# System Utilities

## BIOS Setup Utility

The *BIOS Setup Utility* is a hardware configuration program built into a computer's BIOS (Basic Input/Output System).

The BIOS utility is pre-configured and optimized so most users do not need to run this utility. However, if configuration problems occur, you may need to run the BIOS utility.

To activate the BIOS Utility, press ***F2*** during POST (power-on-self-test) when the "`Press <F2> to enter Setup.`" message is prompted on the bottom of the screen.

To change the boot device without entering the BIOS utility, press ***F12*** during POST to enter the multi-boot menu. In this menu, users can change the boot device without entering *BIOS Setup Utility*.

## Navigating the Bios Setup Utility

The BIOS utility has six menu options: **Information**, **Main**, **Advanced**, **Security**, **Boot**, and **Exit**.

To navigate through the menus options, perform the following:

- To choose a menu, use the left and right arrow keys.
- To choose an item, use the up and down arrow keys.
- To change the value of a parameter, press ***F5*** or ***F6***.
- A plus sign (+) indicates the item has sub-items.
- Press ***Enter*** to expand this item.
- Press ***Esc*** while you are in any of the menu options to go to the Exit menu.
- In any menu, you can load default settings by pressing ***F9***. You can also press ***F10*** to save any changes made and exit the *BIOS Setup Utility*.

**NOTE:**

- Parameter values can be changed if enclosed in square brackets [ ]. Navigation keys for a particular menu are shown on the bottom of the screen. Help for parameters are found in the Item Specific Help part of the screen. Read this carefully when making changes to parameter values.
- System information is subject to specific models.

The succeeding sections are descriptions of the menu tabs found on the *InsydeH20 BIOS Setup Utility* screen.

**NOTE:**

The screens provided are for reference only. Actual values may differ by model.

# Information Tab

The Information tab displays a summary of the computer hardware information.

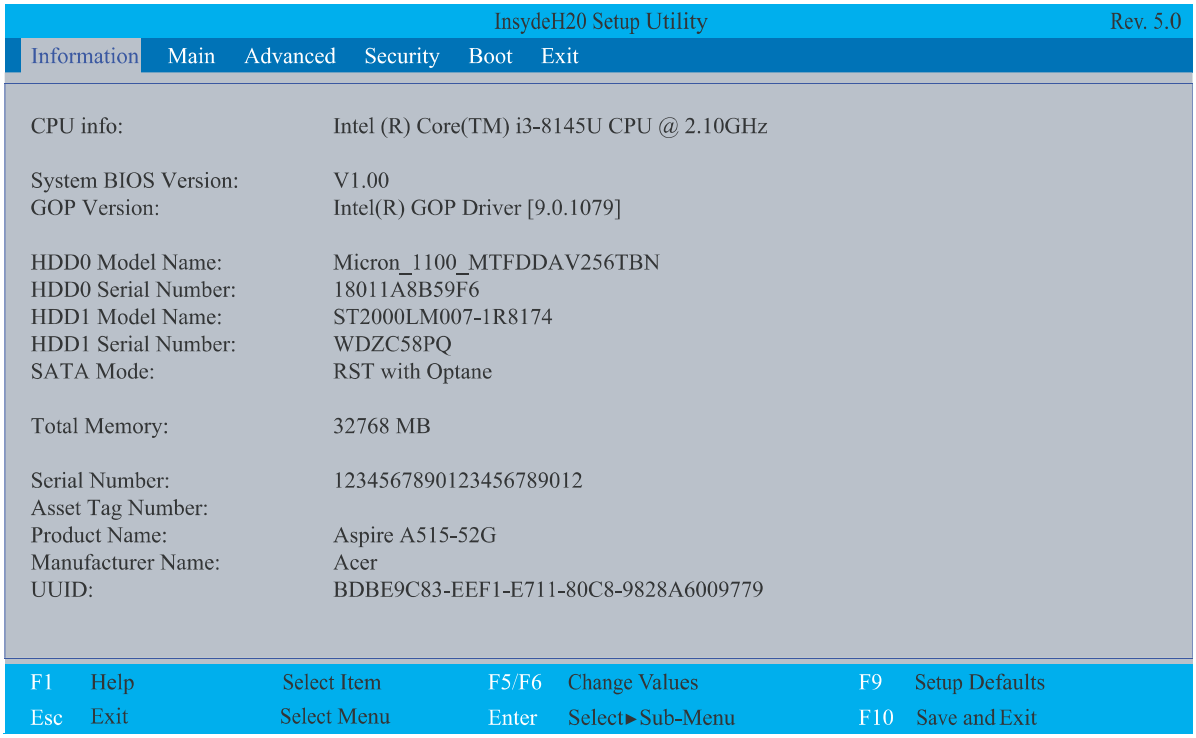


**Figure 2-1. BIOS Information (Windows 10)**

**Table 2-1. BIOS Information Tab Parameters (Windows 10)**

| Product Information | Remark |
|---|---|
| CPU Info | Should be same with processor brand string, BIOS can get processor brand string by calling CPUID instruction. |
| System BIOS Version | Should be same with SMBIOS Type 0 Offset 05h. |
| GOP Version | GOP Version will only be shown when Boot Mode is [UEFI]. |
| HDD Model Name | • This item show the model name of HDD installed.<br>• The hard disk mode name is automatically detected by the system. If there is no hard disk present or unknown type, "None" should be shown on this field. |
| HDD Serial Number | • This item will show the serial number of HDD installed.<br>• If no hard disk or other devices are installed, then it will display a blank line.<br>• If system has more than 1 device, the item should be listed as below:<br>  • HDD0 Model Name<br>  • HDD0 Serial Number<br>  • HDD1 Model Name<br>  • HDD1 Serial Number |
| SATA Mode | Display SATA Mode setting. |
| Total Memory | The field reports the system total installed memory. |
| Serial Number | Should be the same with SMBIOS Type 1 Offset 07h. |

| Product Information | Remark |
|---|---|
| Asset Tag Number | Should be same with SMBIOS Type 3 Offset 08h. |
| Product Name | • Should be same with SMBIOS Type 1 Offset 05h.<br>• Product Name is defined by project POR.<br>• The string is case sensitive and the maximum length is 25 bytes. |
| Manufacturer Name | • Should be same with SMBOS Type 1 Offset 04h.<br>• The string is case sensitive. |
| UUID | • It is required for all systems.<br>• Display format: xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx (follow UUID Standard) |

# Main Tab

The Main tab allows the user to set the system time and date, enable or disable boot option, and enable or disable recovery.

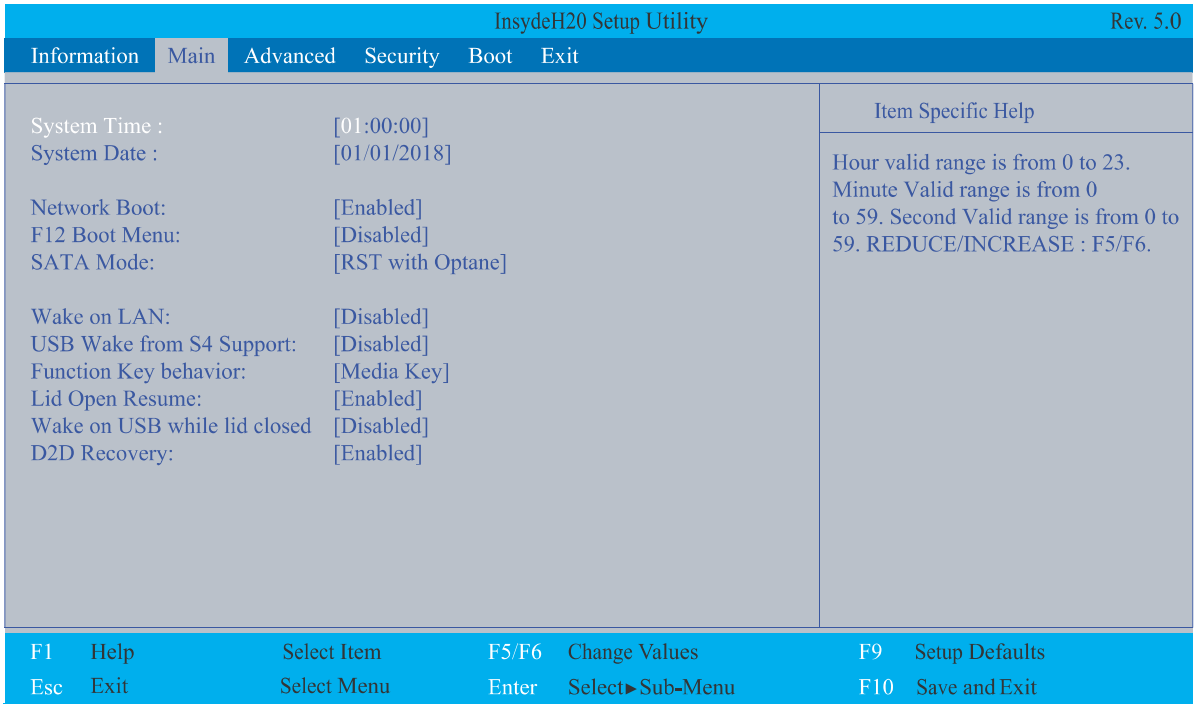


**Figure 2-2. BIOS Main (Windows 10)**

**Table 2-2. BIOS Main Tab Parameters (Windows 10)**

| Product Information | Example | Remark |
|---|---|---|
| System Time | HH:MM:SS | • The format is the number of string.<br>• The hours are displayed in 24-hour format.<br>• The values set in the two fields take effect immediately. |
| System Date | MM/DD/YY | |
| Network Boot | [Enabled] / [Disabled] | The default Network Boot value in different Boot Mode:<br>• [UEFI] Boot Mode: [Disabled]<br>• [Legacy] Boot Mode: [Enabled] |
| F12 Boot Menu | [Enabled] / [Disabled] | • This function enables or disables the ability that user can press ***F12*** while POST to quickly select the boot device.<br>• Modification to the boot device order apply only for the current session. The next time your computer is rebooted it will use again the boot device sequence as set in the **BIOS Setup Utility** > **Boot** > **Boot priority order**.<br>• The default value is [Disabled]. |
| SATA Mode | [RST with Optane] / [AHCI] | • Determines how STAT controller(s) operate.<br>• The default value is [RST with Optane]. |

| Product Information | Example | Remark |
|---|---|---|
| Wake On LAN | [Enabled] / [Disabled] | • Wake on LAN feature allows to turn on a network computer remotely by sending Magic Packet even if the system is in off state.<br>• The default value is [Disabled].<br>• Panel off when wake on LAN. |
| USB Wake from S4 Support | [Enabled] / [Disabled] | Enable/Disable support USB wake from S4. |
| Function Key behavior | [Function Key] / [Media Key] | • [Media Key]: Perform the media function by default. Hold **Fn** to activate ***F1*** to ***F12***.<br>• [Function Key]: Activate ***F1*** to ***F12*** by default, Hold **Fn** to perform media function. |
| Lid Open Resume | [Enabled] / [Disabled] | • System will resume from S3 state by opening the lid.<br>• This option is only visible and functions on non-connected standby supported systems.<br>• The default value depends on project definition. |
| Wake on USB while lid closed | [Enabled] / [Disabled] | • If enabled, USB devices can wake the system, even if the lid is closed.<br>• The option is only visible on non-modern standby supported system.<br>• The default value is [Disabled]. |
| D2D Recovery | [Enabled] / [Disabled] | • This function enables/disables Acer disc-to-disc Recovery.<br>• To do Acer disc-to-disc system recovery, press **Alt**+***F10*** key during POST. |

# Advanced Tab

The Advanced tab allows the user to set VTX/VTD function switch configuration.

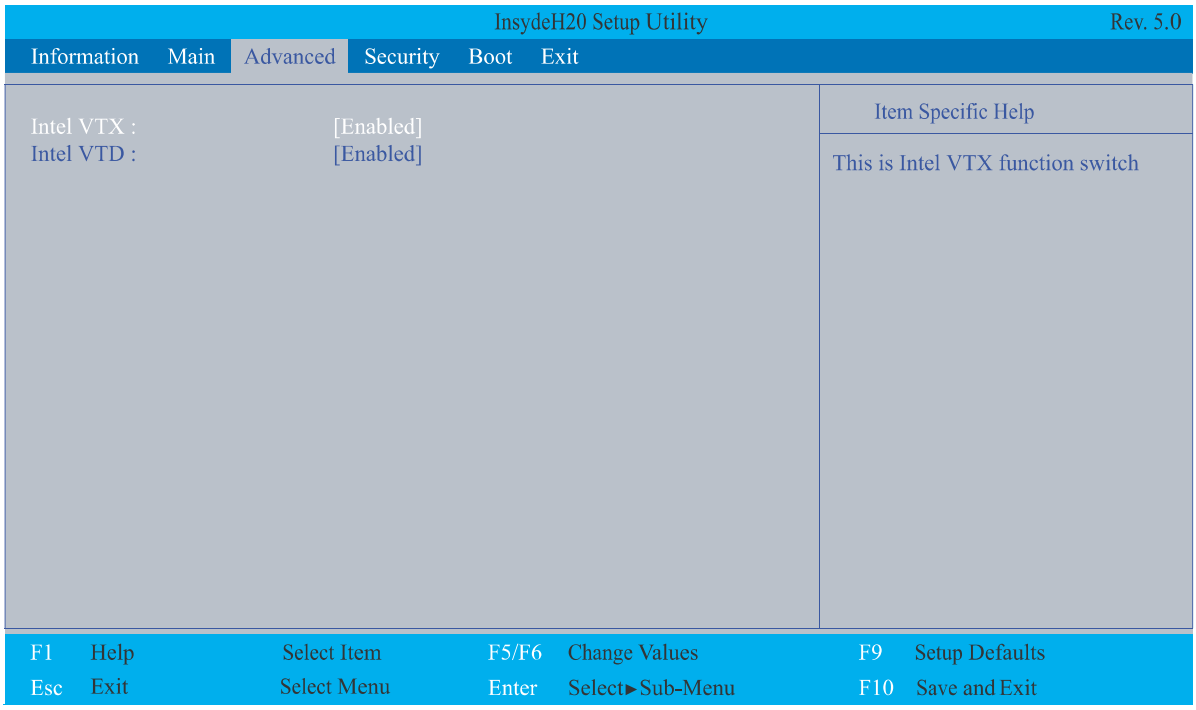


**Figure 2-3. BIOS Advanced (Windows 10)**

**Table 2-3. BIOS Advanced Tab Parameters (Windows 10)**

| Product Information | Example | Remark |
|---|---|---|
| VTX | [Enabled] / [Disabled] | • This is Intel VTX function switch.<br>• Only appear if the platform supports the function.<br>• The default value is [Enabled]. |
| VTD | [Enabled] / [Disabled] | • This is Intel VTD function switch.<br>• Only appear if the platform supports the function.<br>• The default value is [Enabled]. |

# Security Tab

The Security tab allows the user to configure and protect the computer from unauthorized use.

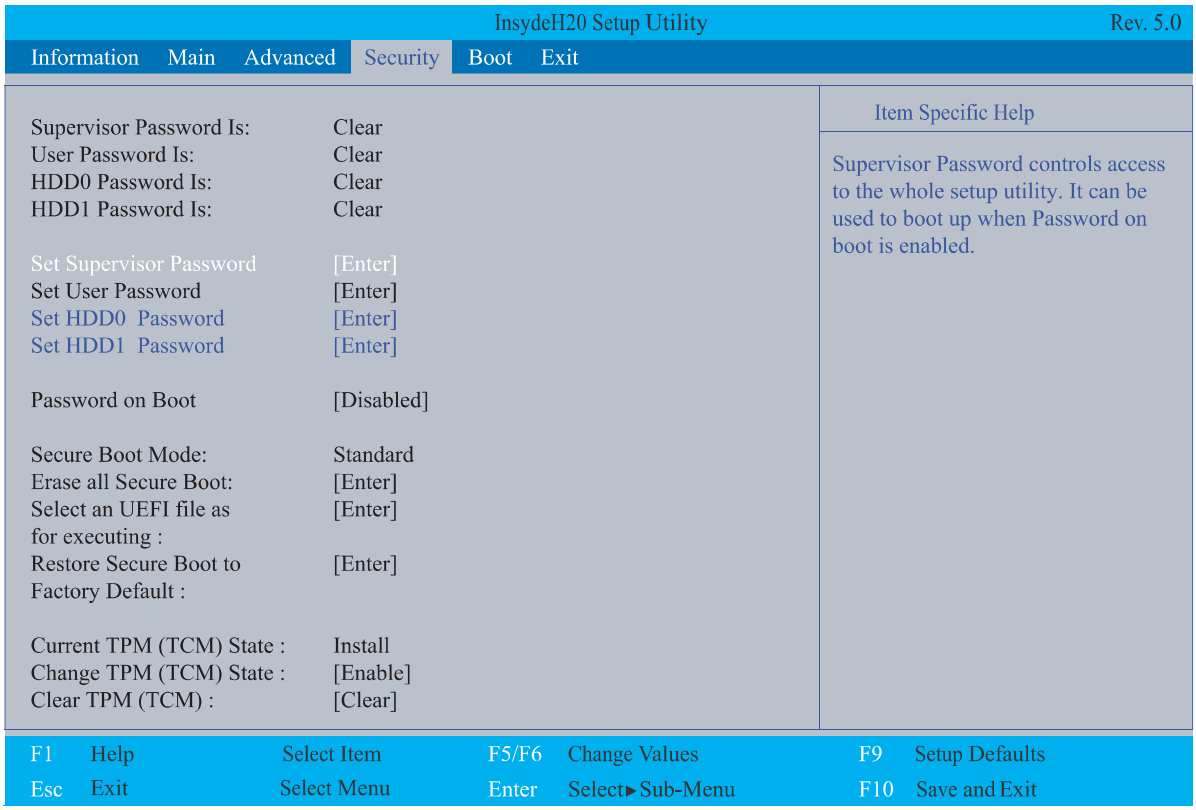


**Figure 2-4. BIOS Security (Windows 10)**

**Table 2-4. BIOS Security Tab Parameters (Windows 10)**

| Product Information | Example | Remark |
|---|---|---|
| Supervisor Password | [Set] / [Clear] | This field indicates if the Supervisor Password is set or not. The default value is [Clear].<br>• [Set]: Supervisor Password is set.<br>• [Clear]: Supervisor Password is not set. |
| User Password | [Set] / [Clear] | This field indicates if the User Password is set or not. The default value is [Clear].<br>• [Set]: User Password is set.<br>• [Clear]: User Password is not set. |
| HDD Password | [Set] / [Clear] | This field indicates if HDD Password is set or not. The default value is [Clear].<br>• [Set]: HDD Password is set.<br>• [Clear]: User Password is not set.<br>For NVMe SSD which doesn't support HDD password, the BIOS must display "HDDx:NVMe SSD don't support HDD password". |

| Product Information | Example | Remark |
|---|---|---|
| Set Supervisor Password | [Enter] | This field shows always the default value [Enter].<br>If the Supervisor Password is not set then the User Password is grayed out. |
| Set User Password | [Enter] | 1. Use the ↑ and ↓ keys to highlight the `Set Supervisor Password` parameter and press ***Enter***. The `Set Supervisor Password` dialog box appears<br>  <br>If you already have set a Supervisor Password previously, the following dialog box appears:<br>  <br>2. Type the current password in the `Enter Current Password` field and press ***Enter***.<br>3. Type the new password in the `Enter New Password` field and pres ***Enter***.<br>4. Retype the new password in the `Confirm New Password` field.<br>5. Press ***Enter***. If the passwords match, the `Setup Notice` dialog box appears.<br>  <br>If the current password entered does not match the actual current password, press ***Enter*** and re-type the passwords.<br>  <br>If the new password and confirm new password do not match, press ***Enter*** and re-type the passwords.<br>  |

| Product Information | Example | Remark |
|---|---|---|
| Set HDD Password | [Enter] | • This field shows always the default value [Enter].<br>• HDD Password Security: This feature is available to the user if the HDD password is set. Password can be added to the HDD usage only when the HDD password is set.<br>• If the system has more than 1 HDD, listed items in Security Menu are as follows:<br>  • Set HDD0 Password<br>  • Set HDD1 Password |
| Password on Boot | [Enabled] / [Disabled] | • Defines whether a password is required or not when the events defined in this group take place.<br>• Password on Boot option requires the Supervisor Password. During login, this should be grayed out if the User Password was used to enter BIOS Setup Utility.<br>• Allows user to specify whether or not a password is required for boot.<br>• The default value is [Disabled]. |

**NOTE:**

When prompted to enter the password, three attempts are allowed before system halts. Resetting the BIOS password may require the computer to be returned to the dealer.

## Selecting a UEFI File as Trusted

Perform the following to select a UEFI file as trusted for execution:

1. Use the ↑ and ↓ keys to highlight the `Select an UEFI File as trusted for executing` parameter and press ***Enter***. This will open the page for you to select the location of the trusted file.

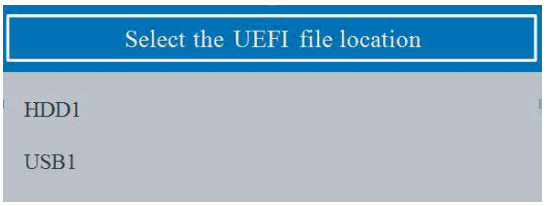


**Figure 2-5. Select UEFI File Location**

2. Use the ↑ and ↓ keys to select a location, then press ***Enter*** until you find the file which will be added to trusted file database.


**Figure 2-6. Select UEFI File**

3. Select the *.efi file to execute (only *.efi files can be added to the signature database).

4. Enter Boot Description of this file. Select “Yes” to add the signature database and return to the security section. Boot description will be added in the end of the Boot device order list (maximum of 5 entries are allowed).

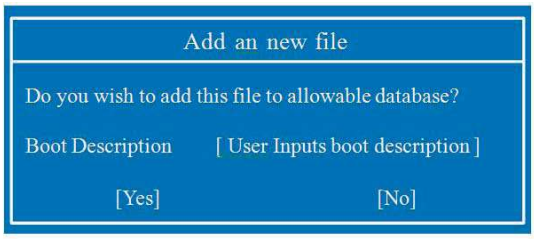


**Figure 2-7. Add New File**

## Setting a Password

Perform the following to set the supervisor password:

1. Use the ↑ and ↓ keys to highlight the `Set Supervisor Password` parameter and press ***Enter***. The `Set Supervisor Password` dialog box appears.

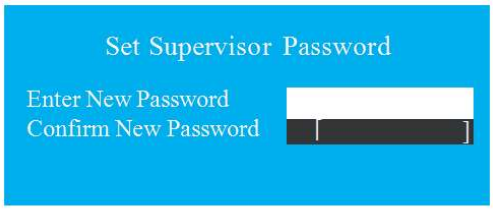


**Figure 2-8. Set Supervisor Password**

2. Type the password in the `Enter New Password` field.

**NOTE:**

Passwords are not case sensitive and the length must not exceed 12 characters. The following characters may be used in a password.

| | |
|---|---|
| A - Z | Alphabets A through Z (Not Case Sensitive) |
| 0 - 9 | Numerical Characters |
| - | Dash |
| = | Equal Sign |
| [ | Left Bracket |
| ] | Right Bracket |
| . | Period |
| , | Comma |
| ; | Semi-colon |
| / | Slash |
| \ | Back-slash |

**IMPORTANT:**

Use care when typing a password. Characters do not appear on the screen.

3. Retype the password in the `Confirm New Password` field.

4. Press ***Enter***. The `Setup Notice` dialog box appears.


**Figure 2-9. Setup Notice**

5. Press ***Enter*** to complete the password setting. After setting the supervisor password, the computer sets the `Supervisor Password Is` parameter to `Set`.

6. Press ***F10*** to save changes and exit *BIOS Setup Utility*.

**NOTE:**

The same procedures apply in setting the user password and HDD password.

When the supervisor password is set, the `Set User Password` and `Password on Boot` parameters are enabled for users to configure.

## Changing a Password

Perform the following to change a password:

**NOTE:**

Below are the procedures for changing the supervisor password. The same procedures apply in changing the user and HDD passwords.

1. Use the ↑ and ↓ keys to highlight the `Set Supervisor Password` parameter and press ***Enter***. The `Set Supervisor Password` dialog box appears.

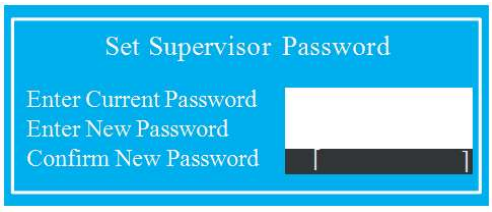


**Figure 2-10. Set Supervisor Password**

2. Type the current password in the `Enter Current Password` field and press ***Enter***.
3. Type the new password in the `Enter New Password` field and press ***Enter***.
4. Retype the new password in the `Confirm New Password` field.
5. Press ***Enter***. If the passwords match, the `Setup Notice` dialog box appears.


**Figure 2-11. Setup Notice**

6. Press ***Enter*** to complete the password setting. The computer sets the `Supervisor Password Is` parameter to `Set`.
7. Press ***F10*** to save changes and exit *BIOS Setup Utility*.

## Removing a Password

Perform the following to remove a password:

**NOTE:**

Below are the procedures for removing the supervisor password. The same procedures apply in removing the user and HDD passwords.

When the supervisor password is removed, the user password is automatically removed.

1. Use the ↑ and ↓ keys to highlight the `Set Supervisor Password` parameter and press ***Enter***. The `Set Supervisor Password` dialog box appears.

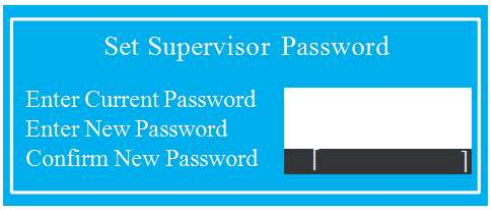


**Figure 2-12. Set Supervisor Password**

2. Type the current password in the `Enter Current Password` field and press ***Enter***.

3. Press ***Enter*** twice without typing anything in the `Enter New Password` and `Confirm New Password` fields. The `Setup Notice` dialog box appears.


**Figure 2-13. Setup Notice**

4. Press ***Enter*** to complete the password setting. The computer sets the `Supervisor Password Is` parameter to `Clear`.

5. Press ***F10*** to save changes and exit *BIOS Setup Utility*.

# Boot Tab

The Boot tab allows the user to configure the order of boot devices used to load the operating system.

Use ↑ and ↓ keys to select a device and press ***F5*** or ***F6*** to change the value.

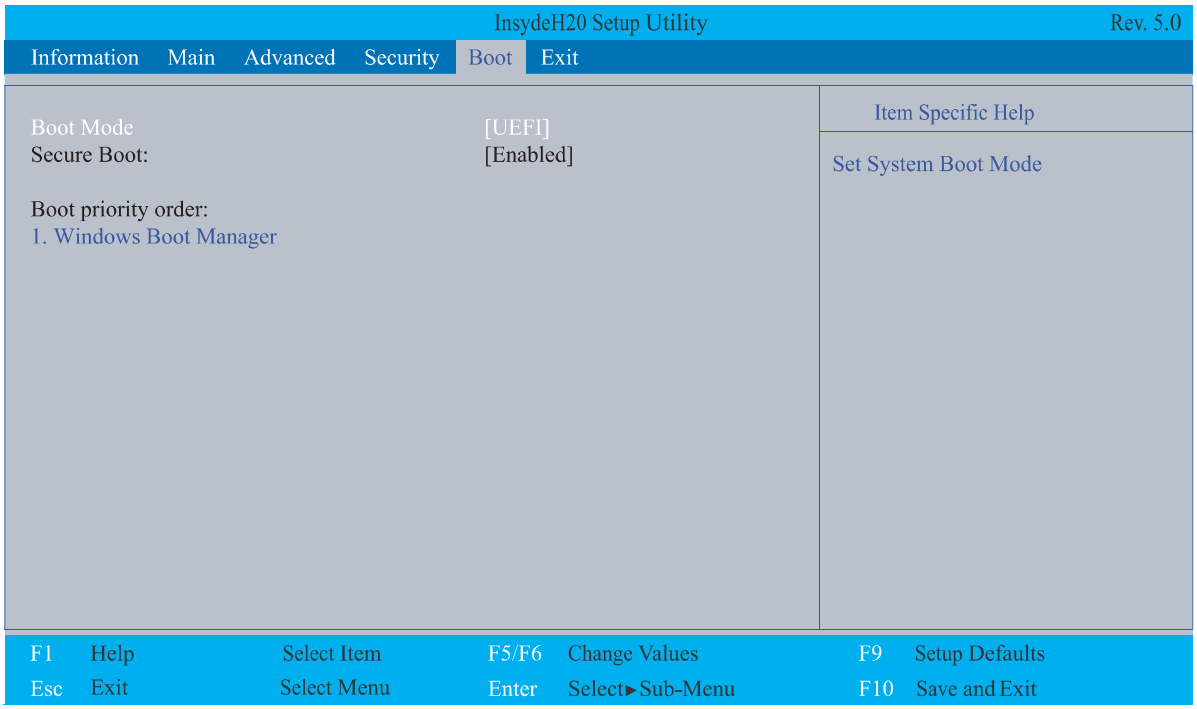


**Figure 2-14. BIOS Boot (Windows 10)**

**Table 2-5. BIOS Boot Tab Parameters (Windows 10)**

| Product Information | Example | Remark |
|---|---|---|
| Boot Mode | [UEFI] | • After user flashes BIOS or loads the Setup Defaults, the Boot Mode should return to its factory default value.<br>• The default value is [UEFI]. |

| Product Information | Example | Remark |
|---|---|---|
| Secure Boot | [Enabled] / [Disabled] | • If the default Boot Mode is [UEFI], then the default Secure Boot status is [Enabled] and CSM module can't be loaded during boot.<br>• If the user sets the Secure Boot to [Disabled], the firmware will bypass secure boot verification.<br>• The Secure Boot status is only available on [UEFI] Boot Mode and it is hidden under [Legacy] Boot Mode.<br>• In [UEFI] Boot Mode, the Secure Boot status is default gray out and could only be modified by following actions:<br>1. Supervisor password had been set.<br>• When BIOS "Load Setup Defaults" is executed, if the default Boot Mode is [UEFI], the Secure Boot status will reset to [Enabled].On the contrary, if the default Boot Mode is [Legacy], the Secure Boot will be disabled and hidden in the Boot Menu.<br>• When user changes the Boot Mode from [Legacy] to [UEFI], Secure Boot status will be set to [Enabled] and shown in the Boot Menu. |
| Boot Priority Order | | • If the Boot Mode has changed, the Boot Priority Order will not be refreshed until the next BIOS Setup Utility entry.<br>• When the Boot Mode is [UEFI] or [Legacy] (UEFI+CSM), and users enable Windows To GO Startup Options under OS, an USB class boot entry name "USB Entry for Windows To GO" will be inserted into the top of the Boot Priority Order and Boot Option Menu.<br>• If the "USB Entry for Windows To Go" is present, and BIOS "Load Setup Defaults" is executed, "USB Entry for Windows To Go" will be set to 1st Boot Device in Boot Priority Order.<br>• If eMMc and HDD exist in the same time, eMMc is set as the default boot device. |

**NOTE:**

- Wired connection will display `Network Boot-IPV4` and `Network Boot-IPV6` as two separate network boot devices.
- After Windows 10 OS is installed, a `Windows Boot Manager` will be generated and displayed on top of the boot device priority.
- Non-physical boot devices can be deleted in the Boot Priority Order List, this includes `A trusted boot entry` and `Windows Boot Manager`.
- If two (2) HDD is configured as RAID, only HDD0 is presented.

# Exit Tab

The Exit tab allows the user to save or discard changes and quit the *BIOS Setup Uitility*.

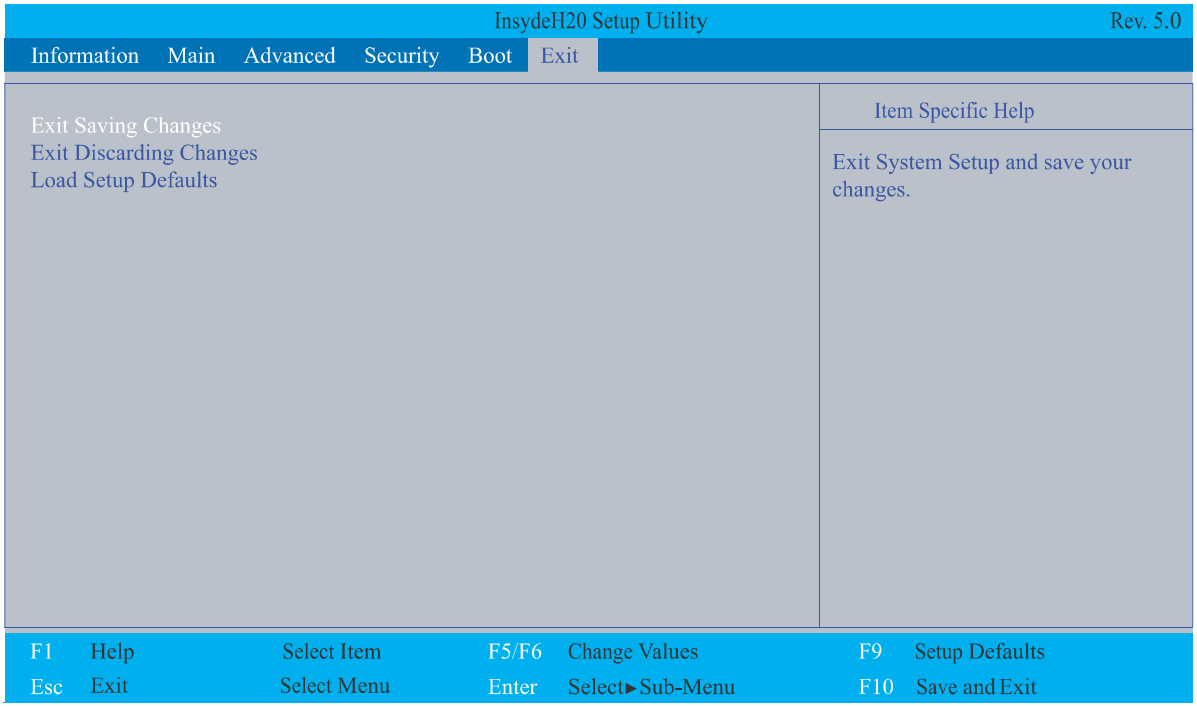


**Figure 2-15. BIOS Exit (Windows 10)**

**Table 2-6. BIOS Exit Tab Parameters (Windows 10)**

| Parameter | Description |
|---|---|
| Exit Saving Changes | Save the changes and exit the BIOS utility. |
| Exit Discarding Changes | Exit the BIOS utility without saving the changes to the system. |
| Load Setup Defaults | Load the default values of all setup items. |

# Boot Manager

The *Boot Manager* allows users to select the boot device without accessing the BIOS utility.

**NOTE:**

*Boot Manager* is available only if the `F12 Boot Menu` parameter in `Main` menu is set to `Enabled` (refer to **Main Tab** on page **2-5**).

Perform the following to use the F12 Boot menu:

1. Start the computer.
2. When prompted, press ***F12*** during POST. The `Boot Manager` screen appears.

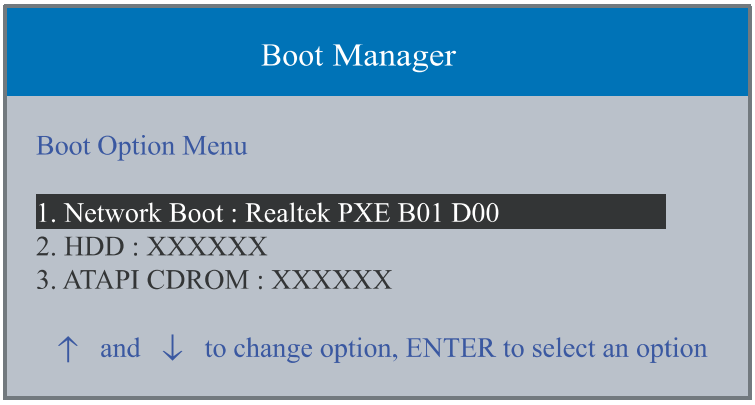


**Figure 2-16. Boot Manager Screen**

3. Use the ↑ and ↓ keys to highlight a boot device.
4. Press ***Enter*** to select and continue with the boot procedure.