

IntelliGaze™ Desktop 2.0

Quickstart Guide

Version 1.3



alea technologies

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1.0	August, 2011	2.0
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1 Introduction

IntelliGaze Desktop 2.0 automation allows the user to operate the Windows desktop and standard Windows applications very conveniently by gaze control. Specialized eye controls help to manage frequent tasks, like drag and drop, cut and paste, scroll, and type text in many applications. Specialized interface functions allow to operate most Windows controls like buttons, menus and edit boxes directly without cumbersome, often unstable mouse cursor positioning.

2 Prerequisites

2.1 Hardware

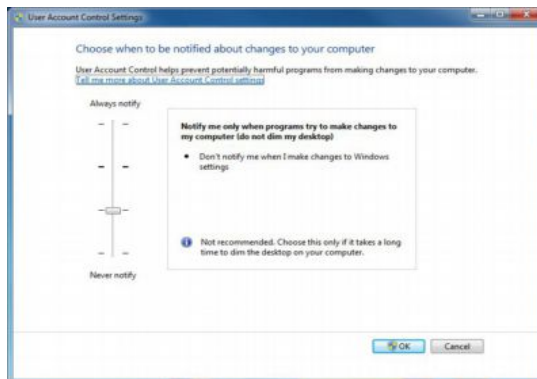
Minimum	Intel Atom N270 CPU, 1GB Ram, 12" Monitor (single), CAM30
Recommended	Dual Core CPU 2GHz, 2GB Ram, 17" Monitor (single), CAM30NT

2.2 Software

Minimum	Windows Vista – Aero activated
Recommended	Windows 7 – Aero activated, Windows 8

IntelliGaze version 2.0 or greater must be installed to use Desktop 2.0. Windows User Account Control can block the user interface automation. We recommended setting the UAC to **“Notify me only when programs try to make changes to my computer (do not dim my desktop)”**

Control Panel > User Accounts > Change User Account Settings:



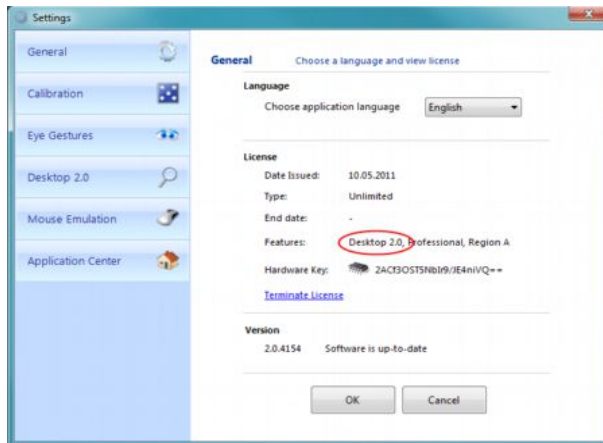


3 Activation

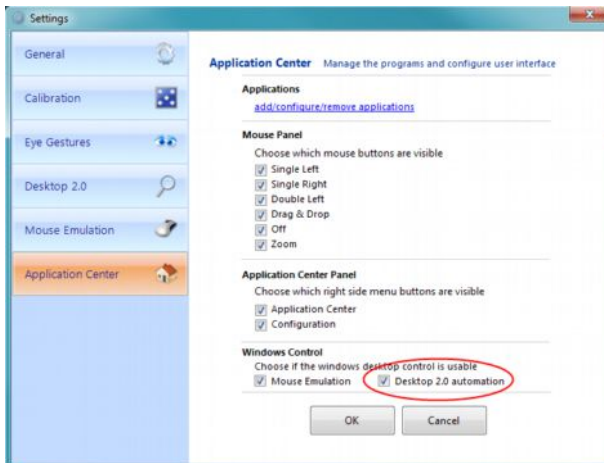


*Desktop 2.0 requires an extended IntelliGaze license before it can be activated.
Please contact your local distributor regarding upgrade options.*

How to check whether the DT2.0 has been licensed (IG v2.x or higher):



The use of Desktop 2.0 can be enabled in the Application Center configuration (only on Windows Vista, 7 or 8).





You can still use the more direct mouse emulation provided in earlier version of IntelliGaze, by activating 'Mouse Emulation.'



All application specific configurations entered into the Application Center are based on standard Mouse Emulation or direct data access (no changes to earlier versions).



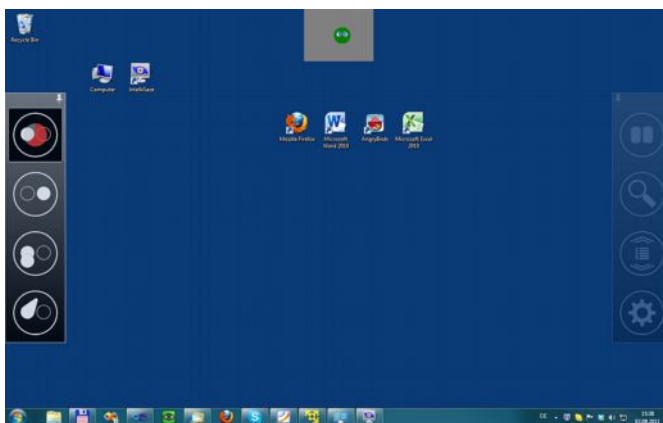
There are no user accessible, client application specific configurations for DT2.

4 Using Desktop 2.0

The DT2 mode can be entered at any time by selecting it from the Application Center's upper button bar.

Special functions and mouse functions can be activated from side menus. Side menus are activated with an off-screen fixation and can be made 'sticky' with another off-screen fixation if the menu is visible. Non-sticky side menus will disappear after a few seconds of idle time. The status of the menu is visualized by a small needle icon at the top of the menu bars.

The DT2 mode also includes a modified, automatic tracking status display that will appear in the upper center of the screen when smiley is yellow or red or the tracking is unstable. When the smiley is green the tracking status display will disappear after a few seconds, allowing the user to concentrate at the current task.



Tracking Status, Active Left Side Menu, Passive Right Side Menu



The Desktop 2.0 mode can be exited on the configuration page by clicking the home button. Please find details below.

4.1 Mouse Menu – Left Side

The off-screen mouse menu can be accessed on the left side of the screen.



Single Left Click

Single Right Click, lockable*

Double Left Click, lockable*

Drag and Drop



*/ Locked Mouse actions will be used with every click until they are unlocked again.
By default, Single Left-Click will be enabled after every other click action.

Drag and Drop Options

Three different drag and drop options are available to allow the user either fast and coarse or very precise drag&drop or selection operations.



1.

2.

3.



1. Direct, single click select and drop operation.
2. A magnifier will be opened.
3. The Position Helper will be used for very precise select and drop operation.



The Position Helper tool does not place the mouse cursor directly at the gaze location, instead the position of the Windows cursor is moved according to the gaze position relative to a 'dead zone' (red circle).

A fixation inside the dead zone initiates the mouse click.

After the primary selection, the dead-zone shape changes to an octagon and the secondary selection can be completed as before.



All menu functions are disabled while a drag&drop operation is in progress.

4.2 Special Functions Menu - *Right Side*



Pause

halts the gaze interaction, can be restarted with a second activation on the pause button.

Enforce Magnifier

will pop up the magnifier at the next activation on the screen.

Scroll

will open a scroll selection pop-up to choose between text scrolling and selection scrolling.

Configuration

allows to configure Desktop 2.0 settings.



When paused, the menu will disappear after 30s to allow undisturbed media-consumption or similar. Another off-screen fixation will bring the menu back.



Scroll Selection

Two different scroll modes are available to choose between text scrolling operation and selection scrolling operation.



1

2

1. Text reading scrolling

Used for reading long texts with automatic scrolling and minimal obstruction.

→ Exit with fixation on upper right exit icon.

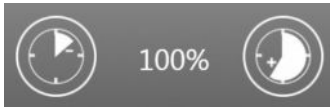
2. Selection scrolling

Used to select an item from a scrolling list of options.

Exit with a fixation inside the scroll area.

4.2.1 Configuration Options

You can access the configuration options via the icon on the right side menu.



Adjusts the dwell.

This setting is relative to the global IntelliGaze (Options) setting in Milliseconds.



Changes the magnification factor.



Selects one of the three on-screen keyboards:

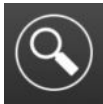
DT2.0 integrated keyboard, the Windows 7 on screen keyboard or a 3rd party keyboard (optional).



Changes the system volume level.



Toggles the 'click' audio feedback.



Permanently suppresses the automated lens.



*In some applications, i.e. games, it is recommendable to suppress the lens.
With excellent calibration or adjusted screen settings you may also turn off the lens in standard applications to speed up usage of the desktop control.*



Exit desktop 2.0 and return to the Application Center.



Close the dialogue and return to the desktop.



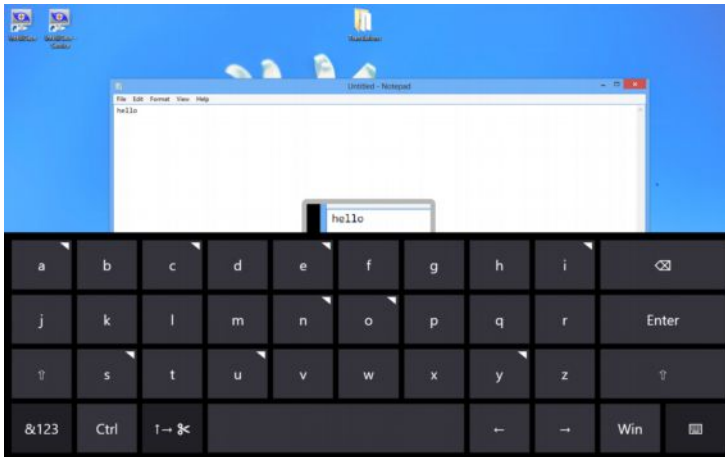
Switch to the start screen of Windows 8 (Modern UI)



4.3 Integrated Keyboard

A click inside an edit box or a text field will automatically pop up a keyboard. Depending on the pre-selection of the setup menu, one out of three keyboards will be activated.

Use either the integrated DT2.0 keyboard for easy typing, the Windows OSK which supports several languages and provides word prediction or an optional third party keyboard which can be customized.



Integrated keyboard (ABC-layout) with local text feedback.

Shown above is the integrated DT2.0 keyboard. Buttons that are marked with a tiny triangle in the corner offer international variations of the letter when performing an immediate second fixation on the same button.



The preview on top of the keyboard shows the content of the cursor even if the text field is hidden by the on screen keyboard. Its purpose is to provide quick feed-back.



The screenshot shows the 'Options' dialog box with the 'General' tab selected. The 'Desktop 2.0' section is expanded, displaying the following settings:

- License State:** active
- Mouse Trigger:** Dwell (selected from a dropdown menu)
- Dwell Time:** 1500 (in a text box)
- Key:** Space (in a text box)
- Mouse Cursor Shape:** Shrinking Disk (selected from a dropdown menu)
- Integrated Keyboard Layouts:**
 - ☒ ABC Layout
 - ☐ English
 - ☐ German
 - ☐ French
 - ☐ Italian
 - ☐ Spanish
 - ☐ Hebrew
 - ☐ Dutch
 - ☒ Danish
 - ☒ Norwegian
 - ☒ Swedish

At the bottom of the dialog are 'OK' and 'Cancel' buttons.

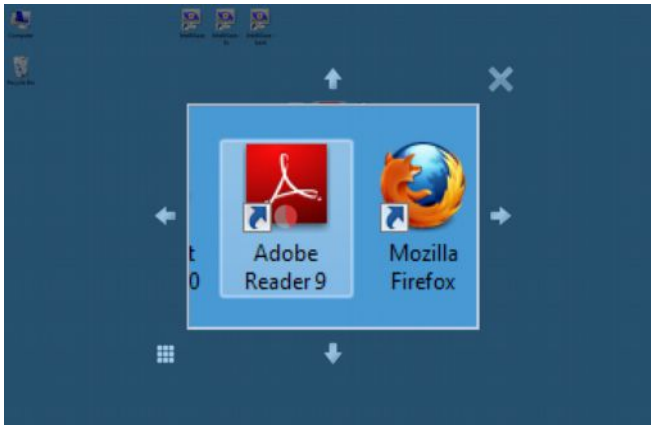
א	ב	ג	ד	ה	ו	ז	ח	ט	י	כ	ל	מ	נ	ס	ע	פ	צ	ק	ר	ש	ת	?	⌘
ש	ד	ג	כ	ע	י	ח	ל	ך	ף	!	Enter												
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4.4 Magnifier

A click in a region with small, crowded elements will automatically open the magnifier to allow for precise selections.



Interactive Magnifier

The magnifier will always be opened in the middle of the screen. It provides a live view of the desktop, rather than a simple, static snapshot and it can be shifted around by looking at or beyond the little arrows outside the central area.

The operation can be canceled by looking at the top-right cross.

The automation will always try to snap the cursor into elements. When there are overlapping elements and controls it can be advantageous to turn the automation off to prevent false selections. This can be done with the lower left button.



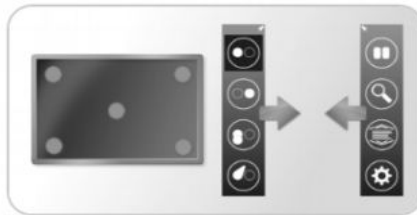
As constantly finding interactive GUI elements is a performance demanding task, slower PCs might fail to accomplish the calculations in real-time. The magnifier will then always pop up when the search for elements does not finish in time. A red frame on the magnifier indicates that the magnifier popped up because of lack of processing power on the PC.



4.5 Touch Menu

Displays that have touch panel support can be used to bring up a menu to start the calibration or show the side menus with a finger tip.

The touch menu will disappear automatically after a few seconds when not touched.



Touch Panel Menu

5 Client Applications

5.1 Recommended Applications

An increasing number of third party applications is providing UI automation features. IntelliGaze relies on these features to detect GUI elements, snap-in the cursor and offer eye controllable, easy access to those elements. While most applications provide some degree of automation, the following applications have been positively tested and are recommended:

- MS Office 2010 or higher
- Internet Explorer 8
- Firefox
- Adobe Reader 10
- Skype 5
- Windows Live Mail 2011



Whenever applications lack support for full UI automation, the cursor will not snap in and the keyboard will not pop up automatically. Nevertheless, DT2.0 allows the seamless operation of such applications with slightly reduced comfort.



6 Windows 8

IntelliGaze version 3.0 or higher is required to operate the Windows 8 Modern UI controls.

6.1 Activation

The Windows 8 extension of IntelliGaze allows you to control the standard desktop as before. Additionally you can switch to the so called Modern UI start menu and operate all touch optimized Windows 8 Apps with a gaze optimized input layer for touch controls.



Switch to the start screen of Windows 8 (Modern UI) from the Desktop 2 options menu



Switch back to classic Desktop 2 control with this* Desktop tile

*can look different on your PC



6.2 Side Menus

The left and right off-screen area allow the user to bring up the app gesture menu (left) and the special functions menu (right). The top and bottom third of the side is reserved for a quick swipe right or left. You can use the swipe in any application that supports it.

An off-screen fixation to the bottom shows the OSK as in the classic desktop mode.

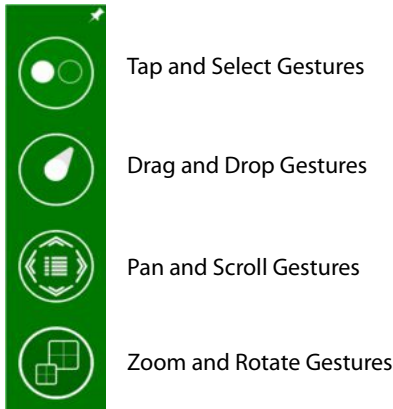


Active Right Side Menu, Hidden Left Side Menu



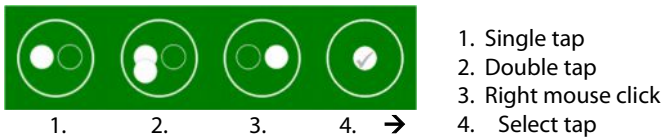
6.3 App Gestures – Left Side

The off-screen App Gestures menu can be accessed on the left side of the screen.



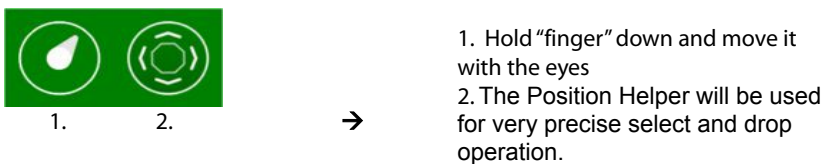
Tap and Select Gestures Options

Four different Tap and Select Options are available.



Drag and Drop Gestures Options

Two different drag and drop options are available to allow the user either fast and coarse or very precise drag&drop selection operations.



Pan and Scroll Gestures Options



Two different Pan and Scroll Gestures are available to allow the user either use a reading scroll mode or a mode where you can pan in any direction.



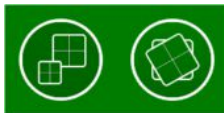
1. 2.



1. Pan in any direction
2. Reading scrolling

Zoom and Rotate Gestures Options

Zoom and Rotate are multi-touch gestures.



1. 2.



1. Switch to the zoom mode
2. Switch to the rotate mode

6.4 Special Functions Menu - *Right Side*



Pause

halts the gaze interaction, can be restarted with a second activation on the pause button.

Enforce Magnifier

will pop up the magnifier at the next activation on the screen.

System Gestures

will open a system gesture menu that allows the user to perform a windows system gesture just like close, charms or switch app

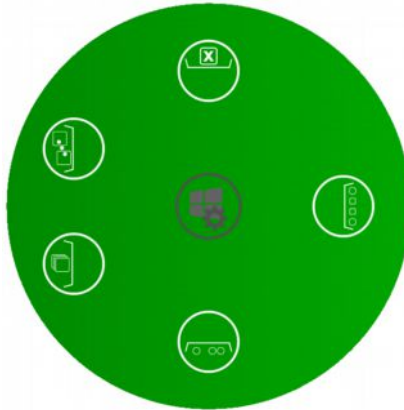
Configuration

allows to configure Desktop 2.0 settings



System Gestures

System Gestures are special Windows operations to switch between apps, close an app, show the charms menu or application options.



Close
Close the app



Charms Menu
will open the Windows charms menu



Application Options
opens the options menu of the application



Task Manager
shows the windows task manager to switch between apps



Activate next app
switches to the next app in the list



----- Notes -----

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