

USER'S MANUAL

EUROCOM

Monster 4



About this Concise User Guide

This quick guide is a brief introduction to getting your system started. This is a supplement, and not a substitute for the expanded English language *User's Manual* in *Adobe Acrobat* format on the *Device Drivers & Utilities + User's Manual* disc supplied with your computer. This disc also contains the drivers and utilities necessary for the proper operation of the computer (**Note:** The company reserves the right to revise this publication or to change its contents without notice).

Some or all of the computer's features may already have been setup. If they aren't, or you are planning to re-configure (or re-install) portions of the system, refer to the expanded *User's Manual*. The *Device Drivers & Utilities + User's Manual* disc does not contain an operating system.

Regulatory and Safety Information

Please pay careful attention to the full regulatory notices and safety information contained in the expanded *User's Manual* on the *Device Drivers & Utilities + User's Manual* disc.

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FCC 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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Instructions for Care and Operation

The computer is quite rugged, but it can be damaged. To prevent this, follow these suggestions:

- **Don't drop it, or expose it to shock.** If the computer falls, the case and the components could be damaged.
- **Keep it dry, and don't overheat it.** Keep the computer and power supply away from any kind of heating element. This is an electrical appliance. If water or any other liquid gets into it, the computer could be badly damaged.
- **Avoid interference.** Keep the computer away from high capacity transformers, electric motors, and other strong magnetic fields. These can hinder proper performance and damage your data.
- **Follow the proper working procedures for the computer.** Shut the computer down properly and don't forget to save your work. Remember to periodically save your data as data may be lost.
- Note that in computer's featuring a raised LCD electro-plated logo, the logo is covered by a protective adhesive. Due to general wear and tear, this adhesive may deteriorate over time and the exposed logo may develop sharp edges. Be careful when handling the computer in this case, and avoid touching the raised LCD electro-plated logo. Avoid placing any other items in the carrying bag which may rub against the top of the computer during transport. If any such wear and tear develops contact your service center.

Power & Battery Safety

- Only use an AC/DC adapter approved for use with this computer.
- Use only the power cord and batteries indicated in this manual.
- Your AC/DC adapter may be designed for international travel but it still requires a steady, uninterrupted power supply. If you are unsure of your local power specifications, consult your service representative or local power company.

- The AC/DC adapter may have either a 2-prong or a 3-prong grounded plug. The third prong is an important safety feature; do not defeat its purpose. If you do not have access to a compatible outlet, have a qualified electrician install one.
- When you want to unplug the power cord, be sure to disconnect it by the plug head, not by its wire.
- Make sure the socket and any extension cord(s) you use can support the total current load of all the connected devices.
- Make sure that your computer is completely powered off before putting it into a travel bag (or any such container).
- Only use batteries designed for this computer. The wrong battery type may explode, leak or damage the computer.
- Do not continue to use a battery that has been dropped, or that appears damaged (e.g. bent or twisted) in any way. Even if the computer continues to work with a damaged battery in place, it may cause circuit damage, which may possibly result in fire.
- Recharge the batteries using the computer's system. Incorrect recharging may make the battery explode.
- Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
- Keep children away from, and promptly dispose of a damaged battery. Always dispose of batteries carefully. Batteries may explode or leak if exposed to fire, or improperly handled or discarded.
- Keep the battery away from metal appliances.
- Affix tape to the battery contacts before disposing of the battery.
- Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
- Do not touch the battery contacts with your hands or metal objects.

Polymer Battery Precautions

Note the following information which is specific to polymer batteries only, and where applicable, this overrides the general battery precaution information.

- Polymer batteries may experience a slight expansion or swelling, however this is part of the battery's safety mechanism and is not a cause for concern.
- Use proper handling procedures when using polymer batteries. Do not use polymer batteries in high ambient temperature environments, and do not store unused batteries for extended periods.



Battery Disposal & Caution

The product that you have purchased contains a rechargeable battery. The battery is recyclable. At the end of its useful life, under various state and local laws, it may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for recycling options or proper disposal.

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used battery according to the manufacturer's instructions.

Cleaning

- Use a soft clean cloth to clean the computer, but do not apply cleaner directly to the computer.
- Do not use volatile (petroleum distillates) or abrasive cleaners on any part of the computer.
- Before cleaning the computer remove the battery and make sure the computer is disconnected from any external power supplies, peripherals and cables (including telephone lines).

Servicing

Attempting to service the computer yourself may violate your warranty and expose you and the computer to electric shock. Refer all servicing to qualified service personnel, particularly under any of the following conditions:

- When the power cord or AC/DC adapter is damaged or frayed.
- If the computer has been exposed to any liquids.
- If the computer does not work normally when you follow the operating instructions.
- If the computer has been dropped or damaged (do not touch the poisonous liquid if the LCD panel breaks).
- If there is an unusual odor, heat or smoke coming from your computer.

System Startup

1. Remove all packing materials.
2. Place the computer on a stable surface.
3. Securely attach any peripherals you want to use with the computer (e.g. keyboard and mouse) to their ports.
4. Attach the AC/DC adapter to the DC-In jack at the rear of the computer, then plug the AC power cord into an outlet, and connect the AC power cord to the AC/DC adapter (**make sure you use the adapter when first setting up the computer**, as to safeguard the computer during shipping the battery will be locked to not power the system until first connected to the AC/DC adapter).
5. Use one hand to raise the lid/LCD to a comfortable viewing angle (do not to exceed **135** degrees); use the other hand (as illustrated in **Figure 1**) to support the base of the computer (**Note: Never** lift the computer by the lid/LCD).
6. Press the power button to turn the computer “on”.

System Software

Your computer may already come with system software pre-installed. Where this is not the case, or where you are re-configuring your computer for a different system, you will find this manual refers to **Microsoft Windows 10**.

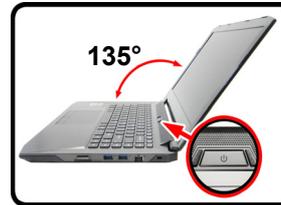
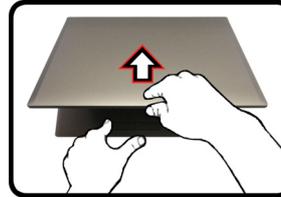


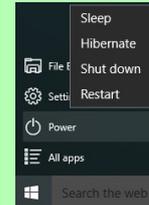
Figure 1
Opening the Lid/LCD/
Computer with AC/DC
Adapter Plugged-In



Shut Down

Note that you should always shut your computer down by choosing the **Shut down** command in **Windows** (see below). This will help prevent hard disk or system problems.

1. Click the Start Menu icon .
2. Click the **Power** item .
3. Choose **Shut Down** from the menu.



System Map: Front View with LCD Panel Open



Wireless Device Operation Aboard Aircraft

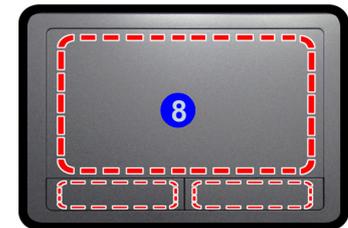
The use of any portable electronic transmission devices aboard aircraft is usually prohibited.

Make sure the WLAN, Bluetooth & 3G/4G module(s) are OFF if you are using the computer aboard aircraft by putting the system in to Airplane Mode.



Figure 2
Front View with LCD Panel
Open

1. PC Camera
2. *PC Camera LED
**When the PC camera is in use, the LED will be illuminated in red.*
3. Built-In Array Microphone
4. LCD
5. Speakers
6. Power Button
7. Keyboard
8. Touchpad & Buttons



Note that the Touchpad and Buttons valid operational area is that indicated within the red dotted lines above.

LED Indicators

The LED indicators on the computer display helpful information about the current status of the computer.

Icon	Color	Description
		
	Green	Airplane Mode is ON (the WLAN, Bluetooth and 3G/4G Modules are OFF)
	Green	The Hard Disk is in use
	Orange	The Battery is Charging
	Green	The Battery is Fully Charged
	Blinking Orange	The Battery Has Reached Critically Low Power Status
	Orange	The AC/DC Adapter is Plugged In
	Blinking Orange*	The AC/DC adapter is plugged in and the powered USB Port is on*
	Green	The Computer is On
	Blinking Green	The Computer is in Sleep Mode

Table 1 - LED Indicators

*The powered USB 3.0 port (see [page 15](#)) may be toggled on /off by means of the **Fn + Power Button** key combination. When the powered USB port is on it will supply power (for charging devices only, not for operating devices) when the system is off but still powered by the AC/DC adapter plugged into a working outlet, or powered by the battery with a capacity level above 20% (this may not work with certain devices - see [page 30](#)).

Keyboard & Function Keys

The keyboard includes a numeric keypad for easy numeric data input. Pressing **Fn + NumLk** turns on/off the numeric keypad. It also features function keys to allow you to change operational features instantly. The function keys (**F1 - F12** etc.) will act as hot keys when pressed while the **Fn** key is held down. In addition to the basic function key combinations, some visual indicators are available when the Control Center driver is installed.



Figure 3 - Keyboard

Keys	Function/Visual Indicators	Keys	Function/Visual Indicators
Fn +	Play/Pause (in Audio/Video Programs)	Fn +	Airplane Mode Toggle Airplane mode on Airplane mode off
Fn +	Touchpad Toggle 	Fn +	Sleep Toggle
Fn +	Turn LCD Backlight Off (Press a key to or use Touchpad to turn on)	Fn +	Number Lock Toggle
Fn +	Mute Toggle 	Fn +	Scroll Lock Toggle
Fn +	Toggle Keyboard Illumination/Adjust Brightness Level 	Caps Lock	Caps Lock Toggle
Fn +	Volume Decrease/Increase 	Fn + Power Button	Powered USB Port Power Toggle (see page 15)
Fn +	Change Display Configuration (see page 19)	Fn +	Control Center Toggle (see page 8)
Fn +	Brightness Decrease/Increase 	Fn +	Fan Automatic Control/Full Power
Fn +	PC Camera Power Toggle 	Fn +	Disable/Enable Flexikey® (see page 11)

Table 2 - Function Keys & Visual Indicators

Control Center

Press the **Fn + Esc** key combination, or **double-click the icon**  in the **notification area of the taskbar** to toggle the **Control Center** on/off. The **Control Center** gives quick access to frequently used controls and enables you to quickly turn the camera/Touchpad on/off.



Figure 4 - Control Center

Power Modes

You can set a **Power Mode** by clicking the appropriate icon at the top of the **Control Center**. Each power mode will affect the Power Conservation Mode, Airplane Mode, Power Plan and PC camera power etc.

Control Center Menus

The **Control Center** contains 3 menu headings (**System Program, Device and Gaming**) under the Power Modes. Click the **Control Center** icons to toggle the appropriate function, or hold the mouse button down and move the dial control where applicable. Certain functions will automatically be adjusted when a power mode is selected. Click the menu headings and then click any of the buttons.

Power Status

The **Power Status** icon will show whether you are currently powered by the battery, or by the AC/DC adapter plugged in to a working power outlet. The power status bar will show the current battery charge state.

Brightness

The **Brightness** icon will show the current screen brightness level. You can use the slider to adjust the screen brightness or the **Fn + F8/F9** key combinations, or use the **Fn + F2** key combination to turn off the LED backlight (press any key to turn it on again). Note that screen brightness is also effected by the **Power Mode** selected.

Volume

The **Volume** icon will show the current volume level. You can use the slider to adjust the volume or the **Fn + F5/F6** key combinations, or use the **Fn + F3** key combination to mute the volume.

Power Conservation

This system supports **Energy Star** power management features that place computers (CPU, hard drive, etc.) into a low-power sleep mode after a designated period of inactivity. Click either the **Performance**, **Balanced** or **Energy Star** button.

Fan Speed

You can set the fan speed to **Maximum (full power)**, **Automatic**, **Custom** or **Overclock** from this menu item. The fan speed will adjust itself automatically to control the heat of the CPU. However you can adjust the setting to maximum if you prefer. Select **Custom** and click on the sliders to adjust the settings to your preference, however these settings can be overridden by the system, as a safety precaution, if it requires heavier use of the fan.

Overclock will be selected automatically if you have enabled CPU overclocking (in this case do not change the setting).

Sleep Button

Click either the **Hibernate** or **Sleep** button to have the computer enter the selected power-saving mode.

Display Utility

The **Display Utility** icon will only appear in the System Program menu if your display's resolution is QHD or above. The Display Utility allows you to adjust text size on the screen to make it easier to view.

Display Switch

Click the **Display Switch** button to access the menu (or use the **⊞ + P** key combination) and select the appropriate display mode.

Time Zone

Clicking the **Time Zone** button will access the **Date and Time Windows** control panel.

Desktop Background

Clicking the **Desktop Background** button will allow you to change the desktop background picture.

Touchpad/PC Camera

Click either of these buttons to toggle the Touchpad or camera module's power status. Note that the power status of the camera module is also effected by the **Power Mode** selected.

Left Windows Key

Click **Disable** to disable the Windows Logo Key on the left side of the keyboard. This may be useful if you are using the gaming keys (**W, A, S & D**) and wish to avoid accidentally triggering menus with the Windows Logo Key.

Headphone

The headphones may be set for different effects using this menu.

Backlight Keyboard

Click the **numbers** under the Backlight Keyboard icon to adjust the brightness of the keyboard backlight LED.

Flexikey®

Click the button to access the **Flexikey®** application.

Flexikey® Application

The **Flexikey®** application is a quick hotkey configuration application, which allows you to **assign a single key to launch multiple key combinations**, or to **launch programs and applications**, to **create text macros** and to **disable** certain keys. The application can also be used to **configure the mouse buttons** to create hotkeys for gaming etc. All the configuration settings are retained under (up to 12) **profiles** to which the settings are applied.

The **Flexikey®** application can be accessed by clicking the button  in the **Gaming** section of the **Control Center** or by clicking the icon  in the notification area of the desktop taskbar.



Enabling or Disabling the Flexikey® Profile in Use

 Flexikey ON

 Flexikey OFF

You can enable or disable any keyboard or mouse profile functions currently in use by using the **Fn + ** key combination. Pressing this key combination will toggle you between the currently selected keyboard or mouse profile to the standard keyboard and/or mouse settings, and back again.

Windows Logo Key  and P key

Note that you can assign actions to any keyboard key except the **Windows Logo Key ** and **P key**.

Profiles

The menus on the left side of the application relate to Profiles. You can **Add** or **Delete** profiles (**you can maintain 12 active Profiles**), **Export** and **Import** profiles from the menus. If you double-click on a profile you can change the **Profile Name**, and change an **Image** file (images created using PNG files).



Figure 5 Flexikey® Application

Keyboard and Mouse Settings

Click **Enable** to create settings for the keyboard and/or mouse by clicking the button on the top left of the screen (e.g. you may wish to create a profile with settings only for the mouse or keyboard). Clicking on the keyboard or mouse icons will allow you to access the settings page for either the keyboard or mouse.



Figure 6 - Enable (Keyboard & Mouse)

Keyboard Settings

The keyboard settings allow you to configure actions for any single key (or a combination of keys). Click the key and then select the **Action Type (Express Key, Launch App, Express Text or Disable)** from the menu at the bottom of the page. You can rename the action by clicking in the **Name** box, and click in **Tool Tips** to type in a note to remind you of the action's function.



Figure 7 - Keyboard Configuration

Mouse Settings

The mouse settings allow you to configure actions for the left **1**, right **2** and middle **3** buttons of any attached mouse, and also for any backward **4** and forward **5** buttons if applicable (on a gaming type mouse). Click the button number and then select the **Action Type (Express Key, Launch App, Express Text or Disable)** from the menu at the bottom of the page. You can rename the action

by clicking in the **Name** box, and click in **Tool Tips** to type in a note to remind you of the action's function.



Figure 8 - Mouse Configuration

Flexikey® Application Features:

- **EXPRESS KEY** - This feature allows you to configure a single key (or mouse click) to send multiple key combinations, or to create more useful shortcut keys. This is useful in gaming or when using applications which have a complex set of keyboard shortcuts.
- **LAUNCH APP** - This simply assigns single keys (or mouse clicks) to launch any program's or application's executable file.
- **EXPRESS TEXT** - With this you can assign single keys (or mouse clicks) to send commonly used strings of text.
- **DISABLE** - Use this function to disable any keyboard keys or mouse buttons.
- **STATISTICS** - Use this to quickly record keys in use in any application, and to disable unused keys.

Keyboard Settings - Express Key

To configure a single key to send multiple key combinations, or to create more useful shortcut keys, use **Express Key**.

1. **Enable** and select the keyboard under your chosen profile, click on a key to select it, and then click to select **Express Key** in **Action Type**.
2. In the following example we want to change an existing game key configuration which uses the **left shift** key for sprinting, and the **W** key for moving forwards, to use the **left Ctrl** key to combine this movement to sprint forward.
3. Click on the chosen key for the shortcut action.
4. Click in the **Tool Tips** field and type to give the key combination a name e.g. "*Sprint Fwds*", then click back in the **Name** field (to avoid adding the recorded keys to the Tool Tips name).
5. Click **Start Record** and then **press** the key or keys (in this case we will **press** Left Shift and W) required (make sure you **press the key(s) required** and do not click on them).
6. Click **Stop Record** to complete the process.



Figure 9 - Keyboard - Express Key

7. Click **Save** to save the settings within your chosen profile.
8. If you want to remove any individual key click to select it, and then click **Delete**.

9. If you want to clear all the settings click **Restore** to return to the default key setting.
10. Any assigned **Express Keys** will appear in **orange**.

Keyboard Settings - Launch App

You can configure keys to launch any application or program as follows:

1. **Enable** and select the keyboard under your chosen profile, click to select a key to launch the application, and then click to select **Launch App** in **Action Type**.
2. Click **Browse...** at the bottom right of the application window.

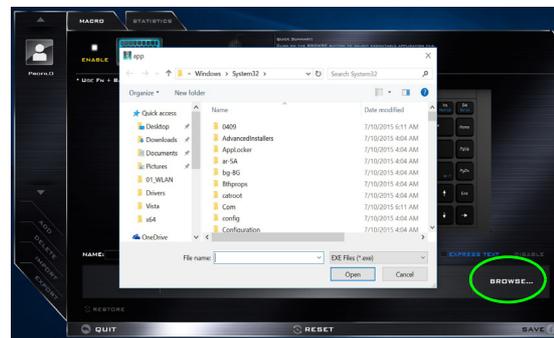


Figure 10 - Keyboard - Launch App

3. Navigate to the executable file of the application and click **Open**.
4. The key will now be configured to open the selected application under your chosen Profile, and the key will appear in **green**.
5. If you want to remove any **Launch App** key, select it and click on **Restore**.
6. Click **Save** to save the settings within your chosen profile.

Keyboard Settings - Express Text

A single key can be set to send a string of text within any application using **Express Text**.

1. **Enable** and select the keyboard under your chosen profile, click to select a key, and then click to select **Express Text** in **Action Type**.
2. Click in **Start** key if required (the **Start** key is the key used in your target program to open a text message), or you can leave it blank if you prefer.
3. Click in the **Click to type** field and type in your message.



Figure 11 - Keyboard - Express Text

4. Click in **Send** key if required (the **Send** key is the key used in your target program to send a text message e.g the Enter key would be the most commonly used), or you can leave it blank if you prefer.
5. The key will now be configured to send the text message in the target program under your chosen Profile, and the key will appear in **blue**.
6. If you want to remove any **Express Text** key, select it and click on **Restore**.
7. Click **Save** to save the settings within your chosen profile.

Keyboard Settings - Disable

You can use the program to disable any keys not required.

1. **Enable** and select the keyboard under your chosen profile, click to select a key to disable, and then click to select **Disable** in **Action Type**.
2. The key will now be disabled.
3. If you want to enable the key again, select it and click on **Restore**.
4. Click **Save** to save the settings within your chosen profile.
5. The key will be disabled under your chosen Profile, and the key will appear in **gray**.

System Map: Front, Left & Right Views



Mini DisplayPorts

External displays can be configured either using the **Intel HD Graphics Control Panel** or by the **Project menu** (press  + P or Fn + F7).

If you wish to configure an external display connected to **Mini DisplayPort 1** (2) you must use **Project menu** to control the display configuration.

Figure 12 - Front, Left & Right Views

1. LED Indicators
2. Mini DisplayPort 1
3. Mini DisplayPort 2
4. HDMI-Out Port
5. USB 3.0 Ports
6. Microphone Jack
7. Headphone Jack
8. S/PDIF-Out Jack
9. USIM Card Reader (for 3G/4G USIM Cards)
10. Multi-in-1 Card Reader
11. *Powered USB 3.0 Port
*Toggle power to this port by using **Fn + power button** (see [Table 1 on page 6](#)).
12. RJ-45 LAN Jack
13. Security Lock Slot



USIM Card Ejection

Simply press on the USIM card to eject it, however do not do this while a connection is in progress.

If you do eject the card while a 3G/4G connection is ongoing, you will need to shut down the system, reinsert the USIM card, restart the system and then reestablish the 3G/4G connection.

If you wish to change USIM cards then you will also need to **shut down the system**, reinsert the USIM card, restart the system and then reestablish the 3G/4G connection.

System Map: Bottom & Rear Views



Overheating

To prevent your computer from overheating make sure nothing blocks any vent while the computer is in use.

Bottom Cover Removal Warning

Do not remove any cover(s) and/or screw(s) for the purposes of device upgrade as this may violate the terms of your warranty.

If you need to replace/remove the hard disk/RAM etc., for any reason, please contact your distributor/supplier for further information.

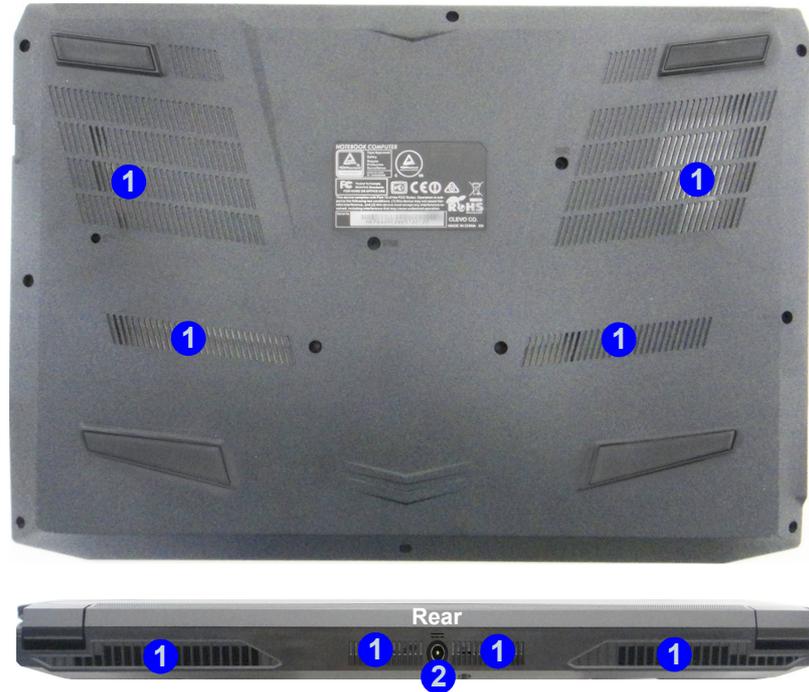


Figure 13 - Bottom & Rear Views

1. Vent
2. DC-In Jack

Windows 10 Start Menu, Context Menu, Taskbar, Control Panel and Settings

Most of the apps, control panels, utilities and programs within *Windows 10* can be accessed from the Start Menu by clicking the icon  in the taskbar in the lower left corner of the screen (or by pressing the **Windows Logo Key**  on the keyboard).

Right-click the Start Menu icon  (or use the **Windows Logo Key**  + **X** key combination) to bring up an advanced Context Menu of useful features such as Control Panel, Programs and Features, Power Options, Task Manager, Search, File Explorer, Command Prompt, Device Manager and Network Connections etc.

The notification area of the taskbar is in the bottom right of the screen. Some of the control panels and applications referred to throughout the course of this manual can be accessed from here.

Throughout this manual you will see an instruction to open the Control Panel. To access the Control Panel, right-click the Start Menu icon  in the taskbar in the lower left corner of the screen and select Control Panel from the menu. Or, press the **Windows Logo Key**  on your keyboard and **X** to bring up the context menu, and then press **P** to bring up the Control Panel.

The **Settings** item in the Start Menu (and also as an App) gives you quick access to a number of system settings control panels allowing you to adjust settings for System, Devices, Network & Internet, Personalization, Accounts, Time & language, Ease of Access, Privacy and Update & security.

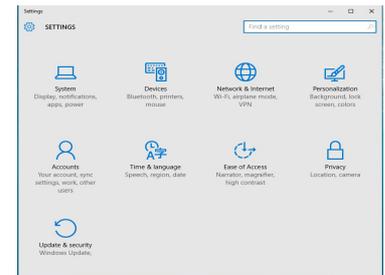
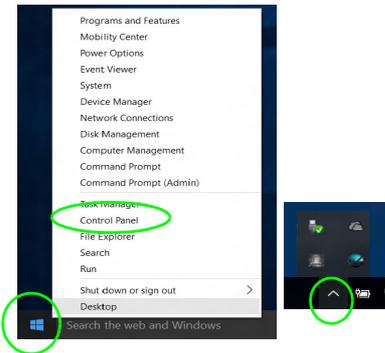
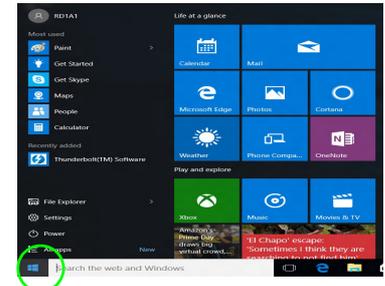


Figure 14 - Start Menu, Context Menu, Taskbar, Control Panel and Settings

Video Features

The system features both an **Intel's Integrated GPU** (for power-saving) and an **NVIDIA's discrete GPU** (for performance). You can switch display devices, and configure display options, from the **Display** control panel in *Windows* as long as the video drivers are installed.

Microsoft Hybrid Graphics

Microsoft Hybrid Graphics is a seamless technology designed to get best performance from the graphics system while allowing longer battery life, without having to manually change settings. The computer's operating system (and some applications) will **automatically switch** between the integrated GPU and the discrete GPU when required by the applications in use.

To access the Display control panel in Windows:

1. Go to the **Control Panel**.
2. Click **Display** (icon) - in the **Appearance and Personalization** category.
3. Make the required changes from the **Display, Resolution, Orientation** or **Multiple display** menus.
4. Click **Apply** to save the settings.

To access the Intel® HD Graphics Control Panel:

1. Right-click the desktop and select **Graphics Properties** from the menu.

OR

2. Click the icon  in the notification area of the Desktop taskbar and select **Graphics Properties** from the menu.

To access the NVIDIA Control Panel:

1. Go to the Control Panel.
2. Click **NVIDIA Control Panel** (icon) - in the **Appearance and Personalization** category.

OR

3. Right-click the desktop and select **NVIDIA Control Panel** from the menu.

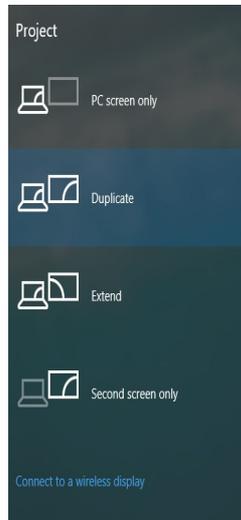
Display Devices

Note that you can use external displays connected to the HDMI-Out port and/or Mini DisplayPort. See your display device manual to see which formats are supported.

In *Windows* it is possible to quickly configure external displays from the **Project** menu (press the **Windows Logo Key**  and the **P** key).

To configure the displays using the Project menu:

1. Attach your external display device to the appropriate port, and then turn it on.
2. Press the  + **P** (or **Fn + F7**) key combination.
3. Click on any one of the options from the menu to select **PC screen only**, **Duplicate**, **Extend** or **Second screen only**.



Mini DisplayPorts

External displays can be configured either using the **Intel HD Graphics Control Panel** or by the **Project** menu (press  + **P** or **Fn + F7**).

If you wish to configure an external display connected to **Mini DisplayPort 1** (2 in [Figure 12 on page 15](#)) you must use **Project** menu to control the display configuration.

Figure 15 - Project Menu

CPU Overclocking Support

You can enable overclocking support for systems with Intel® Core™ i7-6820HK (2.7GHz) CPUs. However to support overclocking for this CPU you will need to install the Intel(R) Extreme Tuning Utility which is provided on the *Device Drivers & Utilities + User's Manual* disc.

1. Make sure all the necessary drivers and utilities are already installed on the computer.
2. Insert the *Device Drivers & Utilities + User's Manual* disc into an attached DVD drive.
3. Browse to the location (D: denotes your DVD drive) below on the *Device Drivers & Utilities + User's Manual* disc.
 - D:\Options\XTU_6.XXXXX (X denotes the version number which is subject to change)
4. Run the XTU-Setup.exe executable file.
5. Click the checkbox to accept the terms of the license agreement and click **Install** and then click **Close**.
6. Access the Intel(R) Extreme Tuning Utility from the desktop shortcut or from the apps menu.
7. Note that making alterations to clock frequency and/or voltage can cause system instability, cause components to fail, cause heat damage and result in data loss, and any changes made may affect the processor warranty.

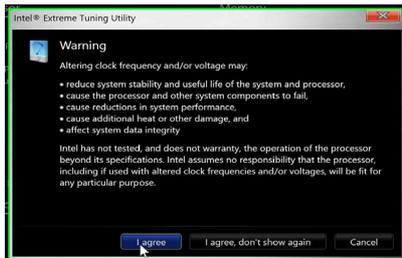


Figure 16
Intel Extreme
Tuning Utility -
Warning

8. You will need to agree to the usage conditions before continuing.
9. You may tune the system using the set of controls provided on the left side menus e.g. System Information etc.
10. A Help file is provided and you can check the Intel website for further information.
11. After the Intel(R) Extreme Tuning Utility has been installed, the **CPU Memory Overclocking** button will appear on your **Control Center Gaming** page. This button provides quick access to the **Intel(R) Extreme Tuning Utility**. **If you have enabled CPU overclocking the Fan Speed will also automatically be set to overclock (do not adjust this fan speed setting if you have enabled CPU overclocking).**



Figure 17 - Gaming with CPU Memory Overclocking

Audio Features

You can configure the audio options on your computer from the **Sound** control panel in *Windows*, or from the **Realtek HD Audio Manager** icon in the notification area/Control panel (right-click the notification area icon to bring up an audio menu). The volume may also be adjusted by means of the **Fn + F5/F6** key combination.



Volume Adjustment

The sound volume level can also be set using the volume control within *Windows*. Click the **Speaker** icon in the taskbar to check the setting.

Setup for 5.1 Surround Sound

To setup your system for 5.1 surround sound you will need to connect the audio cables to the Headphone-Out, Microphone-In and S/PDIF-Out jacks.

1. Go to the **Control Panel**.
2. Click **Realtek HD Audio Manager** (or right-click the notification area icon and select **Sound Manager**).
3. Click **Speakers** (tab) and click **Speaker Configuration** (tab).
4. Select **5.1 Speaker** from the **Speaker Configuration** pull-down menu.

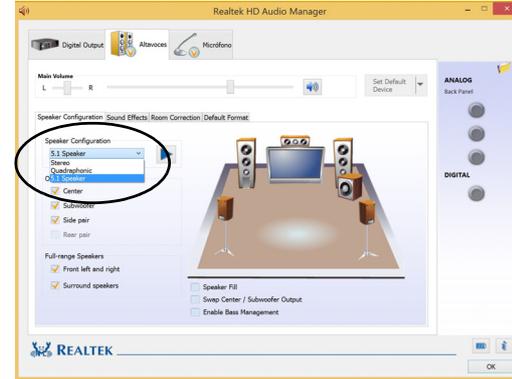


Figure 18 - Speaker Configuration

5. Plug in the cables (you may require an adapter to connect each cable to the appropriate jack e.g a stereo mini to dual RCA adapter) from your speakers as follows:
 - Headphone-Out Jack = Side Speaker Out
 - Microphone-In Jack = Center/Subwoofer Speaker Out
 - S/PDIF-Out Jack = Front Speaker Out

6. As you plug in each cable a dialog box will pop up.
7. Click to put a tick in the appropriate box according to the speaker plugged-in (e.g. Rear Speaker Out), and then click **OK** to save the setting.
8. Click **OK** to exit **Realtek HD Audio Manager**.

Setup for Audio Recording

To record audio sources on your computer at optimum quality follow the instructions below:

1. Go to the **Control Panel**.
2. Click **Realtek HD Audio Manager** (or right-click the notification area icon  and select **Sound Manager**).
3. Click **Microphone Effects** (tab) in **Microphone** (tab), and then click to select **Noise Suppression** (button), or adjust the **Recording Volume** level to around **60**, to obtain the optimum recording quality.
4. Click **OK** to close the **Sound**  control panel.

Sound Blaster Audio

Install the **Sound Blaster** application to allow you to configure the audio settings to your requirements for the best performance in games, music and movies.

Sound Blaster X-Fi MB5 AP Installation

1. Click **Option Drivers** (button).
2. Click **3.Install SB X-Fi MB 5 AP > Yes**.
3. Choose the language you prefer and click **Next**.
4. Click **Yes** to accept the license.
5. Click **Next > Full Installation** (button).
6. Click **Next > Finish** to restart the computer.

Sound Blaster X-Fi MB5 Application

Run the **Sound Blaster** control panel from the notification area of the taskbar. Click on the tabs to access any of the control panel menus. Note that the Sound Blaster audio effects **do not** apply to audio generated through an **HDMI/Mini DisplayPort** connection.

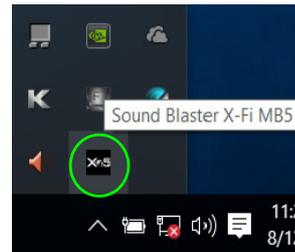


Figure 19
Sound Blaster X-Fi MB5
(Taskbar Notification Area Icon)

PC Camera

Use the **Fn + F10** key combination to toggle power to the PC Camera module. When the PC Camera is in use the PC Camera LED will be illuminated (see [page 5](#)).

Camera App

Note that you need to use the **Camera app**  in **Windows** to take pictures and capture video.

1. Run the Camera app from the Start menu by clicking on the **Camera app** icon  in **All Apps** (you can type “camera” into the search box to find the Camera app if it is not pinned to the Start menu).
2. Click to select either **photo**  or **video**  mode.
3. Click the photo icon  to take a picture, and the icon will briefly turn yellow as the picture is taken.
4. Click on the video icon  to start video capture (if video capture begins a timer will appear at the bottom of the screen and the icon will turn yellow).
5. To stop video capture click the video icon again.
6. Captured photos and videos will be saved to a **Camera Roll** folder within the **Pictures** folder in **This PC**, and to the **Photos** app stored in the Start menu.

Power Options

The **Power Options (Hardware and Sound menu)** control panel icon in **Windows** allows you to configure power management features for your computer. You can conserve power by means of **power plans** and configure the options for the **power button**, **sleep button (Fn + F12)**, **computer lid (when closed)**, **display** and **sleep mode** (the default power saving state) from the left menu. Note that the **Power saver** plan may have an affect on computer performance.

Click to select one of the existing plans, or click **Create a power plan** in the left menu and select the options to create a new plan. Click **Change Plan Settings** and click **Change advanced power settings** to access further configuration options.

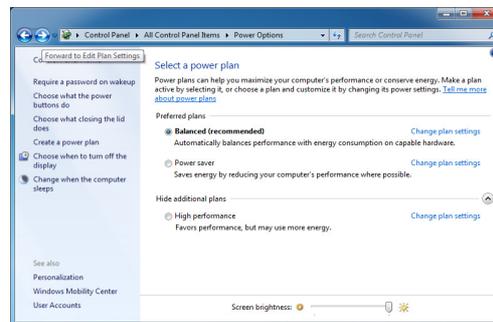


Figure 20 - Power Options

Driver Installation

The *Device Drivers & Utilities + User's Manual* disc contains the drivers and utilities necessary for the proper operation of the computer. Insert the disc and click **Install Drivers** (button), or **Option Drivers** (button) to access the **Optional** driver menu. Install the drivers in the order indicated in *Table 3*. Click to select the drivers you wish to install (you should note down the drivers as you install them). **Note:** If you need to reinstall any driver, you should uninstall the driver first.

Manual Driver Installation

Click the **Browse CD/DVD** button in the *Drivers Installer* application and browse to the executable file in the appropriate driver folder.

If a **Found New Hardware** wizard appears during the installation procedure, click **Cancel** and follow the installation procedure as directed.



Driver Installation & Power

When installing drivers make sure your computer is powered by the AC/DC adapter connected to a working power source. Some drivers draw a significant amount of power during the installation procedure, and if the remaining battery capacity is not adequate this may cause the system to shut down and cause system problems (note that there is no safety issue involved here, and the battery will be rechargeable within 1 minute).

Driver	Page#
Chipset	page 25
Video (VGA)	page 25
NVIDIA Video (NVIDIA VGA)	page 25
LAN	page 25
Cardreader	page 25
Touchpad	page 25
Airplane Mode (Airplane)	page 25
Control Center	page 25
MEI	page 25
Audio	page 25
Wireless LAN Module (Optional)	page 26
Bluetooth Module (Optional)	page 28
Sound Blaster Audio	page 22
Intel® Rapid Storage Technology (IRST)	page 25
Enable Windows Update *	
*After installing all the drivers make sure you enable Windows Update in order to get all the latest security updates etc. (all updates will include the latest hotfixes from Microsoft).	

Table 3 - Driver Installation

Chipset

1. Click **Install Drivers** (button).
2. Click **1.Install Chipset Driver > Yes**.
3. Click **Next > Accept > Install**.
4. Click **Restart Now** to restart the computer.

Video (VGA)

1. Click **2.Install VGA Driver > Yes**.
2. Click **Next > Yes > Next > Next**.
3. Click **Finish** to restart the computer.

NVIDIA Video (NVIDIA VGA)

1. Click **3.Install NVIDIA VGA Driver > Yes**.
2. Click **AGREE AND CONTINUE** (button) to accept the terms of the license agreement.
3. Click **Next**.
4. Click **Close**.

LAN

1. Click **4.Install LAN Driver > Yes**.
2. Click **Next > Install > Finish**.

CardReader

1. Click **5.Install Cardreader Driver > Yes**.
2. Click **Finish**.

Touchpad

1. Click **6.Install Touchpad Driver > Yes**.
2. Click **Next**.
3. Click the tickbox to accept the license, and then click **Next**.
4. Click **Finish > Restart Now** to restart the computer.

Airplane Mode (Airplane)

1. Click **7.Install Airplane Driver > Yes**.
2. Click **Next > Install**.
3. Click **Finish** to restart the computer.

Control Center

1. Click **8.Install Control Center AP > Yes**.
2. Click **Next > Install**.
3. Click **Finish** to restart the computer.

MEI

1. Click **9.Install MEI Driver > Yes**.
2. Click **Next**.
3. Click the tickbox to accept the license, and then click **Next**.
4. Click **Next > Finish**.

Audio

1. Click **10.Install Audio Driver > Yes**.
2. Click **Next > Finish** to restart the computer.

IRST

1. Click **Option Drivers** (button).
2. Click **4.Install IRST Driver > Yes**.
3. Click **Next > Next**.
4. Click the tickbox to accept the license and click **Next**.
5. Click **Next > Next > Next**.
6. Click **Finish** to restart the computer.

Wireless LAN Module (Option)

Make sure the Wireless LAN module is turned on (and not in **Airplane Mode**).

WLAN Driver Installation

Follow the instructions below:

(Intel) WLAN and Bluetooth Combo

1. Click **Option Drivers** (button).
2. Click **1.Install WLAN Driver > Yes**.
3. Click the button to accept the license and click **Install**.
4. Click **Finish**.

(Qualcomm) WLAN 802.11ac and Bluetooth 4.1 Combo

1. Click **Option Drivers** (button).
2. Click **1.Install WLAN Driver > Yes**.
3. Choose the language you prefer and click **Next**.
4. Click **Next > Next**.
5. Click the button to accept the license and click **Next**.
6. Click **Finish > Yes** to restart the computer.

(Third Party) WLAN 802.11b/g/n and Bluetooth 4.0 Combo

1. Click **Option Drivers** (button).
2. Click **1.Install WLAN Driver > Yes**.
3. Click **Next**.
4. Click **Finish** to restart the computer.

WLAN Configuration in Windows

Make sure the Wireless LAN module is turned on (and not in **Airplane Mode**) before configuration begins.

1. Click the icon  in the notification area of the taskbar.
2. A list of available access points will appear.
3. Double-click an access point to connect to it (or click it and click **Connect**).
4. Enter a network security key (password) if required, and click **Next**.
5. You can choose to find other devices or not.
6. When you are connected to the network access point it will display **Connected**.
7. Select any connected network and click **Disconnect** to disconnect from a connected access point.
8. You can click the **Airplane Mode** button to turn the mode On or Off.
9. Alternatively you can click the **Wi-Fi** button to turn just the Wi-Fi On or Off.

Wireless Display

Wireless Display (Miracast) uses your Wireless LAN module/WLAN/Bluetooth Combo module (you need to make sure that your video adapter/display device is compatible **with your particular WLAN/Combo module**) in conjunction with a **compatible video adapter/display device** (purchased separately) to allow you to display the contents of the notebook display on another display (e.g. HDTV), without the need to have cables stretching across a room. You can then play games, browse the internet, display videos or photo slide shows on your TV/external display without using HDMI or A/V cables.

Before configuring **Wireless Display** you will need to set up your **compatible adapter** with your display. Connect the adapter using an HDMI or A/V cable and turn on the display, and then set the display to the appropriate input channel (see the documentation supplied with your **compatible adapter** for full details).

Note that no driver or application is required for wireless display in *Windows 10*.

Wireless Display Configuration

1. Note that no driver or application is required for wireless display in *Windows 10*.
2. Press the  + **P** (or **Fn + F7**) key combination.
3. An on-screen menu will pop up.
4. Click **Connect to a wireless display**.
5. The system will then search for compatible display devices (**this may take up to 60 seconds** so allow time for this to complete).
6. Double-click any detected display device in the list.
7. The display will then connect (for specific settings for your display see the documentation supplied with your compatible adapter/display for full details).
8. Press the  + **P** (or **Fn + F7**) key combination, click **Connect to a wireless display** and then click **Disconnect** to temporarily disconnect from the wireless display.

Bluetooth Module (Option)

Make sure the Bluetooth module is turned on (and not in **Airplane Mode**).

Bluetooth Driver Installation

Follow the instructions below:

(Intel) WLAN and Bluetooth Combo

1. Click **Option Drivers** (button).
2. Click **2.Install Combo BT Driver > Yes**.
3. Click **Next > Next**.
4. Click the button to accept the license and click **Next**.
5. Click **Next > Finish > Yes** to restart the computer.

(Qualcomm) WLAN 802.11ac and Bluetooth 4.1 Combo

1. Click **Option Drivers** (button).
2. Click **2.Install Combo BT Driver > Yes**.
3. Click **Next > Next > Install**.
4. Click **Finish > Yes** to restart the computer.

(Third Party) WLAN 802.11b/g/n and Bluetooth 4.0 Combo

1. Click **Option Drivers** (button).
2. Click **2.Install Combo BT Driver > Yes**.
3. Click **Next**.
4. Click **Finish** to restart the computer.

Bluetooth Configuration in Windows

Make sure the Bluetooth module is turned on (and not in **Airplane Mode**) before configuration begins.

1. Click the **Settings** item in the Start Menu and then click **Devices**.
2. Click **Bluetooth**.
3. Make sure that Bluetooth is turned on and a list of discovered devices will appear.
4. Double-click the device you want to pair with the computer and click **Pair**.
5. On first connection the computer will provide you with a pairing code to be entered onto the device.
6. Enter the code into your Bluetooth enabled device and click **Yes** on the computer to complete the pairing.
7. Select a device and click **Remove Device** to disconnect from any device.

TPM (Option)

Before setting up the TPM (Trusted Platform Module) functions you must initialize the security platform.

Activating TPM

1. Restart the computer.
2. Enter the **Aptio Setup Utility** pressing **F2** during the **POST**.
3. Use the arrow keys to select the **Security** menu.
4. Select **TPM Configuration** and press Enter.
5. Press Enter to access the **Security Device Support** menu and select **Enable**.
6. You will then need to press **F4** to save the changes and restart the computer.

TPM Management in Windows

You can manage your TPM settings from within *Windows*:

1. Go to the **Control Panel**.
2. Click **BitLocker Drive Encryption (System and Security)**.
3. Click **TPM Administration**.

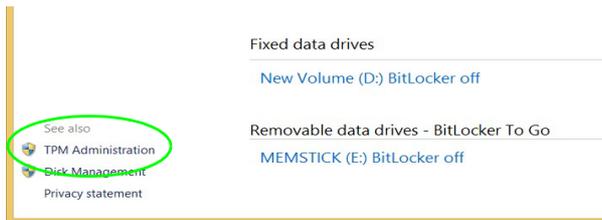


Figure 21 - BitLocker Drive Encryption (TPM Administration)

4. The TPM Management window allows you to configure the TPM within *Windows*. As TPM is usually administered within large enterprises and organizations, your system administrator will need to assist you in managing the information here.

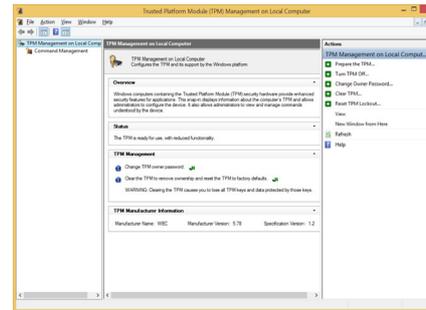


Figure 22
Trusted Platform Module (TPM) Management on Local Computer Administration

TPM Actions

1. Click **Prepare the TPM** and follow the instructions in the Wizard to prepare the TPM (this will probably require a restart of the computer and confirmation of the setting changes after restart by pressing the appropriate F key).
2. After the restart the TPM will be prepared and you can then use the **Actions** menu to **Turn TPM off**, **Change Owner Password**, **Clear TPM** or **Reset TPM Lockout**.
3. A wizard will help take you through any setup steps.

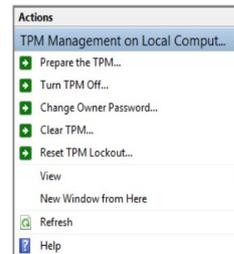


Figure 23
Actions Menu

Troubleshooting

Problem	Possible Cause - Solution
<p>The Wireless LAN/Bluetooth modules cannot be detected.</p>	<p><i>The modules are off as the computer is in Airplane Mode.</i> Check the LED indicator  to see if it is in Airplane Mode (see Table 1 on page 6). Use the Fn + F11 key combination to toggle Airplane Mode on/off (see Table 2 on page 7).</p>
<p>The PC Camera module cannot be detected.</p>	<p><i>The module is off.</i> Press the Fn + F10 key combination in order to enable the module (see Table 2 on page 7). Run the camera application to view the camera picture.</p>
<p>The captured video files from the PC Camera are taking up too much disk space.</p>	<p>Note that capturing high resolution video files requires a substantial amount of disk space for each file.</p> <p>Note that the Windows system requires a minimum of 20GB (64bit) of free space on the C: drive system partition. It is recommended that you save the capture video file to a location other than the C:drive, limit the file size of the captured video or reduce video resolution.</p>
<p>The computer is off (or in Sleep Mode) but powered by the AC/DC adapter plugged in to a working outlet or powered by the battery with a capacity level above 20%. I have plugged a device into the powered USB port in order to charge it, but the device is not charging.</p>	<p><i>The port is not powered on.</i> Toggle power to the port using the Fn + power button combination.</p> <p>This function may not work with certain external USB compliant devices (check your device's documentation). If this is the case, power the computer on and connect the external USB device in order to charge it.</p>

Specifications



Latest Specification Information

The specifications listed in this section are correct at the time of going to press. Certain items (particularly processor types/speeds) may be changed, delayed or updated due to the manufacturer's release schedule. Check with your service center for details.

Processor Options

i7-6820HK (2.70GHz)

8MB Smart Cache, 14nm, DDR4-2133MHz, TDP 45W

Support Intel® XTU over-clocking technology on i7-6820HK

i7-6700HQ (2.60GHz)

6MB Smart Cache, 14nm, DDR4-2133MHz, TDP 45W



CPU Speed & Computer in DC Mode

Note that when the computer is in DC mode (powered by the battery only) the CPU may not run at full speed. This is a design feature implemented in order to protect the battery.

Core Logic

Intel® HM170 Express Chipset

BIOS

AMI BIOS (64Mb SPI Flash-ROM)

LCD Options

14.0" (35.56cm), 16:9, QHD (2560x1440)/FHD (1920x1080)

Storage

One changeable 2.5" (6cm) **7.0mm (h) SATA** (Serial) Hard Disk Drive/Solid State Drive (SSD)

(Factory Option) One M.2 SATA/PCIe Gen3 x4 Solid State Drive (SSD)

Memory

Two 260 Pin SO-DIMM Sockets Supporting **DDR4 2133MHz** Memory

Memory Expandable from **4GB (minimum)** up to **32GB (maximum)**



SO-DIMM Memory Types

All SO-DIMM memory modules installed in the system should be identical (the same size and brand) in order to prevent unexpected system behavior.

Do not mix SO-DIMM memory module sizes and brands otherwise unexpected system problems may occur.

Security

Security (Kensington® Type) Lock Slot

BIOS Password

(Factory Option) TPM 2.0

Intel PTT for Systems Without TPM Hardware

Video Adapter

Intel® Integrated GPU and NVIDIA® Discrete GPU

Supports Microsoft Hybrid Graphics

Supports up to 4 Active Displays

Intel Integrated GPU

Intel® HD Graphics 530

Dynamic Frequency

Intel Dynamic Video Memory Technology

Microsoft DirectX®12 Compatible

NVIDIA® Discrete GPU

NVIDIA® GeForce GTX 970M

3GB GDDR5 Video RAM on board

Microsoft DirectX® 12 Compatible

Audio

High Definition Audio Compliant Interface

S/PDIF Digital Output

Two Speakers

Sound Blaster Audio

ANSP™ 3D sound technology on headphone output

Built-In Array Microphone

Note: External 5.1CH Audio Output Supported by Headphone, Microphone and S/PDIF Out Jacks

Keyboard

Illuminated White-LED “WinKey” Keyboard (with embedded numeric keypad)

Pointing Device

Built-in Touchpad

Interface

Four USB 3.0 Ports (Including one AC/DC Powered USB port)

One HDMI-Out Port

Two Mini DisplayPorts 1.2

One S/PDIF Out Jack

One Headphone/Speaker-Out Jack

One Microphone-In Jack

One RJ-45 LAN Jack

One DC-In Jack

Communication

Built-In Gigabit Ethernet LAN

2.0M FHD PC Camera Module

(Factory Option) M.2 3G/4G Module

WLAN/ Bluetooth M.2 Modules:

(Factory Option) Intel® Wireless-AC 8260 Wireless LAN (802.11ac) + Bluetooth 4.1

(Factory Option) Intel® Wireless-N 7265 Wireless LAN (802.11b/g/n) + Bluetooth 4.0

(Factory Option) Intel® Wireless-AC 3165 Wireless LAN (802.11ac) + Bluetooth 4.0

(Factory Option) Qualcomm® Atheros Killer™ Wireless-AC 1535 Wireless LAN (802.11ac) + Bluetooth 4.1

(Factory Option) Third-Party Wireless LAN 802.11b/g/n + Bluetooth 4.0

Card Reader

Embedded Multi-In-1 Push-Push Card Reader

MMC (MultiMedia Card) / RS MMC

SD (Secure Digital) / Mini SD / SDHC/ SDXC

M.2 Slots

Slot 1 for **Combo WLAN and Bluetooth** Module

Slot 2 for **SATA** or **PCIe Gen3 x4 SSD** (Factory Option) Slot 3 for **3G/4G** Module

Environmental Spec

Temperature

Operating: 5°C - 35°C

Non-Operating: -20°C - 60°C

Relative Humidity

Operating: 20% - 80%

Non-Operating: 10% - 90%

Power

Embedded 3-Cell Polymer Battery Pack, 45WH

Full Range AC/DC Adapter

AC Input: 100 - 240V, 50 - 60Hz

DC Output: 19.5V, 9.23A (180W)

Dimensions & Weight

349mm (w) * 247mm (d) * 25.4mm (h)

2.0kg (Barebone with 45WH Battery)