# *User Manual v 0.1*

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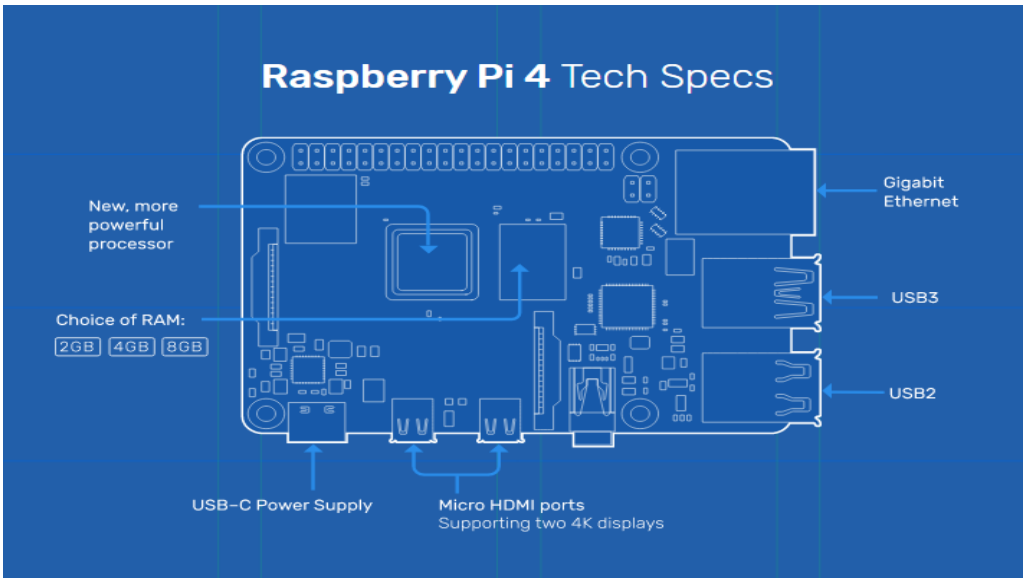
# 1. Introduction

### *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 C Port Power Cable – 2.5 Amps or above.*
- *HDMI Cable which can connect to your TV with HDMI or Monitor with HDMI interface.*
- *Wireless Key Board and Mouse with Battery & Nano Receiver*
- *Webcam with its interface USB cable.*
- *Microphone.*
- *User Manual.*
- *Warranty Card*

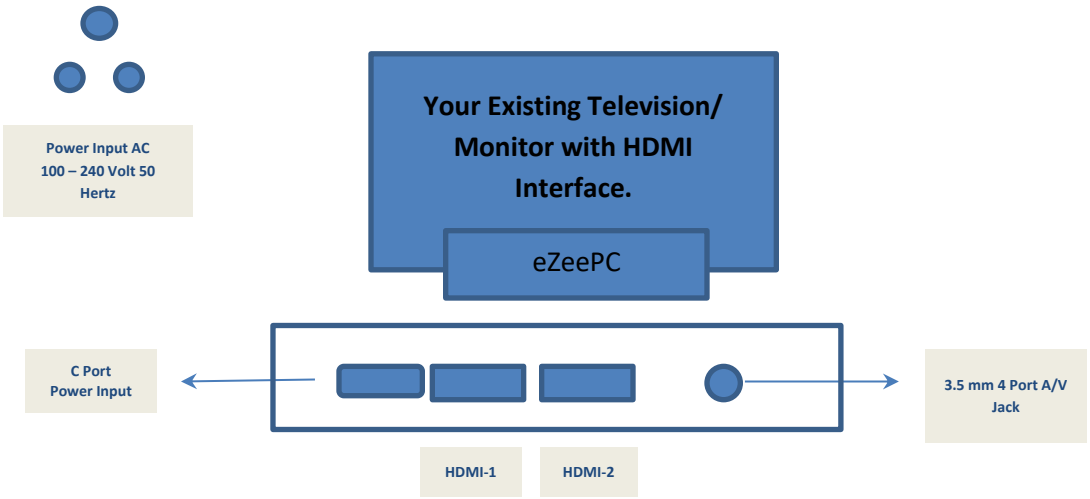
# 2 GETTING STARTED

***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).*

***Interface to TV, Monitor.***

*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.*



### *2.1 Power Supply Selection Guide update for monitors*

***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 which may lead to 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 the worktable and make sure that it is adequately ventilated to enable proper air circulation.*
2. *Connect your eZeePC Desktop to an HDMI TV by connecting the HDMI cable between HDMI-1 (as indicated in Fig 2.1) to HDMI input of your TV or HDMI Display Monitor.*
3. *Connect the power cord with the Charger and C Port Power cable provided, to power socket as shown in Fig 2.1.*
4. *Check that Nano Receivers are firmly in place in black slot USB 2.0 slot. There are 2 Nano Receivers one for the Keyboard and Mouse and the second for the Microphone.*
5. *Blue Slots USB 3.0 is for external HDD & other peripherals like Printer which you may connect when needed.*
6. *Turn on the Power Switch of the Key Board and Mouse, found at the bottom. A Red light should glow, else check if batteries need to be fitted or replaced.*
7. *You are now set and Turn on the Power to the eZeePC.*
8. *Use the TV Remote and change the Display Source to HDMI -1 2 or 3 to whichever the HDMI cable has been connected to in the TV side.*
9. *System will boot within 60 seconds and ready for use. You should see a desktop with 4 symbols on the Task Bar – Raspberry, Internet, and File Manager & Terminal on the left hand side. Bluetooth, Wi-Fi, Audio Speaker and Clock are on the right hand side. The Desktop has the Quick Start Guide preloaded.(see picture below)*
10. *You need to enable the WIFI by clicking the WIFI Symbol on the Bottom side of the Screen .You will be prompted to key in your WIFI Password to connect to the WIFI.*
11. *You could also connect to the LAN terminal by connecting a LAN cable to your Switch and configure accordingly.*

### *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.*

# 3 QUICK NAVIGATION and TASK BAR

*The Taskbar (Top Left OR Bottom Left) has 4 symbols – namely a Raspberry, Internet, File Manager and Terminal.*

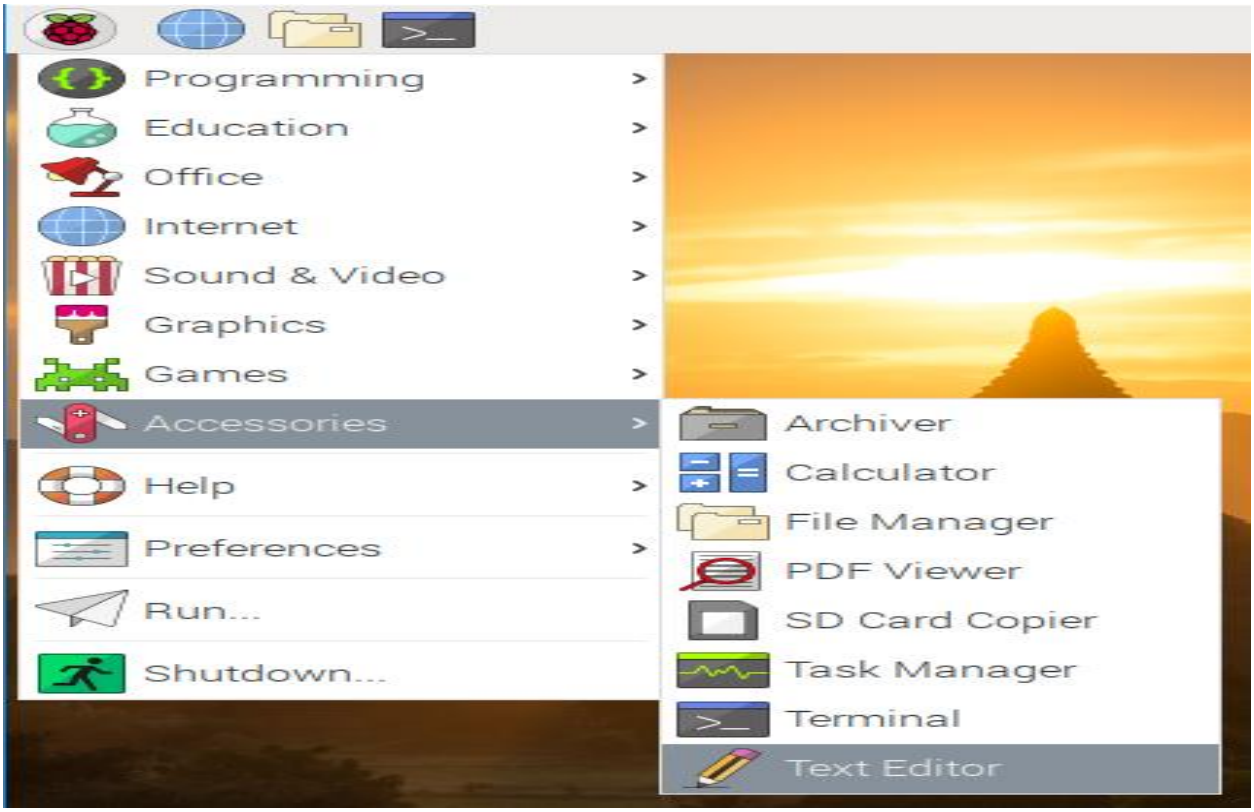
***1. Raspberry** is the main menu and has multiple applications, including Accessories, Games, Programming, LibreOffice (for word processing, calculations, and presentations), Preferences, Games, Logout. See figure below.*


*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 – wordprocessor, 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, Calculator etc. See Figure below*




***2. Internet-*** *opens DuckDuckGo as default browser. You can surf the Internet and access any information*
***3. 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*
***4. Terminal -You are advised to use the Terminal only if you are an experienced Linux user.***

### *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.*

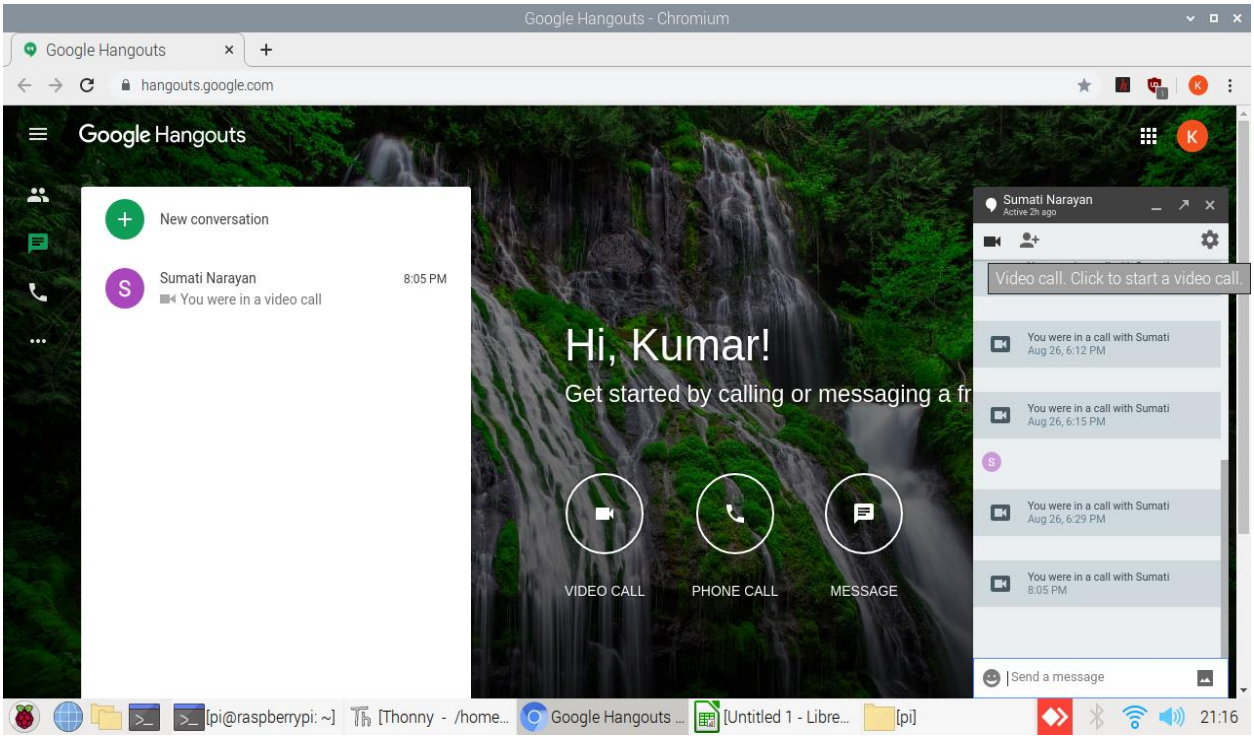
### *3.2 Web Cam Interface*

*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*
*USB Camera is all set and ready to GO.*


### *3.3 Connecting to hangouts.google.com*

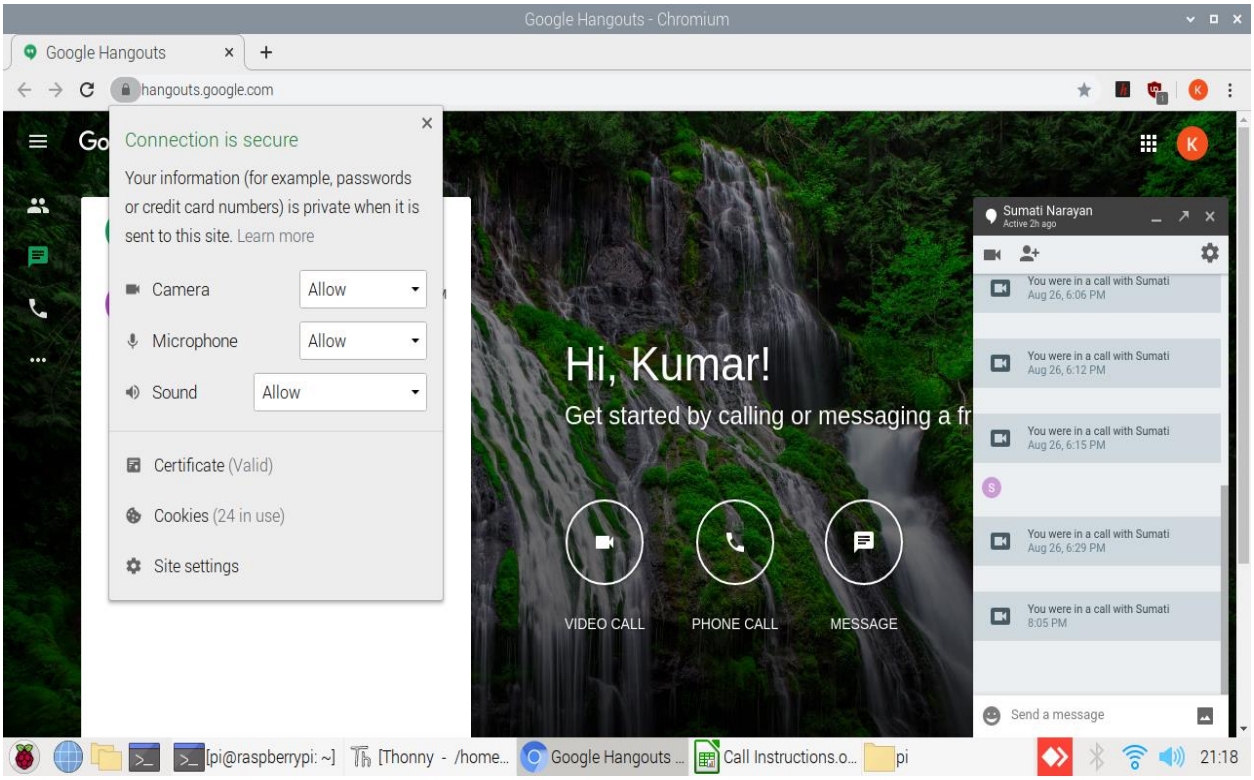
*1.Sign in to google. Hangouts with your Gmail ID and follow the instructions given in the figures below.*

*2. Choose the person you want to contact and a box will open on the left.*

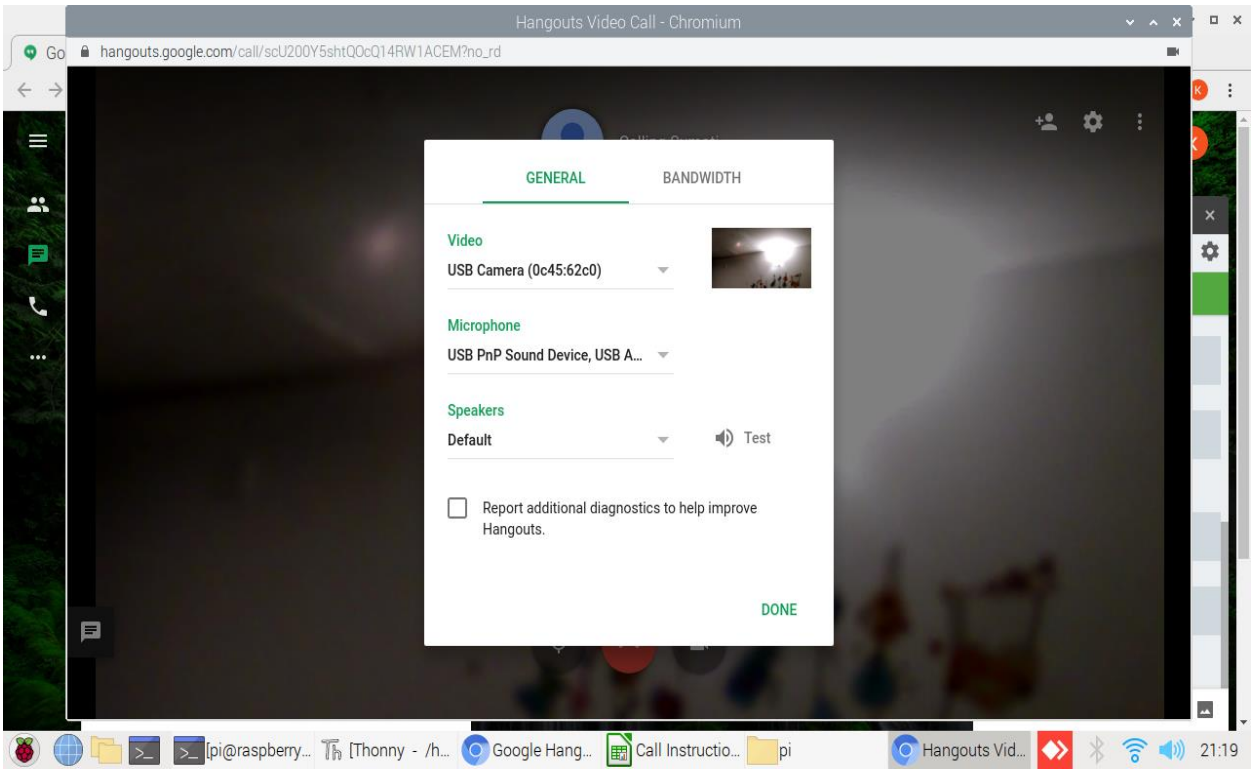


*Now ensure that the microphone and webcam are setup and recognized correctly.*

*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

| ***Characteristic*** | ***Value*** |
|---|---|
| *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 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.*

***3 Do I have to have an SSD drive?***
*No, an SSD drive is not necessary.*

***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 show 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 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.***

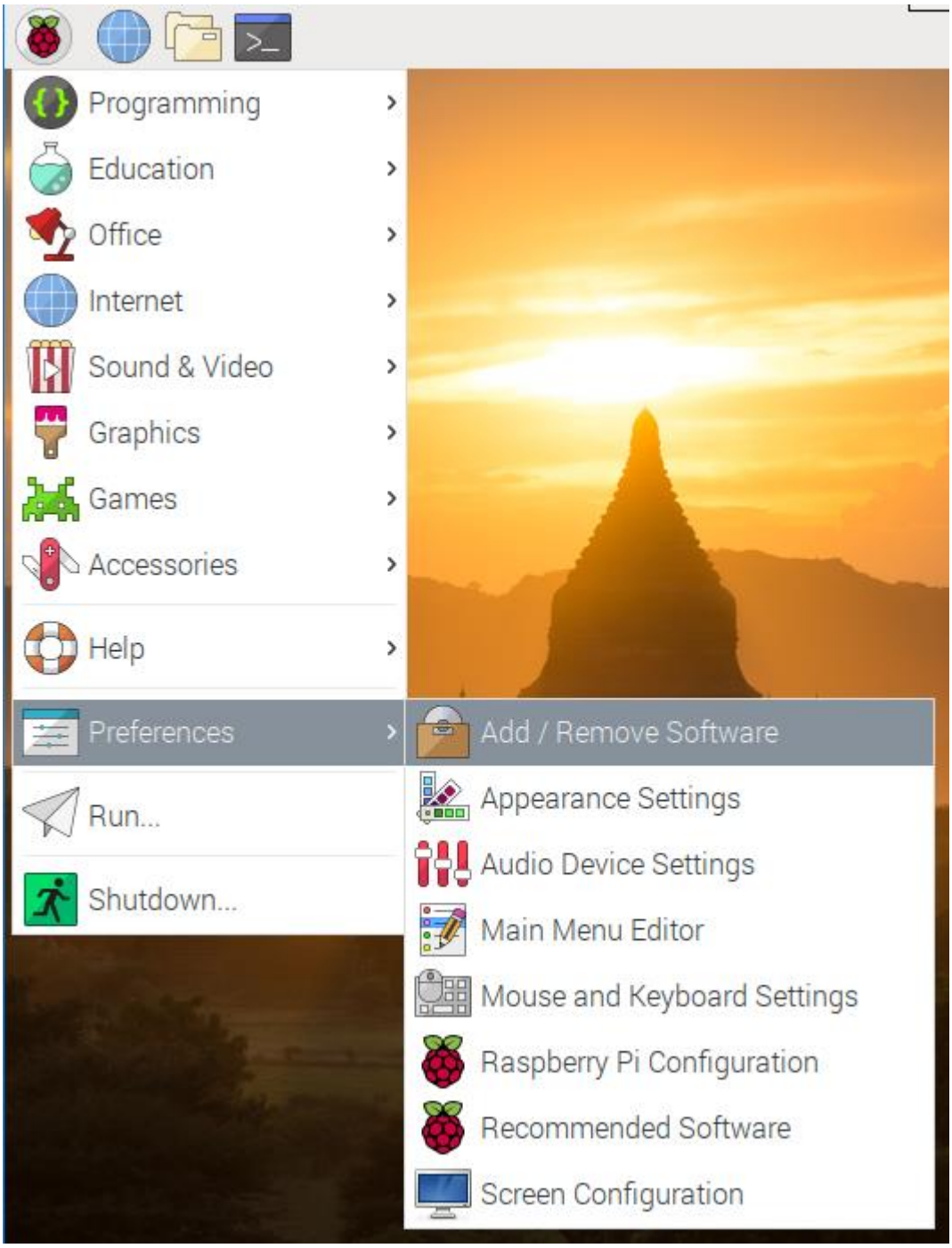
*2 Do a proper shutdown process when you have finished using the computer.by going to Main Start Icon and using the Logout process. It will prompt options Shutdown, Reboot and Logout. Disconnect the Plug from the Mains post shutdown.*

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

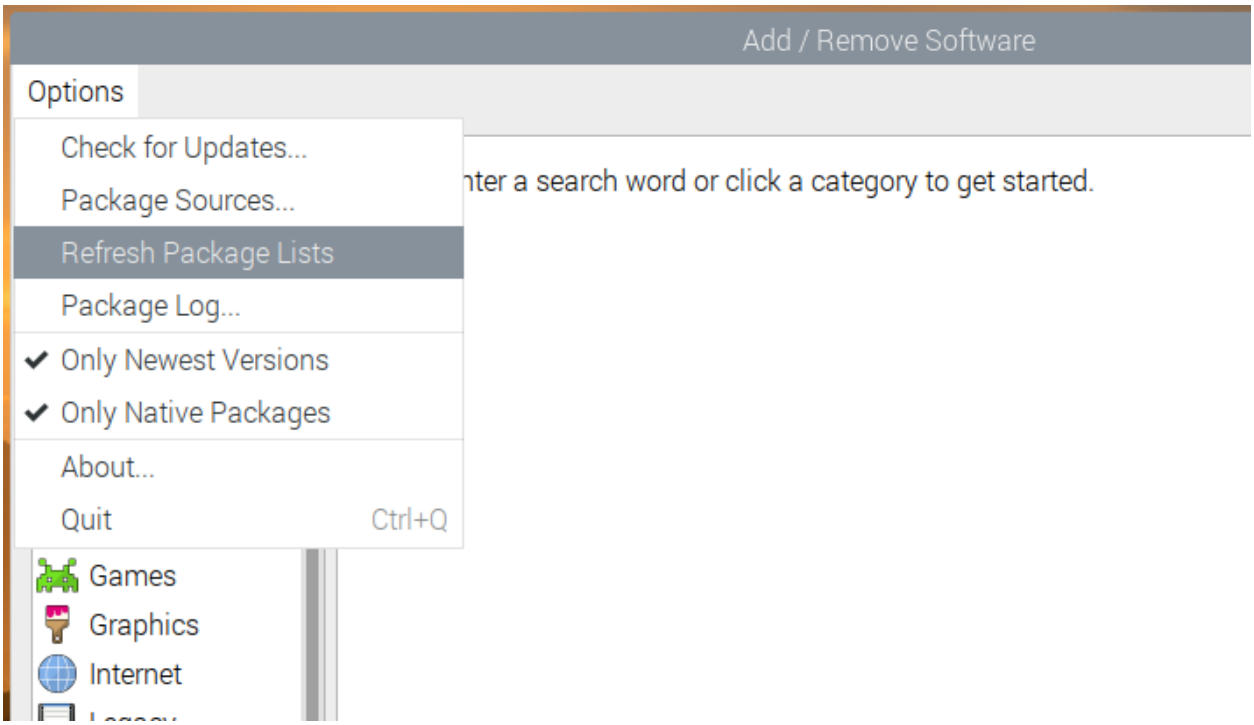
***Note:** Always ensure your software is up to date by connecting your eZeePC to the internet, opening the Terminal and running the following commands:*
*$ sudo apt-get update*
*$ sudo apt-get upgrade*

*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.*

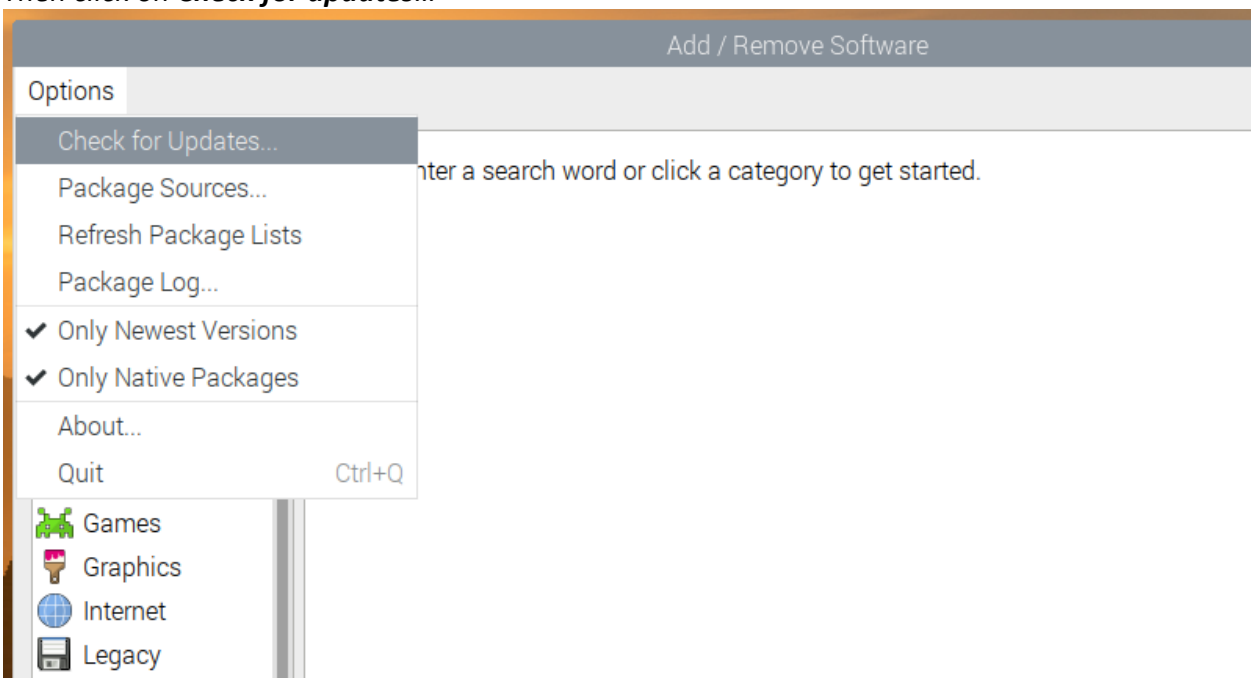
*You can also run these commands from the Raspberry Start Menu itself from **Preferences.** figure below*



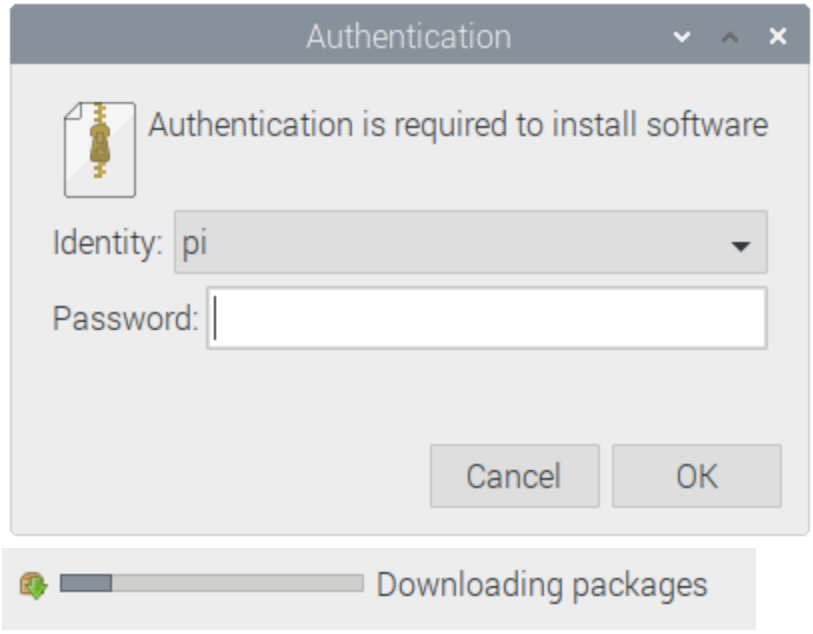

*From **Add/Remove Software** click on **Options – Refresh Package List,** and continue**.** Figure below*




*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: pi
Password:
Cancel
OK


Downloading packages