

**LEADER**



**RESISTANCE**

WELCOME TO  
**RESISTANCE**

 Windows 11

 intel

# 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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## Trademarks

**Intel** is a trademark/registered trademark of Intel Corporation.

**Windows** is a registered trademark of Microsoft Corporation.



### 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.

## Servicing

Do not attempt to service the computer yourself. Doing so may violate your warranty and expose you and the computer to electric shock. Refer all servicing to authorized service personnel. Unplug the computer from the power supply. Then refer servicing to qualified service personnel 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 panel breaks).
- If there is an unusual odor, heat or smoke coming from your computer.

## Safety Information

- Only use an AC/DC adapter approved for use with this computer.
- Use only the power cord and batteries indicated in this manual. Do not dispose of batteries in a fire. They may explode. Check with local codes for possible special disposal instructions.
- 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.
- Make sure that your computer is completely powered off before putting it into a travel bag (or any such container).
- Before cleaning the computer, make sure it is disconnected from any external power supplies, peripherals and cables.
- 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.
- Do not try to repair a battery pack. Refer any battery pack repair or replacement to your service representative or qualified service personnel.
- Note that in computer's featuring a raised 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 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.

## 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/Lithium-Ion batteries. Do not use Polymer/Lithium-Ion batteries in high ambient temperature environments, and do not store unused batteries for extended periods.
- If you are working in areas of low temperature use the AC/DC adapter to power the computer.



### 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.

# 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. **When first setting up the computer use the following procedure** (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 and initially set up as below):
  - Attach the AC/DC adapter cord to the DC-In jack on 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. The battery will now be unlocked.
5. Use one hand to raise the lid to a comfortable viewing angle (do not exceed 130 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).
6. Press the power button to turn the computer “on”.

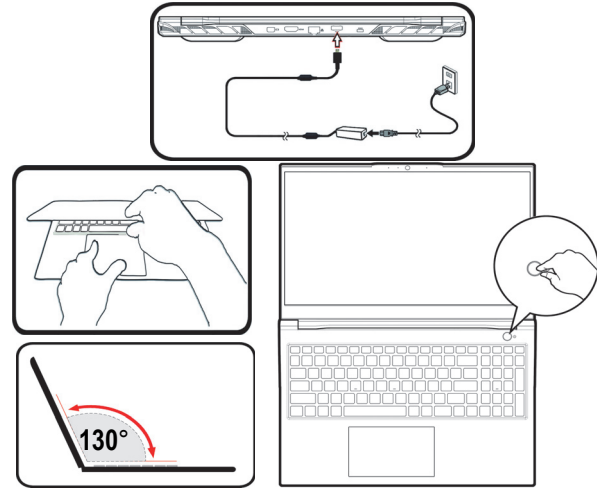


Figure 1 - Opening the Lid/Computer with AC/DC Adapter Plugged-In

## 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 11**.

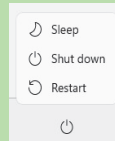
## RAID Support



You need to setup **RAID** before installing your **Windows** operating system (see **RAID Setup on page 5**).



### 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.



# RAID Setup

Your solid state drives (SSDs) can be set up in RAID mode (for increased performance or protection). **Note that setting up your solid state drives in RAID mode needs to be done prior to installing the Windows OS.** Do not change the mode unless you intend to reinstall your operating system, and make sure you back up all necessary files and data before doing so.

To configure your RAID (Redundant Array of Independent Disks) system in Striping (RAID 0) or Mirroring (RAID 1) mode (see [Table 1](#)) you will require two identical solid state drives.

RAID Level	Description
<b>RAID 0</b> (at least two SSDs needed)	Identical drives reading and writing data in parallel to <b>increase performance</b> . RAID 0 implements a striped disk array and the data is broken into blocks and each block is written to a separate drive.
<b>RAID 1</b> (at least two SSDs needed)	Identical drives in a mirrored configuration used to <b>protect data</b> . Should a drive that is part of a mirrored array fail, the mirrored drive (which contains identical data) will handle all the data. When a new replacement drive is installed, data to the new drive is rebuilt from the mirrored drive to restore fault tolerance.

*Table 1 - RAID Description*

Prepare the following before setting up your **PCIe SSDs** in RAID mode:

- The *Microsoft Windows 11 OS* on a DVD or USB flash drive.
- A connected external DVD drive.
- Two identical **PCIe** solid state drives.
- The *Device Drivers & Utilities + User's Manual* disc.
- A USB Flash drive or external USB hard disk drive.

**Note:** All SSDs in a RAID should be identical (the same size and brand) in order to prevent unexpected system behavior.

## RAID Setup Procedure

- Go to the operable computer and copy the f6mdflpy-x64 folder from the location below (**D:** denotes your DVD drive) on the *Device Drivers & Utilities + User's Manual* disc to the USB Flash drive or external USB hard disk.
  - D:\Options\Raid\F6\VMD\fvmdflpy-x64\**
- Start-up your notebook computer and press **F2** to enter the **BIOS** and go to the **Setup Utility**.
- Select the **Advanced** menu.
- Select **VMD Mode** and select **Enabled**.
- Press **F10** to **Save and Exit** and select <Yes>.
- After the computer restarts press **F2** to enter the **BIOS** again and go to the **Setup Utility**.
- Go to **Intel(R) Rapid Storage Technology** (in the **Advanced** menu) and select **Create RAID Volume**.
- You can now setup your RAID volume using the installed SSDs.
- Select **Name** and type a name of your choice for your RAID volume and select <Yes>.
- Select **RAID Level** and choose the RAID Level required (see [Table 1 on page 5](#)) and press Enter.
  - RAID 0 (Stripe)
  - RAID 1 (Mirror)
- Go to any of the disks listed under **Select Disks:** and select a disk name.
- Click on **X** to select the disk required.
- You should select two identical SSDs to form your RAID volume.
- If you have selected **RAID 0 (Stripe)** then you can adjust the **Strip Size** to your requirements (It is recommended that you set the "Strip Size" to **128KB**).
- Select **Create Volume** (make sure you have selected your disks).
- The system will list your RAID volume.
- Press **F10** to **Save and Exit** and select <Yes>, however note below.
  - Make sure the **Windows** OS (DVD) is in the attached DVD drive or on a USB flash drive and as the computer starts up it will automatically boot from the **Windows** OS DVD or USB flash drive.
- Click **Next > Install Now** to continue installing the operating system as normal (see your *Windows* documentation if you need help on installing the *Windows* OS).
- Click to select **Load Driver** when the "Where do you want to install Windows?" screen appears.
- Click **Browse** and browse to the location you copied the files to on your USB Flash drive or external USB hard disk (**X:** denotes your USB Flash drive or external USB hard disk):
  - X:\fvmdflpy-x64 (for Windows 64bit)**
- Select both driver names and click **Next**.
- Follow the on-screen instructions to install the *Windows* operating system.
- Install the *Windows* drivers (see [page 20](#)). Make sure you install the **Intel® Rapid Storage Technology (IRST)** driver.

# System Map: Front View with Display Open

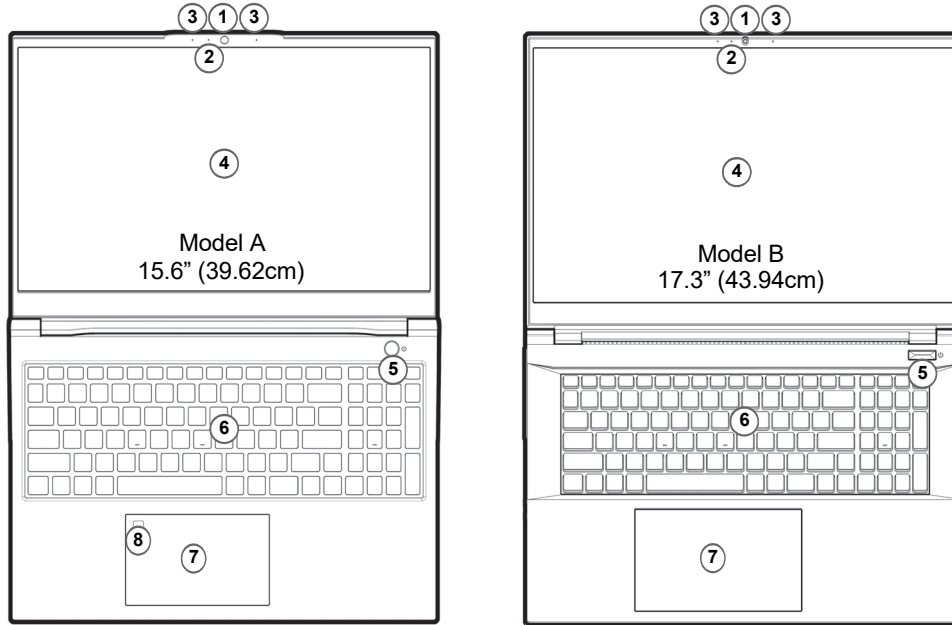
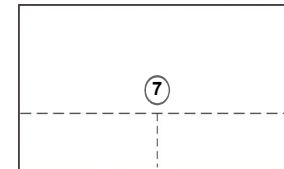


Figure 2 - Front View with Display Open

1. Webcam
2. \*Camera LED  
*\*When the camera is in use, the LED will be illuminated.*
3. Built-In Array Microphone
4. Display
5. Power Button
6. Keyboard
7. Touchpad & Buttons
8. **(Factory Option for Model A)**  
Fingerprint Sensor



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



# LED Indicators

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





Icon	Color	Description
		
	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 <b>Sleep</b> Mode
	Orange	The Battery is Charging
	Green	The Battery is Fully Charged
	Blinking Orange	The Battery Has Reached Critically Low Power Status
	Green	Storage Device Activity

Table 2 - LED Indicators

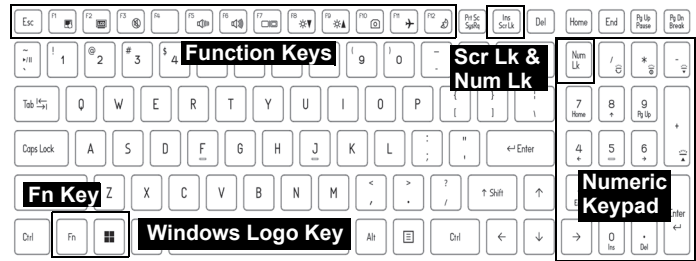



















## \*Powered USB Port

The powered USB 3.2 Gen 1 port (see [page 10](#)) 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 25](#)).

# Keyboard & Function Keys

The keyboard includes a numeric keypad for easy numeric data input. Pressing **Num Lk** 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.



Keys	Function/Visual Indicators	Keys	Function/Visual Indicators
Fn + 	Play/Pause (in Audio/Video Programs)		Number Lock Toggle
Fn + 	Touchpad Toggle	Fn + 	Scroll Lock Toggle
Fn + 	Turn Display Backlight Off (Press a key to or use touchpad to turn on)		Caps Lock Toggle
Fn + 	Mute Toggle	Fn + 	Control Center Toggle (see <a href="#">page 13</a> )
Fn + 	Volume Decrease/ Increase	Fn + 	Fan Speed Control
Fn + 	Change Display Configuration (see <a href="#">page 17</a> )	<b>*Note:</b> It is recommended that you use <b>Maximum</b> fan speed when playing games.	
Fn + 	Display Brightness Decrease/Increase	Fn + 	Disable/Enable Flexikey®
Fn + 	Camera Power Toggle	Fn + 	Power Modes Toggle
Fn + 	Airplane Mode Toggle	Fn + Power Button	Powered USB Port Power Toggle (see <a href="#">page 10</a> )
Fn + 	Sleep Toggle	<b>Table 3 - Function Keys &amp; Visual Indicators</b>	

# System Map: Front, Left & Right Views (Model A)

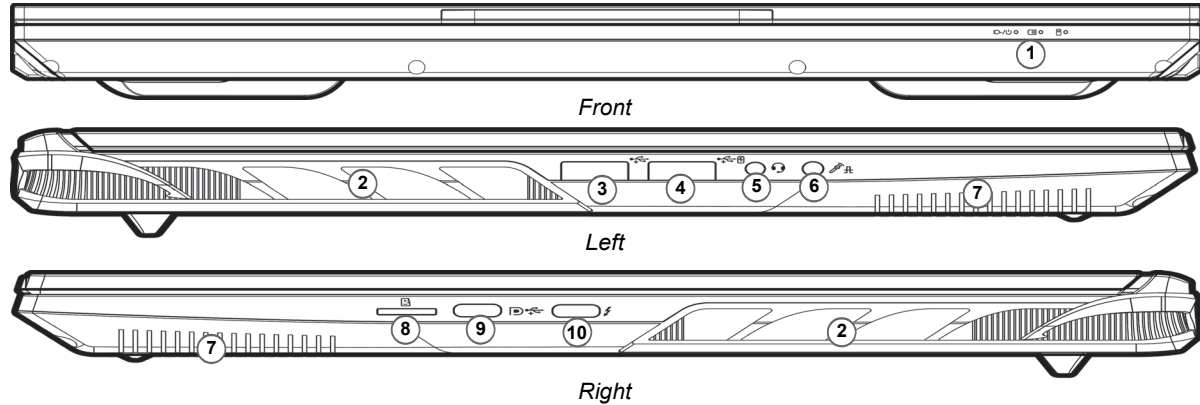


Figure 3 - Front, Left & Right Views (Model A)



## Overheating

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

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. LED Indicators</li> <li>2. Vent</li> <li>3. USB 3.2 Gen 1 Type-A Port</li> <li>4. *Powered USB 3.2 Gen 1 Type-A Port<br/>*Toggle power to this port by using <b>Fn + Power Button</b> (see <a href="#">Table 2 on page 8</a>).</li> <li>5. 2-In-1 Audio Jack (Headphone / Microphone) - see <a href="#">page 19</a></li> <li>6. 2-In-1 Audio Jack (Microphone / S/PDIF Optical) - see <a href="#">page 19</a></li> <li>7. Speakers</li> </ol> | <ol style="list-style-type: none"> <li>8. MicroSD Card Reader</li> <li>9. DisplayPort 1.4 over USB 3.2 Gen 2 Type-C Port</li> <li>10. Thunderbolt 4 Port with Power Delivery (DC-In)*<br/>*This port allows you to use a third party AC/DC adapter/power bank plugged into the port as a power supply. If you are using a power bank make sure that it complies with the USB-C PD (Power Delivery) standard specification (<b>20V/65W - 20V/100W</b>). If you are using a third party AC/DC adapter, the rating of the adapter must be <b>20V/65W - 20V/100W</b> and it should be appropriately certified.</li> </ol> |
|---|---|

# System Map: Front, Left & Right Views (Model B)

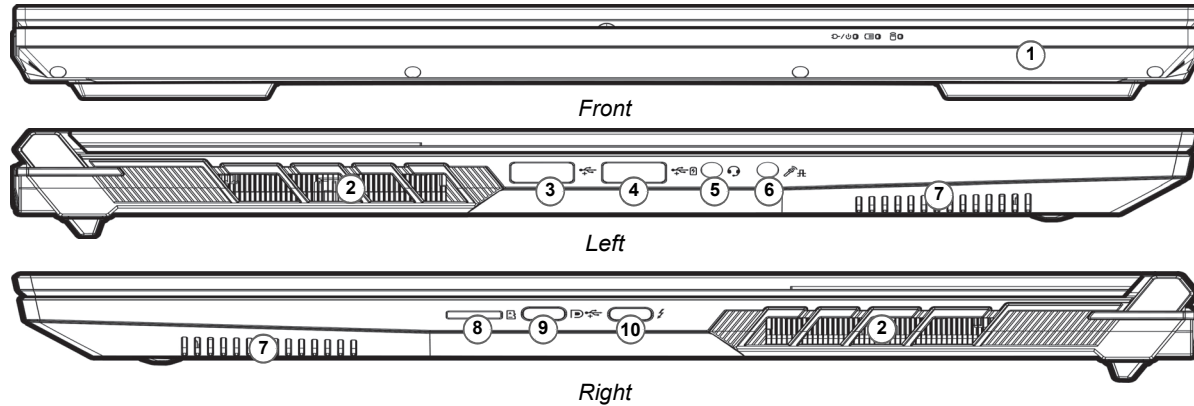


Figure 4 - Front, Left & Right Views (Model B)

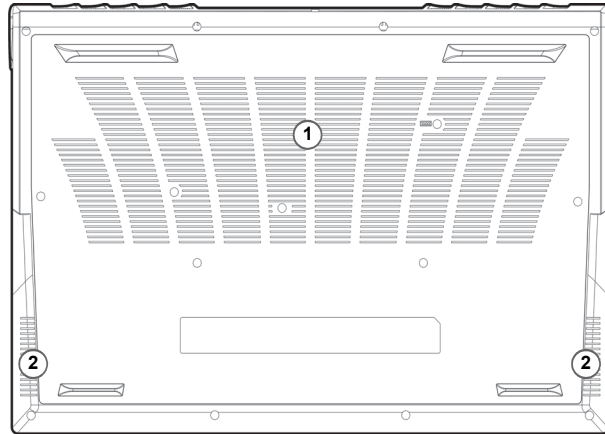


## Overheating

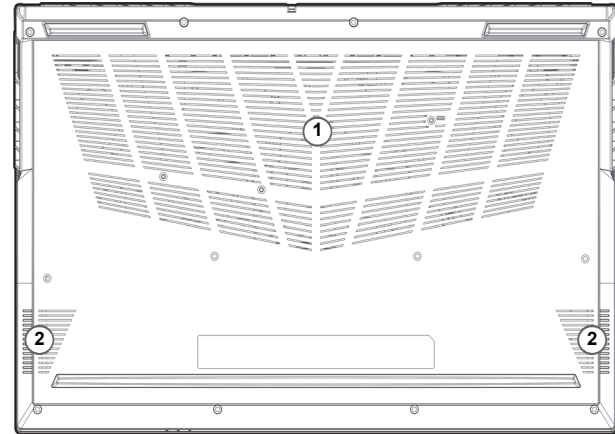
To prevent your computer from overheating make sure nothing blocks any vent while the computer is in use.

1. LED Indicators
2. Vent
3. USB 3.2 Gen 1 Type-A Port
4. \*Powered USB 3.2 Gen 1 Type-A Port  
\*Toggle power to this port by using **Fn + Power Button** (see [Table 2 on page 8](#)).
5. 2-In-1 Audio Jack (Headphone / Microphone) - see [page 19](#)
6. 2-In-1 Audio Jack (Microphone / S/PDIF Optical) - see [page 19](#)
7. Speakers
8. MicroSD Card Reader
9. DisplayPort 1.4 over USB 3.2 Gen 2 Type-C Port
10. Thunderbolt 4 Port with Power Delivery (DC-In)\*  
\*This port allows you to use a third party AC/DC adapter/power bank plugged into the port as a power supply. If you are using a power bank make sure that it complies with the USB-C PD (Power Delivery) standard specification (**20V/65W - 20V/100W**). If you are using a third party AC/DC adapter, the rating of the adapter must be **20V/65W - 20V/100W** and it should be appropriately certified.

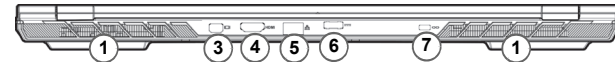
# System Map: Bottom & Rear Views



Model A



Model B



## 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 SSD/RAM etc., for any reason, please contact your distributor/supplier for further information.

## Overheating


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

Figure 5

## Bottom & Rear Views

1. Vent
2. Speakers
3. Mini DisplayPort 1.4
4. HDMI-Out Port
5. RJ-45 LAN Jack
6. DC-In Jack
7. Security Lock Slot

# Control Center

Run the **Control Center** from the Start menu in *Windows*  Fn hotkeys and OSD . You can also press the **Fn + Esc** key combination, or **double-click the icon** in the **notification area of the taskbar** to access the **Control Center**. The **Control Center** provides quick access to **Power Modes**, **Fan settings**, **LED Keyboard** configuration and 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 **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.

Click on the **Flexikey** icon in the **Control Center** to access the **Flexikey®** application.



# LED Keyboard

Your system supports 2 types of keyboards:

- **Multi-Color LED Keyboard** - You can change the color for the multi-color LED keyboard.
- **Full Color “Per Key” LED Keyboard (Factory Option)** - You can change the colors for individual keys on the full color “Per Key” LED Keyboard.

The keyboard LED may be configured using the **Fn + key combination** outlined in the table below.


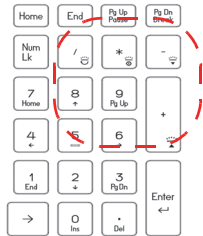




Keyboard LED Function key Combinations		
Fn + 	Launch the LED Keyboard Application	
Fn + 	Toggle the Keyboard LED On/Off	
Fn + 	Keyboard LED Illumination Decrease	
Fn + 	Keyboard LED Illumination Increase	

Table 4 - Keyboard LEDs

The **LED Keyboard** application can be accessed by clicking the **LED Keyboard** icon in the **Control Center** (or by pressing the **Fn** plus  key).



## 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 as long as the video drivers are installed.

### To access the Display control panel in Windows:

1. Right-click the desktop and select **Display settings** from the menu.
2. Choose the required display settings from the menus.

### To access the Intel® Graphics Command Center:

1. Access the **Intel® Graphics Command Center** from the Start menu in *Windows*  Intel® Graphics Command Center .

### To access the NVIDIA Control Panel:

1. Access the **NVIDIA Control Panel** from the Start menu in *Windows*  NVIDIA Control Panel .

## NVIDIA Advanced Optimus

### *(For G-SYNC systems)*

Your computer features seamless **NVIDIA Advanced Optimus** graphics switching technology, and this allows the display to switch between integrated graphics (within the computer's **CPU**) and the discrete graphics (inside the **NVIDIA GPU**). This will get the best performance from your computer by having the display connect to the **NVIDIA GPU** when required under a heavy demand such as video editing or playing games, and boost the battery life when the resources of the **NVIDIA GPU** are not required.

## Microsoft Hybrid Graphics Or Discrete Graphics Mode

### *(For systems supporting the Pantone Certificate)*

Your computer features a dedicated **Discrete Graphics Mode (Discrete GPU only)**, and a **Microsoft Hybrid Graphics Mode (MSHybrid)** featuring switchable graphics technology.

**Microsoft Hybrid Graphics Mode (MSHybrid)** - This seamless technology is 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 (iGPU) and the discrete GPU (dGPU) when required by the applications in use. This switch is seamless to the user. **This mode is selected by default.**

**Discrete Graphics Mode (Discrete GPU only)** - Discrete Graphics Mode will use the dedicated Graphics Processing Unit (GPU) which is more powerful, and therefore more suitable for playing games, watching HD video or running GPU-based applications.

The **Display Mode** item (*Advanced menu > Advanced Chipset Control*) in the BIOS allows you to configure the display mode. Restart your notebook computer and press **F2** to enter the BIOS.

## Display Devices

Note that you can use external displays connected to the HDMI-Out port and/or Mini DisplayPort and/or DisplayPort over USB 3.2 Gen 2 Type-C port and/or Thunderbolt 4 port. See your display device manual to see which formats are supported.

## Configuring the Displays in Windows

All external and internal displays (up to 5 active displays) can be configured from *Windows* by using the **Display** or **System** (in **Settings**) control panel or the **Project** menu.



### 5 Connected Displays

Note that when 5 displays are connected, only 2 displays may be configured in **Duplicate** mode.

### To configure the displays using the Display control panel:

1. Attach your external display(s) to the appropriate port, and turn it(them) on.
2. Right-click the desktop and select **Display settings** from the menu.
3. Click the **Detect** button.
4. The computer will then detect any attached displays.
5. You can configure up to 5 displays from the **Multiple displays** menu.

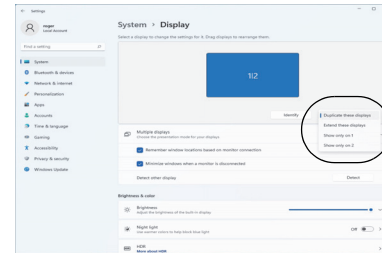


Figure 7  
Display (Multiple displays)

### To configure the displays using the Project menu:

1. Attach your external display(s) to the appropriate port, and turn it(them) on.
2. Press the **Windows + 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**.
4. You can also click **Connect to a wireless display** at the bottom of the **Project** screen and follow the steps to connect to any wireless enabled display.

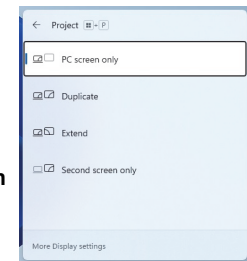


Figure 8 - Project

## G-SYNC

(For G-SYNC systems)

G-SYNC is designed to provide a smooth game play experience from your GeForce product by synchronizing the monitor's refresh cycle to the GPU's render rate, thus removing lag and stutter issues, in order to have objects appear sharper and scenes display instantly.

### Setting up G-SYNC

1. Go to the **NVIDIA Control Panel**.
2. Click "**NVIDIA GPU only**" under "**Manage Display mode**".
3. Click **Apply** and select **Set up G-SYNC**.
4. Click to put a check in the box "**Enable G-SYNC, G-SYNC Compatible**" (it is enabled by default).

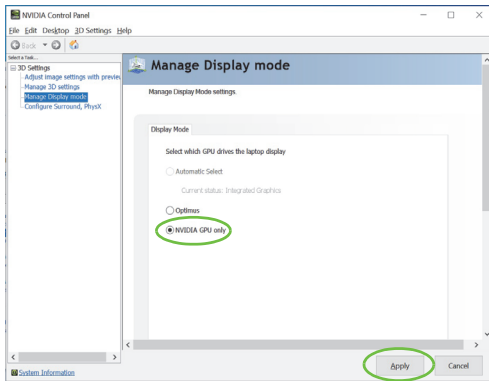


Figure 9 - Manage Display Mode - NVIDIA GPU only

## Power & battery

The **Power & battery** control panel allows you to quickly adjust power options for **Screen and sleep**, **Power mode**, **Battery saver** and **Battery usage** etc. Access the **Power & battery** control panel via the **Settings (System > Power & battery)** item in the Start menu.

The **Power mode** can be set to **Balanced** (default) which balances performance and battery life, **Best power efficiency** for better battery life with reduced performance, and **Best Performance** for improved performance but with greater battery consumption. You can also customize the settings for how long your computer will remain inactive before it turns off the screen or goes to sleep. Expand the "**Screen and sleep**" option, and select your preferred durations from each drop-down menu.

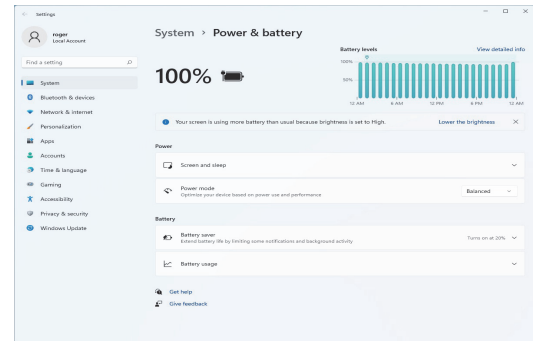



Figure 10 - Power & battery

# Audio Features

You can configure the audio options on your computer from the **Sound** control panel in *Windows*. Access the **Sound** control panel via the **Settings (System > Sound)** item in the Start menu.

The volume may be adjusted by means of the **Fn + F5/F6** key combination. The sound volume level can also be set using the volume control within *Windows*. Click the icon  in the taskbar to check the setting.



## 2-In-1 Audio Jack (Headphone / Microphone)

Note that 2-In-1 Audio Jacks (Headphone / Microphone) can support headphones or headsets (i.e. a combination microphone/headphone).

1. When a device is plugged in to the 2-In-1 Audio Jack (Headphone / Microphone) a dialog (“Which device did you plug in?”) box will pop-up.
2. Make sure you select the correct device from the drop-down menu corresponding to the device plugged-in (e.g. choose “Headset” if you have plugged-in a headset and do not choose “Headphone” in this case), and then click **OK** to save the setting.
3. If you are plugging in a microphone then use the 2-In-1 Audio Jack (Microphone / S/PDIF Optical), and do not use the 2-In-1 Audio Jack (Headphone / Microphone).

# Sound Blaster Studio Pro

The **Sound Blaster Studio Pro** application allows you to configure the audio settings to your requirements for the best performance in games, music and movies.

## Sound Blaster Studio Pro Application

Run the **Sound Blaster Studio Pro** control panel from the Start menu in *Windows*  Creative App

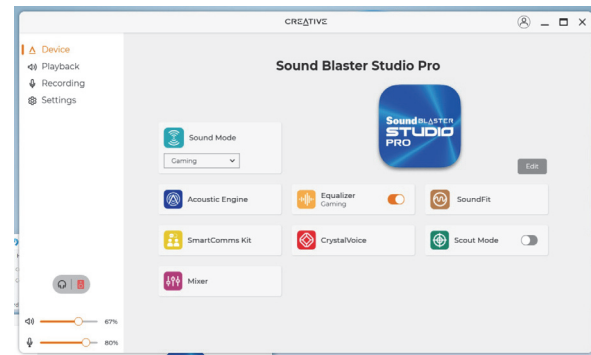


Figure 11 - Sound Blaster Studio Pro



# Driver Installation

The *Device Drivers & Utilities + User's Manual* disc contains the drivers and utilities necessary for the proper operation of the computer. This setup will probably have already been done for you. If this is not the case, 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 *Figure 12*. 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.

## Latest Updates

After installing all the drivers make sure you enable **Check for updates (Settings > Windows Update)** and go to the Microsoft Store and click **Downloads and updates > Get updates** to update all Apps etc.



Figure 12 - Install Drivers



### 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 Installation General Guidelines



As a general guide follow the default on-screen instructions for each driver (e.g. **Next > Next > Finish**) unless you are an advanced user. In many cases a restart is required to install the driver.

Make sure any modules (e.g. WLAN or Bluetooth) are **ON** before installing the appropriate driver.

## Wireless LAN Module (Option)

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

### WLAN Configuration in Windows

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



#### Connect Automatically

It is recommended that you check the box to Connect automatically. This will cause the system to check for the access point upon startup, and resuming from a power-saving state, and will remove any necessity to keep connecting manually.

## Bluetooth Module (Option)

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

### Bluetooth Configuration in Windows

1. Click the **Settings** item in the Start Menu.
2. Click **Bluetooth & devices**.
3. Click **Add device > Bluetooth** and a list of discovered devices will appear.
4. Double-click the device you want to pair with the computer and click **Connect**.
5. Select a device and click **Remove Device > Yes** to disconnect from any device.

# Fingerprint Reader (Option for Model A)

Enroll your fingerprints as instructed below before use. The fingerprint reader module uses the **Sign-in options** configuration of the *Windows Account*.



## Fingerprint Sign-In Issues

If at the Windows Hello screen, the fingerprint reader fails to recognize the fingerprint 3 times it will then block access to the computer. In this case you will need to use your PIN (the PIN you used when initially setting up the fingerprint reader) to access the computer. Alternatively you can sign-in using your windows password. After using the PIN code (or windows Password) to access the computer you can go to the **Settings > Accounts > Sign-in options** if you wish to change any settings.

## Fingerprint Module Configuration

1. Click the **Settings** item in the Start Menu.
2. Click **Accounts** and then click **Sign-in options**.
3. You will need to add a **Windows** password (click **Add** under **Password**).
4. After you have added the password you will need to also add a **PIN**.
5. Click **Set up** under **Fingerprint recognition (Windows Hello)**.

6. The wizard will then guide you through the set up process to enroll your fingerprints.
7. You will be instructed to **Touch the fingerprint sensor** a number of times (**this may be in excess of 20 times**).
8. Try to present different parts of your finger in different positions similar to the various positions you may use when using it, and note the following:
  - Hold the finger on the sensor for at least half a second.
  - Make sure that you make firm direct contact with the sensor, and cover the entire area of the sensor with the finger (you are looking for a reading of at least 75% of the finger area).
  - Use a pressing motion as opposed to a touching or tapping motion.
  - When authenticating use the same sort of angle you used for enrollment.
9. Click **Close** when complete.
10. You can choose to **Add another** finger (this is recommended) or **Remove** the current fingerprint reading.
11. You can now touch the fingerprint sensor to log-on to the computer.

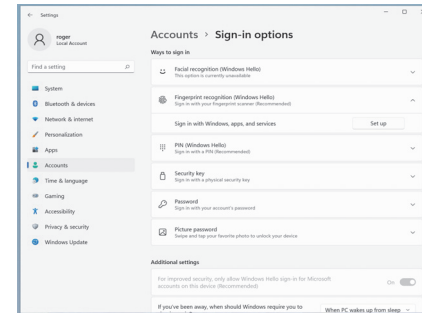


Figure 13 - Accounts - Sign-in options

# X-Rite Color Assistant (Option)

(For systems supporting the Pantone Certificate only)

The X-Rite Color Assistant application allows you to calibrate the screen for optimum color display.

Run the **X-Rite Color Assistant** app from the **Apps** screen to calibrate the screen (there should also be a desktop icon), and if running then access the application from the icon in the taskbar's System Tray.



Right-clicking the taskbar icon will bring up the **Quick Selection** menu and you can choose a profile from the menu.

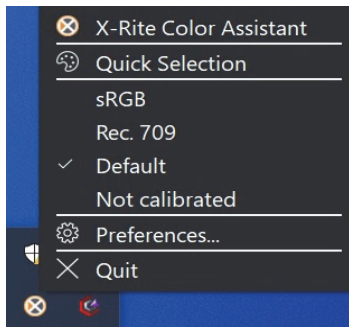


Figure 14 - Right-Click X-Rite Color Assistant Taskbar Icon

You can select a **Profile** to change the screen color, and you view the difference in the changed screen color from the picture on the right.

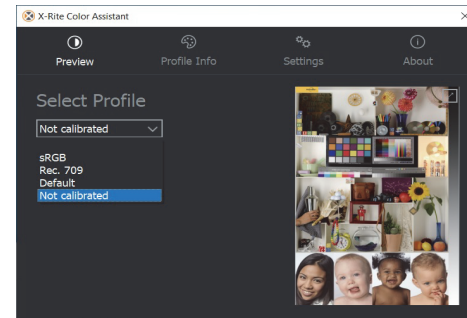


Figure 15 - X-Rite Color Assistant - Preview

The **Settings** tab can be used to restore customized profiles.

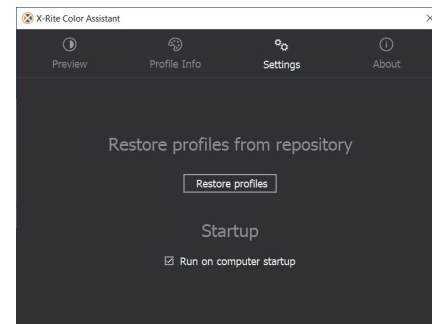


Figure 16 - X-Rite Color Assistant - Settings

# 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 **BIOS** pressing **F2** during the POST/startup.
3. Click **Setup Utility** and select the **Security** menu.
4. Click **TPM Configuration** and select **Enable for Security Device Support**.
5. You will then need to press/click **F10** to save the changes and restart the computer.



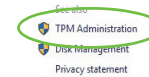
Figure 17  
Security -  
Trusted  
Computing

## 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 18  
BitLocker Drive  
Encryption  
(TPM Administra-  
tion)



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.

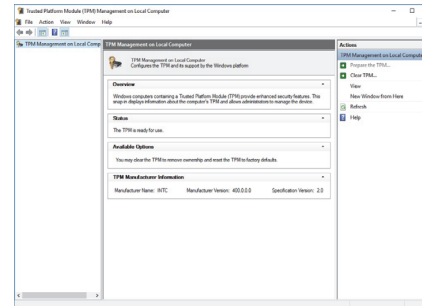


Figure 19  
Trusted Plat-  
form Module  
(TPM) Manage-  
ment on Local  
Computer Ad-  
ministration

## 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 Lockoff**.
3. A wizard will help take you through any setup steps.

# Troubleshooting

Problem	Possible Cause - Solution
The <b>Wireless LAN/Bluetooth</b> modules cannot be detected.	<i>The modules are off as the computer is in <b>Airplane Mode</b>.</i> Use the <b>Fn + F11</b> key combination to toggle <b>Airplane Mode</b> on/off (see <a href="#">Table 3 on page 9</a> ).
The <b>Camera</b> module cannot be detected.	<i>The module is off.</i> Press the <b>Fn + F10</b> key combination in order to enable the module (see <a href="#">Table 3 on page 9</a> ). Run the camera application to view the camera picture.
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%. <b>I have plugged a device into the powered USB port in order to charge it, but the device is not charging.</b>	<i>The port is not powered on.</i> Toggle power to the port using the <b>Fn + Power Button</b> combination.  This function may not work with certain external USB compliant devices (check your device's documentation). If this is the case, <b>power the computer on and connect the external USB device in order to charge it.</b>
Gaming performance is slow.	<i>It is recommended that you use <b>Maximum fan speed when playing games</b>.</i> Use the <b>Fn + 1</b> key combination to adjust the fan speed.



# 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.

Note that this computer model series may support a range of CPUs and/or video adapters.

To find out which CPU is installed on your system go to the **Start** menu and select **Settings**, and then select **System** and click **About**. This will also provide information on the amount of **Installed RAM** etc.

To get information on your system's **video adapter** go to the **Start** menu and select **Settings**, and then select **System** and click **Display > Advanced display settings > Display adapter properties**.

## BIOS

INSYDE BIOS (256Mb SPI Flash ROM)

## Memory

Dual Channel DDR5

Two 262 Pin SO-DIMM Sockets

Supporting up to **4800/5600MHz DDR5** Memory

Memory Expandable from **8GB (minimum)** up to **64GB (maximum)**

Compatible with 8GB, 16GB or 32GB Modules

(The real memory operating frequency depends on the FSB of the processor.)

## Display Options

### Model A:

**For G-SYNC systems:**

LCD, 15.6" (39.62cm), 16:9, FHD (1920x1080)/QHD (2560x1440)

**For systems supporting the Pantone Certificate:**

LCD, 15.6" (39.62cm), 16:9, QHD (2560x1440)

### Model B:

**For G-SYNC systems:**

LCD, 17.3" (43.94cm), 16:9, UHD (3840x2160)/QHD (2560x1440)

**For systems supporting the Pantone Certificate:**

LCD, 17.3" (43.94cm), 16:9, UHD (3840x2160)/QHD (2560x1440)

## Storage

**Two** M.2 2280 **PCIe Gen4 x4** SSDs supporting RAID level 0/1

## Audio

High Definition Audio Compliant Interface

Sound Blaster Studio Pro

Built-In Array Microphone

Two Speakers

## Security

Security (Kensington® Type) Lock Slot

BIOS Password

Intel® PTT for Systems Without TPM Hardware

**(Factory Option)** TPM 2.0

**(Factory Option for Model A)** Fingerprint Sensor

## Keyboard

Full-size **Multi-Color** LED Keyboard (with Numeric Keypad)

Or

**(Factory Option)** Full Size **Full Color "Per Key"** LED Keyboard (with Numeric Keypad)

## Pointing Device

Built-In Touchpad (with Microsoft PTP Multi Gesture & Scrolling Functionality)

Or

**(Factory Option for Model A)** Built-in Secure Pad (with Microsoft PTP Multi Gesture & Scrolling Functionality)

## M.2 Slots

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

Slot 2 for **PCIe Gen4 x4 SSD**

Slot 3 for **PCIe Gen4 x4 SSD**

## Card Reader

MicroSD Card Reader

## Interface

Two USB 3.2 Gen 1 Type-A Ports (Including one AC/DC Powered USB Port)

One DisplayPort 1.4 over USB 3.2 Gen 2 Type-C Port\*

*\*The maximum amount of current supplied by USB Type-C ports is 500mA (USB 2.0)/ 900mA (USB3.2).*

One Thunderbolt 4 Port with Power Delivery (DC-In)

One Mini DisplayPort 1.4

One HDMI-Out Port

One 2-In-1 Audio Jack (Microphone / SPDIF Optical)

One 2-In-1 Audio Jack (Headphones / Microphone)

One RJ-45 LAN Jack

One DC-In Jack

## Communication

Built-In 10/100/1000/2500Mb Base-TX Ethernet LAN

1.0M HD Webcam

Or

**(Factory Option)** 2.0M FHD Webcam with TNR

## WLAN/ Bluetooth M.2 Modules:

**(Factory Option)** Intel® Dual Band Wi-Fi 6E AX211, 2x2 AX Wireless LAN + Bluetooth

**(Factory Option)** Intel® Dual Band Wi-Fi 6E AX210, 2x2 AX Wireless LAN + Bluetooth

**(Factory Option)** Intel® Dual Band Wi-Fi 6 AX201, 2x2 AX Wireless LAN + Bluetooth

**(Factory Option)** Killer™ Dual Band Wi-Fi 6E AX1675i 2x2 AX Wireless LAN + Bluetooth

## Features

Virtual Reality Ready

Windows® Mixed Reality Compatible

Pantone Certificate\*

NVIDIA G-SYNC Technology at Dynamic Display Switch mode\*

*\*These features apply to some individual model designs within this series (check with your distributor/supplier for details).*

## Power

Embedded 6 Cell Polymer Battery Pack, 80Wh

Full Range AC/DC Adapter

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

DC Output: 20V, 14A **(280W)**

## Environmental Spec

### Temperature

Operating: 5°C - 35°C

Non-Operating: -20°C - 60°C

### Relative Humidity

Operating: 20% - 80%

Non-Operating: 10% - 90%

## Dimensions & Weight

### Model A:

358mm (w) \* 240mm (d) \* 24.9mm (h)

**2.4kg** (Barebone with 80Wh Battery)

### Model B:

396mm (w) \* 262mm (d) \* 24.9mm (h)

**2.8kg** (Barebone with 80Wh Battery)

