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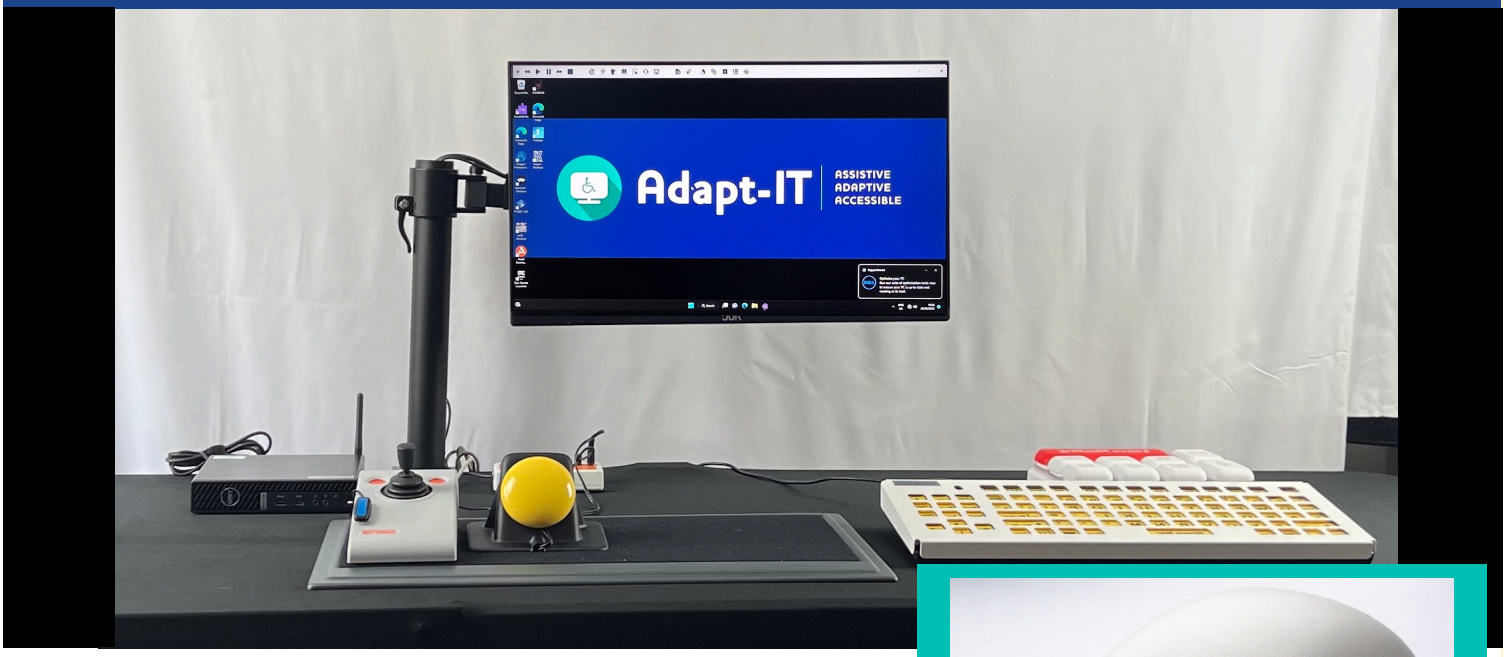
Assistive Technology for PC Gaming



PC Gaming

Over the past 60 years, PC gaming has evolved massively in every way possible. From the appearance of computers to the components in the computers to the peripherals that accompany them, everything has advanced massively. In 2019, 56% of game developers were releasing their games on PC which certainly helped the age old 'PC Master Race' argument! With ever-improving components, PC is generally the most popular device for gaming on as you are not capped to 60 Frames Per Second (FPS) like you are on console. This allows for smoother gameplay whilst having better graphics, what's not to love? But what can we do to make it more accessible? There are several options out there for adaptive gaming such as joysticks, large key keyboards, eye trackers and switches. This, partnered with in-game accessibility options, opens a whole new world for many people who before might not have been able to play games or had difficulties with the controls.

Mice today have as little as 2 buttons on the side as well as the standard ones, with some having up to 12! Most mice also have RGB lighting of some sort to match the PC's, keyboards and mouse mats too. Big upgrade!

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PC Gaming - Quester

Quester is an assistive technology hardware series for PC Gaming by Pretorian Technologies. The series includes the Quester Joystick and the Switchbox, which when partnered together, allow added accessibility to PC gaming.

The joystick has 3 different modes – WASD Mode, Arrow Key Mode and Mouse Mode. These allow you to switch between using the joystick as a mouse for everyday use on your computer or using the joystick for gaming at the click of a button. It also has 2 sockets, one on either side, which allows you to plug switches in, rather than having to use the left and right buttons on the joystick. These can be configurable as left/right, space/enter or escape/mode.

The switchbox also has different levels of functionality as outlined below. This allows you to have different functions as different buttons, for instance a green switch as 'W'. As well as the 6 sockets on top, there is also a 7th socket on the side which allows you to cycle between the 4 modes using an assistive switch.

Not only are these devices perfect for gaming, but they are also designed for general computer use. As well as 'WASD' and 'Arrow Key' mode, the joystick has a 'Mouse' mode and the switchbox has Level 3 and Level 4 as shown below.

Level 1	**Level 2**
W	↑
A	←
S	↓
D	→
Left Click	Escape
Right Click	Enter
Level 3	**Level 4 (Defaults)**
1	Space
2	Tab
3	Shift
4	Ctrl
5	Latching-w
6	Caps

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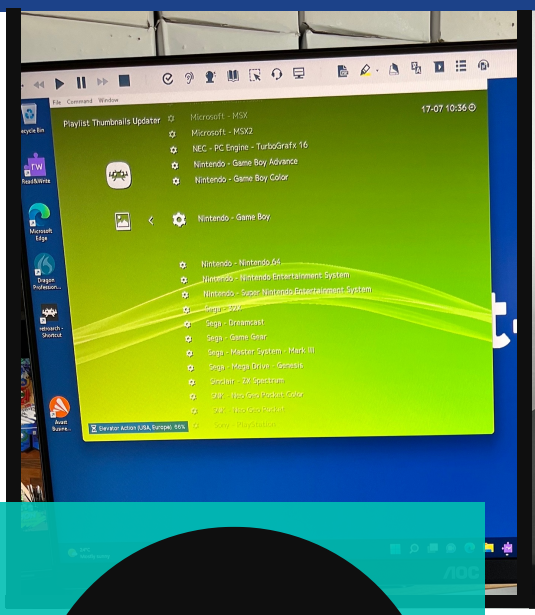
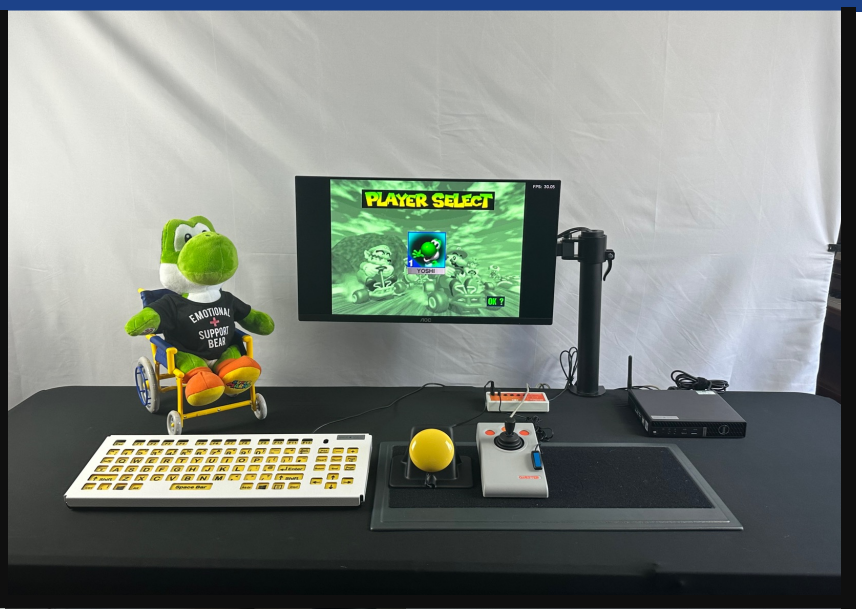
PC Gaming – Video Games





A Blind Legend

A Blind Legend is the first-ever action-adventure game without video. In this game, you follow the adventures of Edward Blake, a blind knight, as he is guided by his daughter through the High Castle Kingdom. You have to avoid traps and confront enemies, all while relying on your hearing. The game has no video at all and is fully accessible to blind and visually impaired people with its binaural 3D sound. It can also raise awareness about visual impairments as eyesight plays no part in the game.

Emulators

We are living in a time where even the older generations have had some form of gaming available to them throughout their entire lives. Accessibility has come a long way but retro games such as Mario Kart 64 and consoles like the Nintendo 64 didn't have much in terms of accessibility. This meant that a large percentage of people didn't get to experience these games without pain or even at all.

With the technology we have today however, we can go back and play these games through emulators but this time with assistive technology! Having the different options we have today allows people to go back and experience their beloved childhood games again or for the first time.

In-Game Accessibility Features

In-game accessibility features have come a long way as well physical technology. In the 1950s, an arcade game called Bertie the Brain, a simple tic-tac-toe game, became the first game to be intentionally inclusive. The creator added the option to change the difficulty of the game which allowed more people to play and have fun. Fast forward to 2020, when The Last of Us Part 2 was released. The game featured more than 60 accessibility options and took home multiple awards for this, including 'Innovation in Accessibility' at The Game Awards. God of War: Ragnarök also has lots of good accessibility options that have seen members of the disabled community be able to earn the platinum trophy. This opens the doors for future developers to include more and better accessibility options that allow an even bigger audience into the world of gaming!