Hardware

One of main objectives of the project is to use low cost computer to provide access to high performance software and hardware. Keeping in mind the top priority being low cost computer, one of the main factors to consider while selecting one include what options are available in terms of low single board computer in the market. Other important factors to consider while deciding on the low-cost computer include which operating system (OS) to run on that single board computer. In this case, a compatible Single board computer is required. Further, other factors about what devices are required to be connected with the selected single board computer, and what ports required. Largely, microSD slots, USB ports, and GPIO headers are commonplace. Based on the block diagram in term of connectivity HDMI, Wi-Fi and USB connectivity are the major requirements. In terms of OS, Linux based OS is considered as the best option because it is free and there are a lot of resources, documentation and third-party integration tools that support it. Also, the electron application can be developed for Linux based OS.

The top 2 options which satisfy in terms of being low-cost single board computer and can run Linux based OS include Raspbian Pi Zero W and Orange Prime Zero. The table X below presents with the comparison between the Raspberry Pi Zero W (Wireless) and the Orange Pi Zero 512MB. Both have comparable CPU clock speed and same built-in ram.

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| Parameters | Raspberry Pi Zero W (Wireless) | Orange Pi Zero 512MB |
| SoC | Broadcom BCM2835 | AllWinner H2+ |
| CPU | ARM11 (32-bit)  1GHz single core | ARM Cortex-A7 (32-bit)  1.2GHz quad core |
| GPU | VideoCore IV | Mali-400 MP2 |
| Built-in RAM | 512 MB | 512 MB |
| Removable storage | Yes | Yes |
| USB host | 1 (v2.0) | 3 (v2.0) |
| HDMI | Yes | No |
| Camera interfaces | Yes | No |
| HDMI audio | Yes | No |
| I2S | Yes | No |
| Wi-Fi | 802.11 b/g/n | 802.11 b/g/n |
| Bluetooth | Bluetooth 4.1 BLE | N0 |
| Price | USD $10 | USD $9 |

Linux presents itself as the best option in terms of

Even most SBCs run Linux OSes flawlessly, you may wish to run Android or Chrome OS.