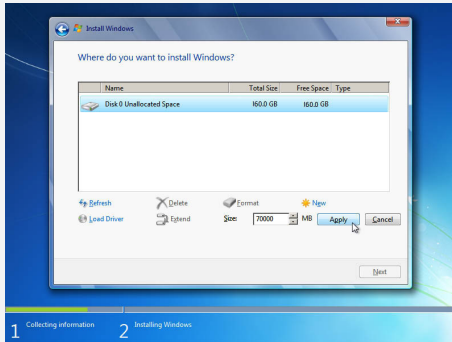
5. When the installation windows popup, set the related items and click “Next” to continue, then click “Install now” button to start the setup.
6. When the license terms appear, choose accept and click “Next” to continue.
7. It will then ask you to select the installation type. Click “Custom (advanced)” to install a new copy of Windows.



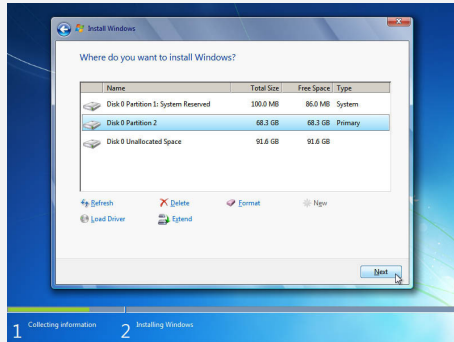
8. The setup will display the hard disk partitions (20GB, in this example) of your system. If there were other systems (such as Linux) installed previously, you need select them and click “Drive options (advanced)” to delete them. When all partitions are clean, setup will display the biggest size of your hard drive.



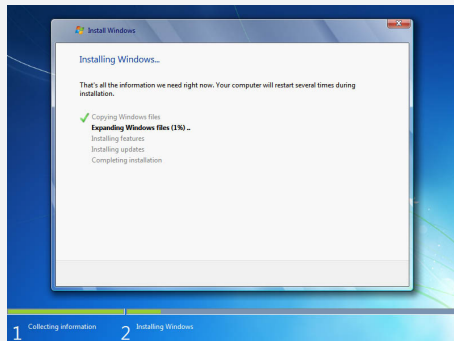
9. In the hard disk size screen, you can click the “new” button to create partitions as you need. In this example we are creating a 70GB partition to install Windows. Make your modifications and click “Apply”.



To ensure that all Windows features work correctly, Windows might create additional partitions for system files. So you will see a 100MB partition reserved by system after you create a partition. Select the 20GB partition and click “Next” to continue.



10. The setup program will then start to install Windows 8.1(64 bit)/Windows 7 on your hard disk. During the installation, your computer will restart several times.



11. When the installation is complete, setup will prepare your computer for it's first use. You can then follow the steps to select system settings, create an account, set a password...etc, until the whole process is completed.

4-2 Install Drivers

1. When the Windows 8.1(64 bit)/Windows 7 is completely installed, you have to install the necessary drivers before using the NanoPC. Connect the NanoPC USB Flash Disk to your system.
2. Waiting for a few seconds, the main menu will be displayed on the screen.



3. Use these options to install all the drivers for your system. You must click "AMD Chipset Driver" to install it first. After that, you can click "One Click Setup" and then choose the items you want to install, or you can click on each individual driver to install it manually.
4. After installing all the drivers, you need to restart your NanoPC, then you can start using it.



Utility

■ Fox WINFLASH



Fox WINFLASH

Fox WINFLASH is a useful utility to backup and update your system BIOS.

Supporting Operating Systems:

- Windows 8.1 (64bit)
- Windows 7

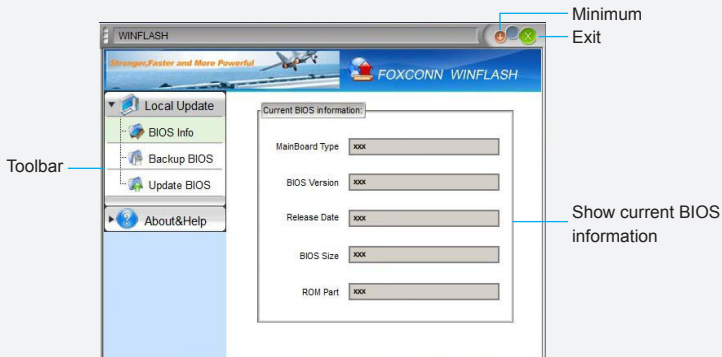


Please set the BIOS setting “BIOS Write Protect” or “Super BIOS Protect” to [Disabled] when running this application.

1. Local Update

1-1 Local Update - BIOS Information

This page lets you know your system BIOS information.



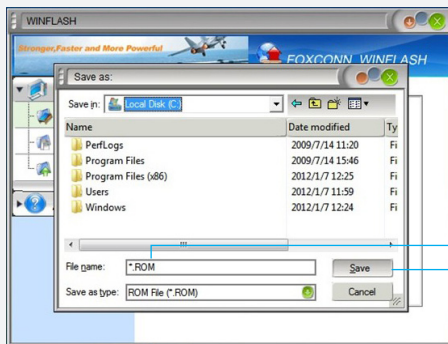
Note: BIOS Size 32Mb = 32M bit = 4M Byte

BIOS Size 16Mb = 16M bit = 2M Byte

Please refer to the physical motherboard for details.

1-2 Local Update - Backup BIOS

This page can back up your system BIOS. You can click “Backup BIOS”, and key in a file name, then click “Save” to finish the backup operation. The extension of this backup file is “.ROM” for AMI BIOS. Make sure you can remember the file name together with the directory which it is stored, prevented that you may need them to recover your BIOS later.

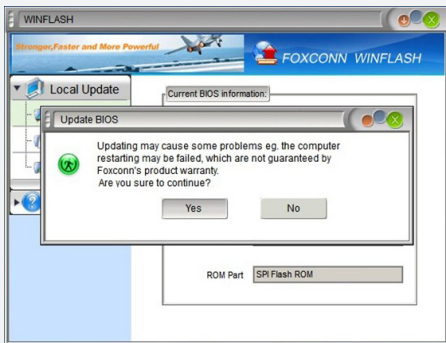


Key in a BIOS name

Click to Save

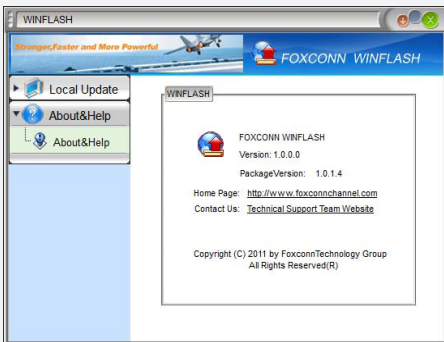
1-3 Local Update - Update BIOS

This page helps you to update your BIOS from a local file. After click “Update BIOS”, An alert message will be displayed to ensure if you really want to continue, click “Yes” to confirm. A setup wizard will guide you to load a local BIOS file to finish the operation. You must remember from which directory to load your new BIOS file (with an extension of “.ROM” for AMI BIOS) before the setup wizard starts.



2. About & Help

This page shows some information about Fox WINFLASH.



Statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning:**FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

Caution:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF exposure warning:

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.



Warning statement for Europe:

Also, put in the manual which directive to fulfil and also which countries to sell the product.

Example of a text to tell which directive has been fulfilled:

Hereby, Foxconn, declares that this nT-ABM Series is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.”

