

Mouse emulation software

Software application to be installed on a computing device designed to be operated by means of a keyboard or other kind of hardware interface; all functions of the hardware mouse are performed by a virtual mouse whose displacement and keys are controlled by capturing different user's voluntary actions such as switches activation, usually managed through a software control panel appearing whenever needed.

Different versions may be available for installation on different devices, operating systems, and operating system versions. Each product item on the market may have a different range of capabilities and functions, as well as different hardware and software requirements to ensure proper installation and operation.

- **Product Classification**
 - APL (WHO Assistive Product Priority List): 20 (Keyboard and mouse emulation software)
 - ISO 9999:2022: 241324 (Software for operating electrical devices)
- **Possible configuration variants**
 - Input technique: face movement captured through the device cam.
 - Input technique: eye blinks.
 - Input technique: eye gaze captured through infrared sensors.
 - Input technique: voice recognition.
 - Input method: row-column scanning.
 - Input method: block scanning.
 - Input method: arrows movement.
 - Auditory cues (to help understand whether the selected key has performed the intended action).
 - Embedded keyboard emulation capabilities.
- **Possible accessories or optional components**

None specified.
- **Product goals**

Activities or functions the product is mainly intended to support, according to WHO ICF Classification:

 - Using communication devices and techniques [\[d360\]](#).
- **Indicated impairments**

Difficulties the product is mainly intended to address, according to the WHO ICF Classification:

 - Hand and arm use [\[d445\]](#).
- **Contraindicated impairments**

Difficulties for which the product may be inappropriate:

 - Lack of communication intention.
 - Insufficient consciousness level to enable association of keystrokes with resulting actions.
- **Indicated environments**

Specific environments in which the product should be used:

 - Compatible computer operating systems (like any software application, it only works with the devices and related operating system versions indicated by the manufacturer for each product item).
- **Contraindicated environments**

Environments in which the product may be inappropriate:

 - Places where electricity is not available to maintain battery charge.
- **Other indicated factors**

Other factors or situations the product is intended to address:

- Controlling mouse functions (in relation to the computer operating system and all installed applications).

- **Other contraindicated factors**

Other factors or situations in which the product may be inappropriate:

None specified.

- **Points to be considered in product selection**

- Check the compatibility of the product with the computing device on which it will be installed, and make sure it really performs all functions that the mouse that normally comes with the device would do.
- If the product requires internet connection for installation and regular updates, make sure that such connection exists and has sufficient bandwidth in the place where the user lives.
- List the tasks the user needs to do with the product, make sure to install all the applications needed for those tasks, and check that the user can actually sustain them.
- Find out – through careful assessment – the user's body function that are best suited to comfortably operate the product.
- Identify the proper physical interface (mouse, touch screen, joystick, control switches, alternate user interfaces such as eye-gaze, etc. and input method (direct selection, arrows, row-column scanning, block scanning etc.).
- This software will only provide ease of access but will not compensate for lack of communication intention or low consciousness.

- **Points to be considered in product fitting**

- Install the product on the computing device, along with all related components and other possible assistive products needed such as input interfaces.
- Position the device (height, distance, tilting, orientation in relation to environmental light conditions etc. in such a way that the user can operate it).
- If applicable, set up the software to the person's profile (e.g. layout adjusted to visual capabilities and needs).
- Training may be needed for the user, to ensure that he or she is able to master all product functionalities in relation to the intended tasks; if applicable, this training should also be extended to the user's assistants.

- **Points to be considered in product use**

- The product as such does not require specific precautions; however, all precautions should be taken to keep safe the device on which the product is installed.

- **Points to be considered in product maintenance / follow-up**

- Download and install product updates every time is required.
- Make sure to have a reliable contact person or company in case of any technical problem.

- **Examples of products available on the market**

- Live product search in the EASTIN website <https://www.eastin.eu/en/searches/products/list?iso=241324>

Source

This Fact Sheet was compiled in 2021 by an international team of experts, to provide the initial knowledge base for a project ("An online system to assist the selection of assistive product") supported by the World Health Organization in 2020-2021 within the GATE Initiative (Global collaboration on Assistive Product). Fact Sheets were compiled for each of the 50 types of products included in the WHO APL (Assistive Product Priority List).

The team was composed of Renzo Andrich (Italy, group leader), Natasha Layton (Australia), Stefan von Prondzinski (Italy), Jerry Weisman (USA), Silvana Contepomi (Argentina) and Hasan Minto (Pakistan).

The project led to a prototype online tool called ASPREX (ASsistive PROduct EXplorer). At the end of the project, it was transferred to a WHO collaborating center (the Global Disability Hub in the UK), in view of possible future developments.