



## ***User Manual v 0.1***

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# 1. Introduction

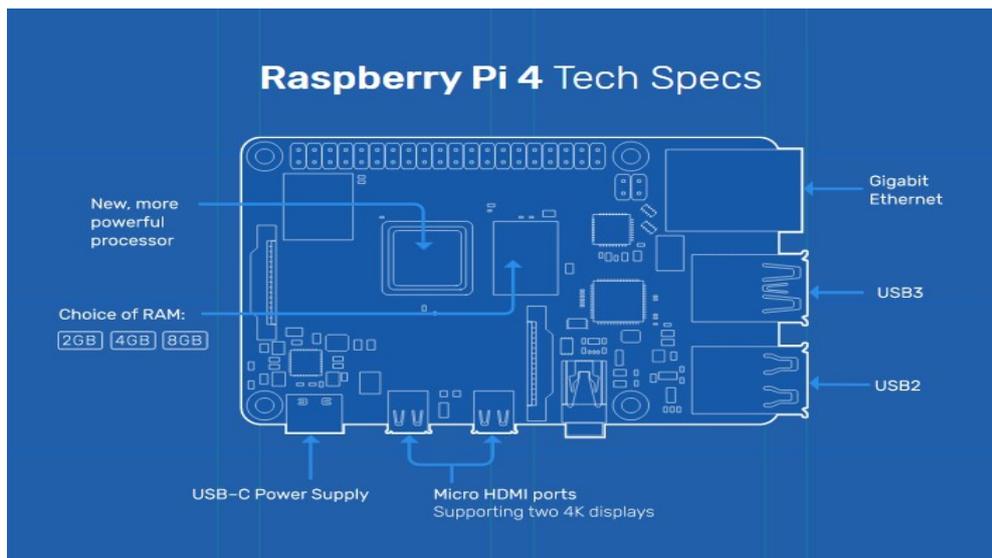
## 1.1 Overview

The PiTronix eZeePC is a desktop computer that runs on Raspberry Pi 4 - latest state of the art Hardware from the Raspberry Pi Foundation of the United Kingdom (UK).

eZeePC is locally manufactured in India as per requirements stipulated.

Purpose and intended use of the Product is within a home / personal environment where internet surfing, Educational Programs, Emails, Gaming, Robotics and such other applications may be required.

## 1.2 Technical Specification



- *Broadcom BCM2711, Quad core Cortex-A72 (ARM v8) 64-bit SoC @ 1.5GHz*
- *2GB, 4GB or 8GB LPDDR4-3200 SDRAM (depending on model)*
- *2.4 GHz and 5.0 GHz IEEE 802.11ac wireless, Bluetooth 5.0, BLE*
- *Gigabit Ethernet*
- *2 USB 3.0 ports; 2 USB 2.0 ports.*
- *2 × micro-HDMI ports (up to 4kp60 supported)*
- *4-pole stereo audio and composite video port*
- *Micro-SD card slot for loading operating system and data storage*
- *5V DC via USB-C connector (minimum 3A\*)*
- *Power over Ethernet (PoE) enabled (requires separate PoE HAT)*
- *Operating temperature: 0 – 50 degrees C ambient*

- A good quality 2.5A power supply can be used if downstream USB peripherals consume less than 500mA in total.

### 1.3 Kit Content

eZeePC is a fully functional Desk Top PC, Internet ready to go with the below Hardware and software provided. **This kit DOES NOT come with printer connection cables.**

- ☑ Plug n Play PC with Pre Programmed Micro SD Card loaded with LibreOffice, Python and relevant software.
- ☑ Power Charger with Type C Cable – 2.5 Amps or above.
- ☑ HDMI Cable for TV with HDMI / Monitor with HDMI interface and speakers
- ☑ Wireless Key Board, Mouse with Battery & Nano Receiver
- ☑ Webcam with USB cable.
- ☑ Microphone.
- ☑ User Manual.
- ☑ Warranty Card

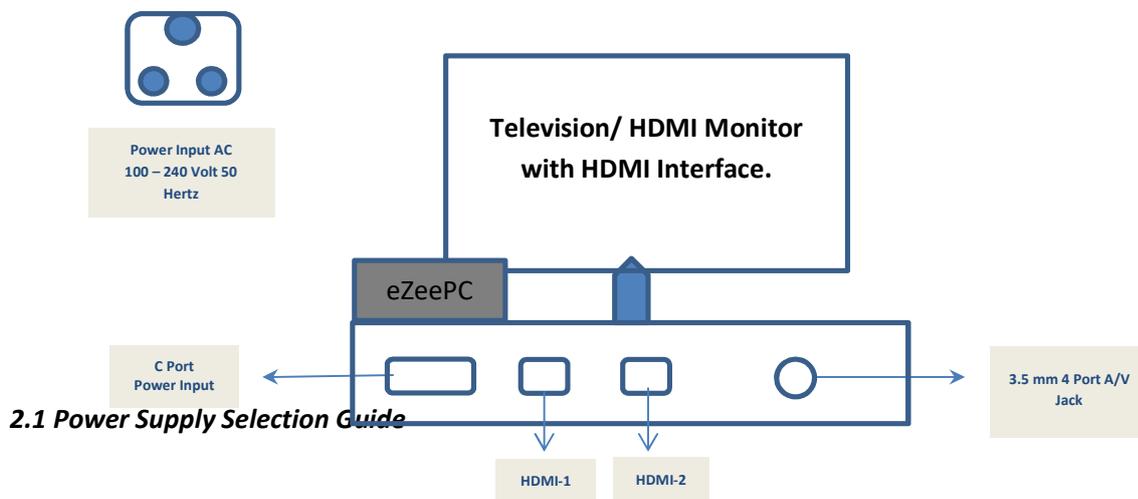
## 2 GETTING STARTED

**Do not attempt to use Nano Receiver provided with other wireless keyboards. This could damage both the keyboard & mouse given in this kit.**

*(It is assumed that the user will use the TV as a display device. Instructions for Monitor as Display with its Power requirements are different. Refer Power Supply Selection Guide below).*

### 2.0 Connecting to TV with HDMI / Monitor with HDMI interface and speakers

eZeePC can drive up to two displays, with a resolution up to 1080p at a 60Hz refresh rate. At 4K resolution, if you connect two displays then you are limited to a 30Hz refresh rate.



A strip socket is to be used with dedicated socket for monitor, eZeePC. Ensure that in locations where power supply is intermittent or unstable, strip socket is used with UPS.

**IMPORTANT:** To ensure stability, a dedicated adapter of 5V @ 2.5 A power supply is required to power the eZeePC. Any power supply with current capacity less than 2.5 A may damage the file system and/or hardware. **Do not plug this device to a multi-point plug that is shared with other devices.**

We strongly recommend the usage of a UPS min 600 VA to be connected to the product as it is loaded with appropriate software and drivers and to prevent data corruption, and data loss.

## 2.2 Ready to Go

Please proceed in order of steps given below:

1. Unbox and place the eZeePC with the logo facing upwards, on a flat surface / TV table / worktable. Make sure that it is adequately ventilated for air circulation.
2. Check that Nano Receiver is firmly in place in black USB 2.0 slot. This is for the Keyboard and Mouse.
3. Blue Slots USB 3.0 is for external HDD & other peripherals like Printer which you may connect when needed.
4. Attach HDMI cable (narrow end) to HDMI-1 port (Fig 2.1) and wider end to HDMI output slot of an HDMI TV / HDMI Monitor.
5. Connect the C Type Power cable to power port as shown in Fig 2.1. Do not connect to main power supply as yet.
6. On the back/bottom side of Key Board and Mouse is the ON/OFF switch. Set this to ON position. Keyboard LED will turn green momentarily and Mouse LED will remain a steady red indicating that both peripherals are working fine. Else check if batteries need to be refitted or replaced.
7. Power up the eZeePC by connecting to main power supply. Turn on power supply for TV/HDMI Monitor & eZeePC.
8. **Go to Step 9 &10** if connected to a TV. For HDMI monitor with speakers, follow **step 11,12,13**. For HDMI monitor without speaker, follow **step 11,12,13,14,15,16**.
9. "No signal" will appear on the TV.
10. Click "Source" on TV Remote and select HDMI-1 or HDMI-2 or HDMI3 depending on which output slot has been used in Step 4.
11. EZeePC will boot within 60 seconds and ready for use.
12. You should see a desktop with 4 symbols on the Task Bar (top or bottom)– Raspberry, Internet, and File Manager & Terminal on the left hand side. Bluetooth, Wi-Fi, Audio Speaker and Clock are on the right hand side. (see picture below)
13. For network connections, use the LAN port and an Ethernet cable from your modem. OR turn on any WiFi device like Mobile Hotspot or Dongle or Wireless Modem. eZeePC automatically detects available networks and a blue  is visible. Select from available Wi-Fi connections; enter the Password to connect. If there are no networks detected you will see 2 red crosses and 2 grey lines in the Task bar(see picture below).
14. Ensure that you have connected a set of headphones with mic OR speakers to the External Sound card Microphone 3.5mm jack. The next step is to setup Mic & speakers.
15. Right click on the Speaker icon (visible on the right hand bottom corner) and select "Audio Output" – "USB PnP Sound device"- a green tick mark should appear. Click on "Audio Output" –

*“Output Device Settings”. In the pop-up that appears, in the “Playback” Tab, ensure – “Speaker” is enabled and volume bar is set to the highest level.*

16. *Right click on the Speaker icon (visible on the right hand bottom corner) and select “Audio Input”-“Input Device Settings”. In the pop-up that appears, in the “Capture” Tab, ensure that “Mic” is enabled and volume bar is raised to the highest level.*



### **2.3 Key Software and Updates provided.**

*Raspberry Pi OS (previously called Raspbian) is the recommended operating system for normal use. Your PiTronix eZeePC is already loaded fully tested and is ready to use.*

### **2.4 User ID and Password**

*The User id is “pi” and password is “Pi1431\*\_”. Before using please check that you are not making changes that can cause issues to the system.*

## **3 QUICK NAVIGATION - TASK BAR, MAIN MENU and DESKTOP APPS**

### **1. The Task bar**

*On the Top Left OR Bottom Left, it has 4 symbols – namely a Raspberry, Internet, File Manager and Terminal.*

**Raspberry is the MAIN MENU**

**Internet-** *opens DuckDuckGo as default browser. You can surf the Internet and access any information*

**File Manager-** *as the name suggests shows all folders and files on your computer. You can drag and*

drop files and folders, rename them, copy or paste

**Terminal -You are advised to use the Terminal only if you are an experienced Linux user.**

## **2. The MAIN MENU**

**Raspberry** is the main menu and has multiple applications, including Accessories, Games, Programming, LibreOffice (for word processing, calculations, and presentations), Preferences, Games, Logout. See figure below.

The **Preferences Menu** has the option to Add/Remove Programs, Appearance Settings, Keyboard & Mouse settings, Screen Resolution etc.

Click "Preferences - Screen Configuration - HDMI1 - Configure - Screen - Resolution". A list of possible resolutions appears. Click one that you need and then "Ok". Save by clicking on the Yellow ✓ mark.

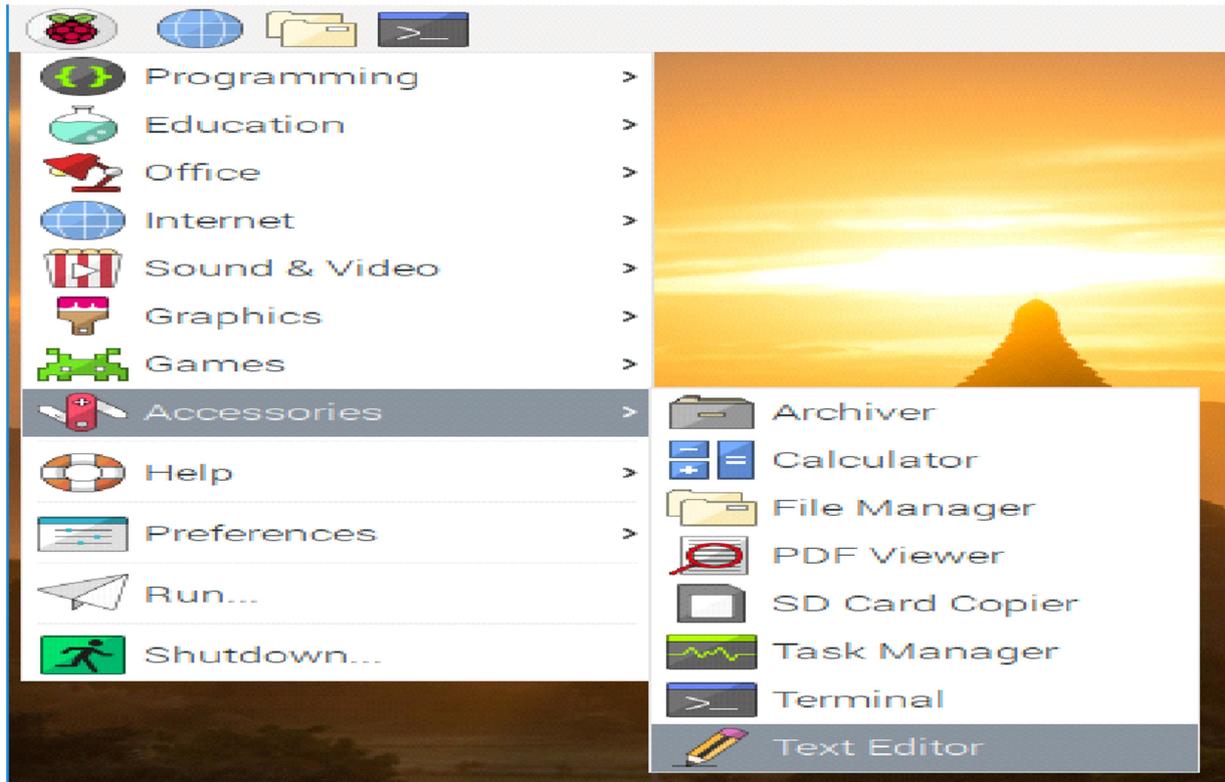
To confirm this change, you will need to click the "OK" button within 10 seconds. Preferred setting for Resolution would be to keep it to Default.

The **Programming Menu** gives options of Java, Thonny Python and other programming languages.

The **Office Menu** gives LibreWrite – word processor, LibreCalc – spreadsheet, LibreImpress – presentations, Libre Base – database. These are similar to other tools used in popular operating systems like Windows.

Similarly the other menu items provide applications and utilities for the user. Explore and now your eZeePC.

The **Accessories Menu** has File Manager, PDF Viewer, and Calculator etc. See Figure below



### 3 DESKTOP APPS

There are a set of 10 Desktop Apps with their associated icons to help the user navigate for day-to-day tasks. Some of these like Resolution are desktop shortcuts, while others open the relevant applications.

#### 3.1 Real Time Clock (RTC)

Each time your eZeePC starts up it will connect to what is called a Network Time Protocol (NTP) server and request the time.

If there is no internet connection the eZeePC utilizes the integrated RTC on the Pi Desktop add-on board. This contains a battery powered clock chip that tells what time it is. To ensure accuracy the time will need to be set on the system initially.

**Note:** Installing the software package then rebooting the system will enable the RTC.

#### 3.2 Web Cam Interface

eZeePC comes with a Webcam which interfaces with the USB port.

Connect the Camera USB cable to the USB 3.0 Port of the eZeePC.

Adjust the Back Light provided to the required Lighting levels by rotating the knob if applicable. Adjust the focus if required.

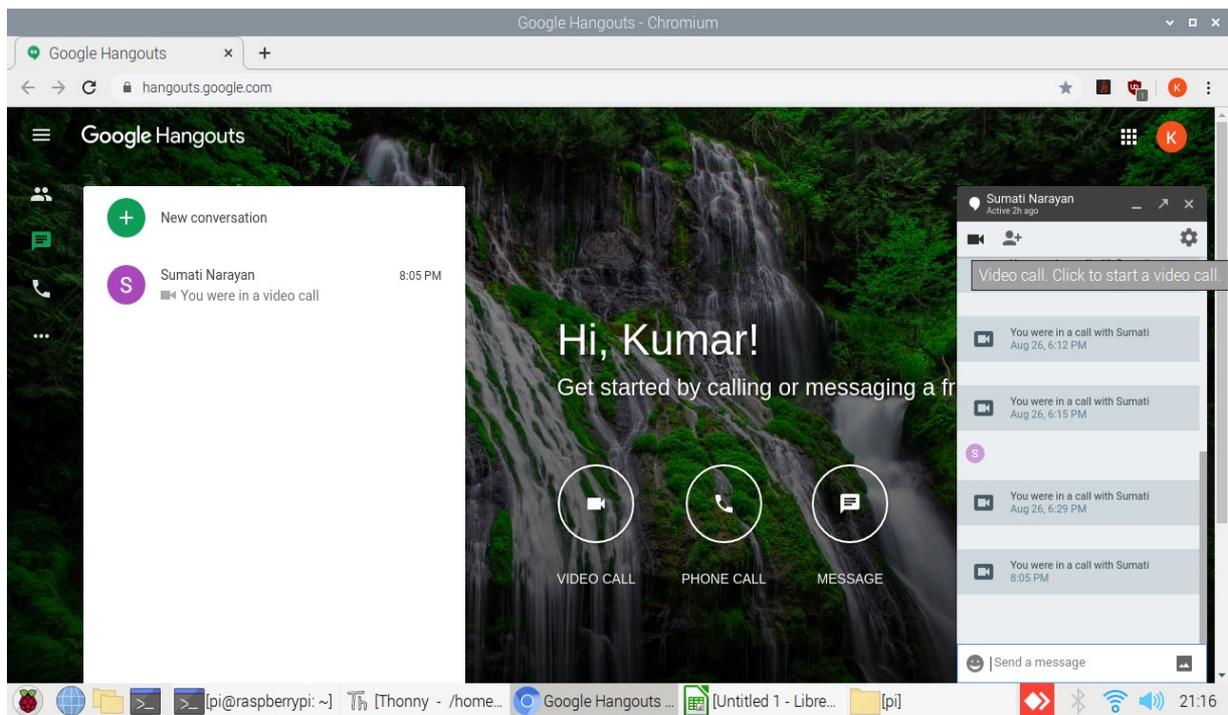
USB Camera is all set and ready to GO.

#### 3.3 Connecting to Hangouts, Google Meet, ZOOM

1. Sign in to the relevant application via the internet and navigate to complete the call.

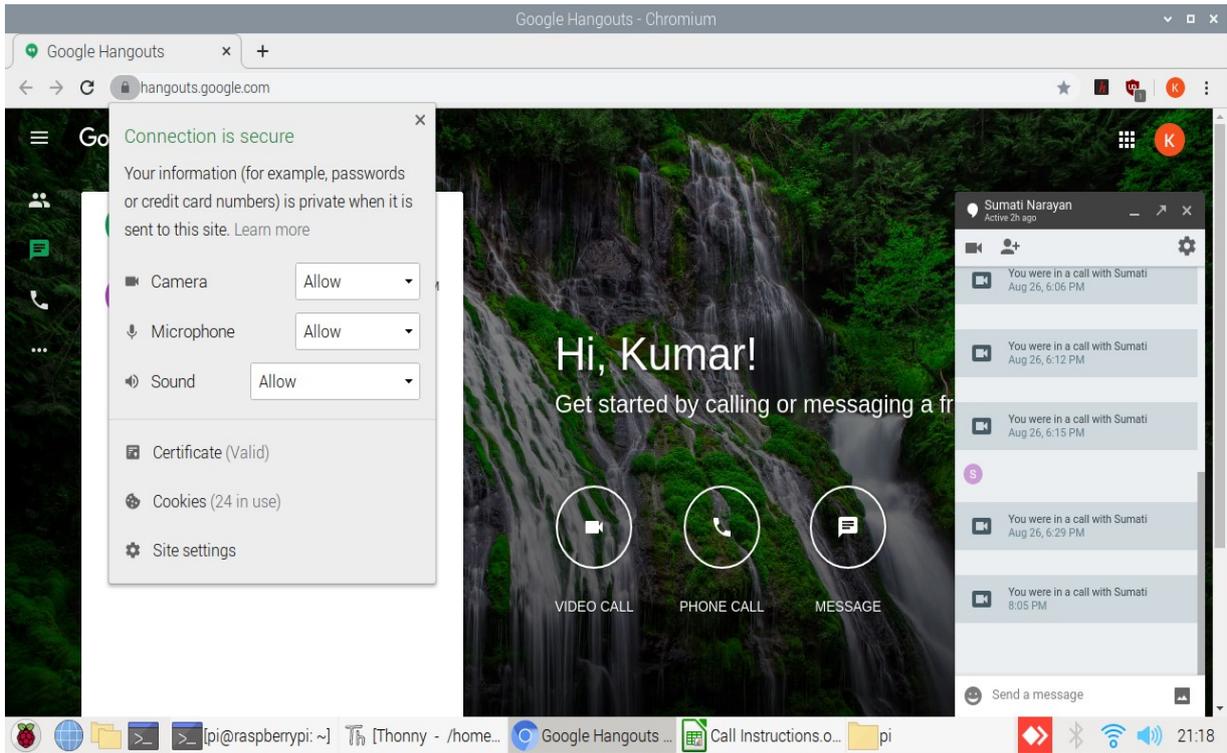
2. For the first time, ensure that all audio and video settings relevant to the application are enabled and pages are refreshed.

General guidelines are provided below as an example.

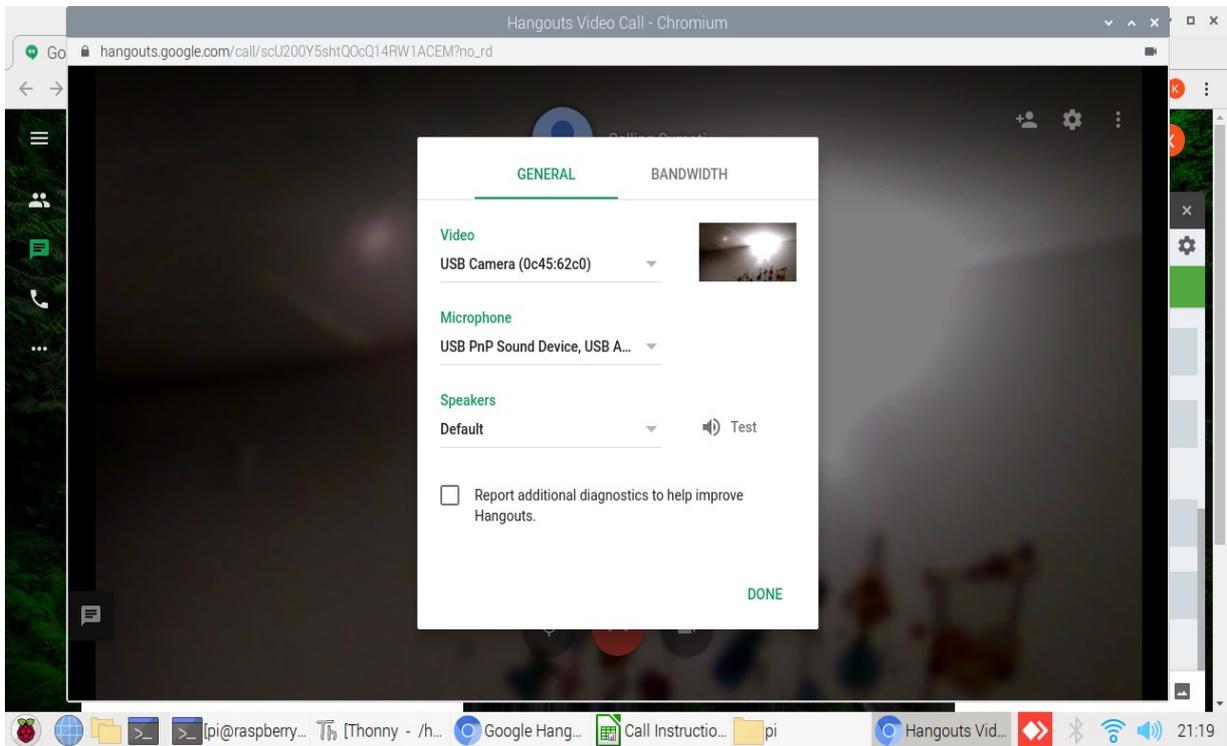


Now ensure that the microphone and webcam are setup and recognized correctly.

For this click on the lock symbol next to the URL and select "Allow" once more for camera and microphone, though "Allow" already appears on the selection.



*Start the video call and ensure Settings (small icon on right hand side) shows as follows*



*Hang up Video call when completed.*

Each video calling application is likely to have some settings for microphone and webcam that are externally attached peripherals. Please ensure that these settings have been made when using for the first time.

## 4 TECHNICAL INFORMATION - Electrical Characteristics

<b>Characteristic</b>	<b>Value</b>
Operating temperature	0~50°C
Storage temperature	0~50°C
Operating voltage	5V
Power Cons	< 15 Watts
Depends upon the number of Peripherals connected to the System.	

### **Dimensions**

Material	High Grade ABS
Case Dimension	108 x 108 x 43.12 mm
Add-on Board	87 x 56 x 1.4 mm

## 5 FAQs

### **❏1 My TV, Monitor does not show any Display**

Check for correct connections of the HDMI to the Display and make sure that the Right Display port is configured in the TV where you have connected. Example- Select HDMI1 through the TV Remote if you have connected the HDMI cable to the HDMI 1 port in the TV/Monitor.

### **❏2 My TV, Monitor does not have any sound or audio output, even if volume is as high as 40 or more**

Check the audio OUTPUT settings. Right click on the Speaker icon (visible on the right hand bottom corner) and select "HDMI" – a green tick mark should appear. Close all windows / popup where videos / audio might be playing. Reboot the system for new settings to take effect.

### **❏3 In a video call the other person cannot hear me at all**

Check the audio INPUT settings. Right click on the Speaker icon (visible on the right hand bottom corner) and select "USB PnP Sound device"– a green tick mark should appear. Then select "Input Device Settings". In the pop-up that appears, under the Playback Tab, ensure that Sound & Mic are both checked as "Enable" and volume bar is raised to the highest level. Under the Capture Tab, ensure that Mic is checked as "Enable" and volume bar is raised to the highest level

### **❏4 I need help to reload the Raspberry PI OS.**

Before reloading, please backup all information onto a USB or external hard drive. Find help with installing Raspberry Pi OS on your Raspberry Pi in our online Getting started guide.

**❗5 I cannot connect to Internet/ Taskbar shows 2 red X**

Check the modem or Wi-Fi connection or LAN devices and turn them on, the above symbol indicates that no network connection is present. Turn off Wi-Fi, wait 30 second and then refresh.

**❗6 Can I use a third party power charger as the power supply?**

To ensure stability, use a power charger/supply that is rated with a minimum of 5V @ 2.5 A. Any power supply with current capacity under 2.5 A may damage the file system and/or hardware.

**❗7 Do I have to have an SSD drive?**

No, an SSD drive is not necessary.

## **6 DO's and DON'T'S.**

**❗1 Do not keep removing and re inserting the SD Card as it is loaded with the Operating System critical for smooth functioning of the System and multiple insertions is likely to damage the Product.**

❗2 Do a proper shutdown process when you have finished using the computer.by going to Main Start Icon and using the Logout process. It will prompt options Shutdown, Reboot and Logout. Disconnect the Plug from the Mains post shutdown.

❗Do unplug the cables from the TV/monitor and power source & NOT from the Raspberry ports.

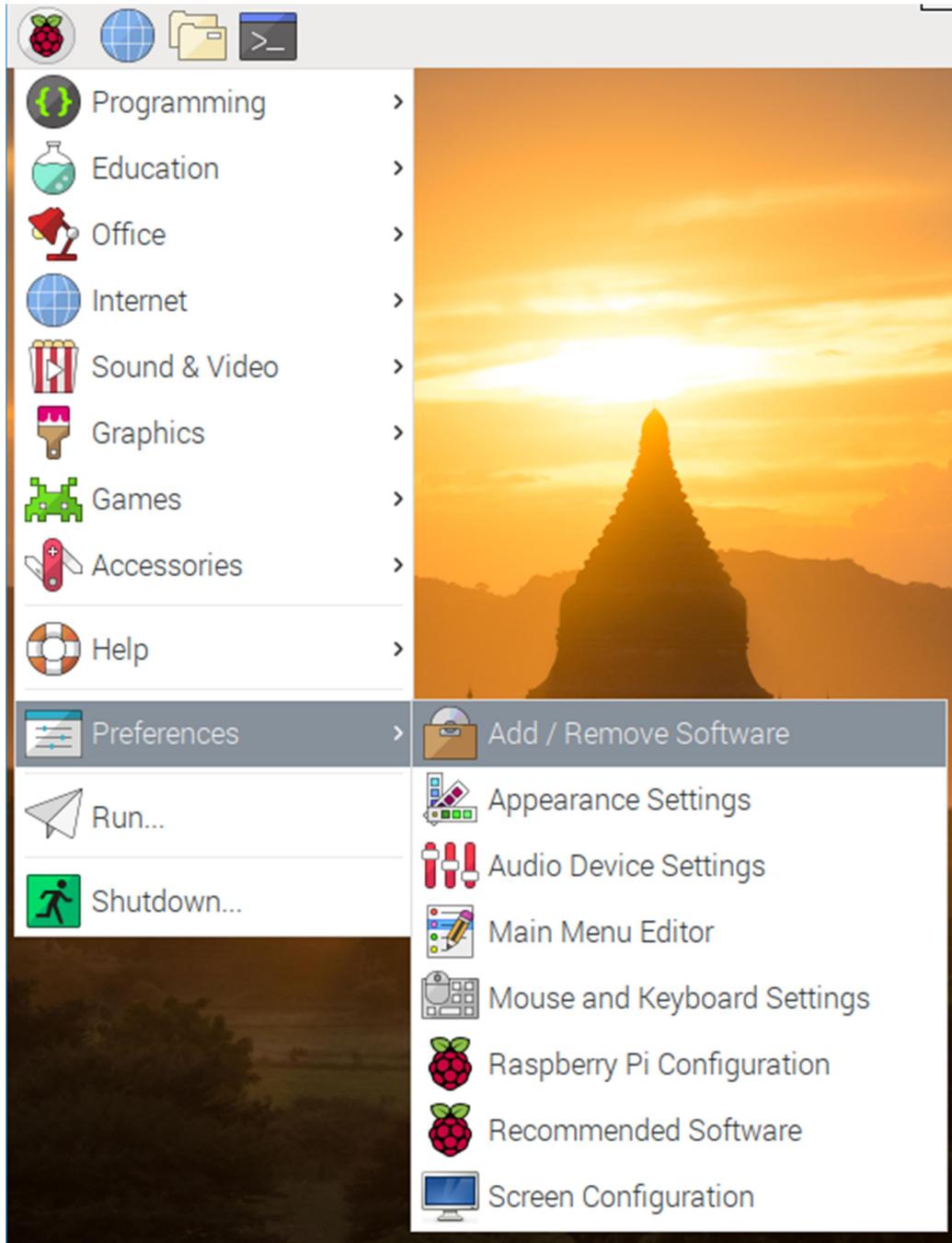
❗**Note:** Always ensure your software is up to date by connecting your eZeePC to the internet, opening the Terminal and running the following commands:

`$ sudo apt-get update`

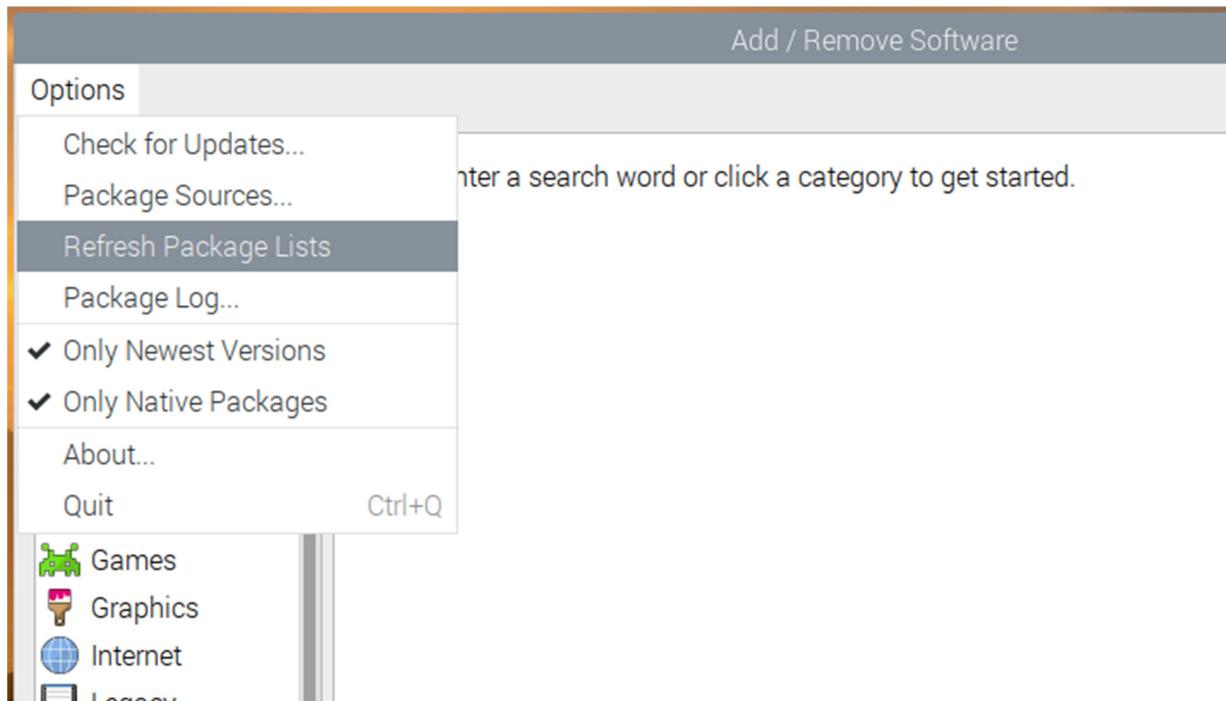
`$ sudo apt-get upgrade`

Prior to connecting new peripherals, it is advisable to run these commands once. This will ensure smooth recognition of hardware and availability or related drivers.

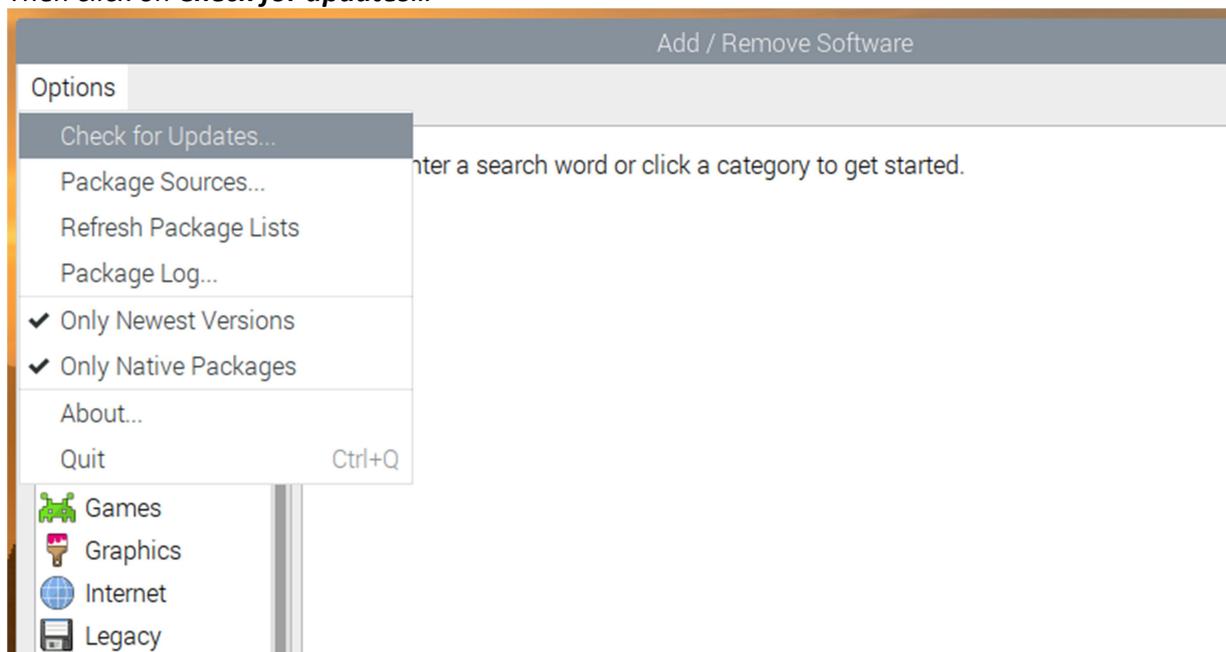
You can also run these commands from the Raspberry Start Menu itself from **Preferences**. Figure below



From **Add/Remove Software** click on **Options – Refresh Package List**, and continue. Figure below



Then click on **Check for updates...**



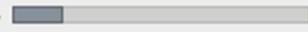
When the **Package Updater** window opens, a list of packages will be displayed. Click on **Install Updates**. If prompted for credential / authentication, type "Pi1431" as password.

Authentication

 Authentication is required to install software

Identity:

Password:

  Downloading packages