# Table of Contents

**Part 1**
- Introduction 2
  - 1.1 About VI 2
  - 1.2 About this Manual 2
  - 1.3 Abbreviations and Glossary 3
  - 1.4 Warnings 5
  - 1.5 Safety Information Regarding Magnets 6
  - 1.6 Liability 8
  - 1.7 Maintenance 9

**Part 2**
- System Overview 12
  - 2.1 myGaze® Components 12
  - 2.2 System Requirements 13
  - 2.3 Optimal User and System Conditions 15
  - 2.4 Status Indicators 16

**Part 3**
- Preparation 18
  - 3.1 Quick Start Guide 18
  - 3.2 Installing the Software 22
    - 3.2.1 Required and Supplementary Software 22
    - 3.2.2 Obtaining the Installation Package 23
    - 3.2.3 Running the Installation Package 23
  - 3.3 myGaze® Software Overview 25
    - 3.3.1 Eye Tracking Monitor 25
    - 3.3.2 Geometry Tab 28
Introduction
1. Introduction

1.1 About VI

Visual Interaction GmbH (VI)

Visual Interaction (VI) is dedicated to making gaze-based interaction hardware, multimodal user interfaces and analysis software commonplace and affordable. Based on leading technology from SMI, a leader in the eye tracking field for 20 years, VI brings to market myGaze, an easy to use and cost-efficient stationary gaze tracking system specifically designed for gaze-based interactive solutions.

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See also About this Manual

1.2 About this Manual

Thank you for purchasing the myGaze® Eye Tracking System. Please read
this manual carefully to ensure that all the hardware and software are set up correctly.

This manual describes:

- How to run the Installation Package, which installs the myGaze Eye Tracking Server and the myGaze Application.

- How to mount the myGaze Eye Tracking System on a PC Monitor or place it on a Laptop.

- How to configure and run the myGaze Application.

The software version covered in this document is: 4.3

You can use this manual in one of two ways:

- As a User Guide by reading through each chapter to learn how to use the myGaze® Eye Tracking System.

- As a Reference Manual to locate and learn about specific details of the product. You can locate a topic using the Table of Contents, the Index, or in the Online Version, the full-text Search feature.

1.3 Abbreviations and Glossary

VI Visual Interaction GmbH.

Indicates a hint or additional information.

Indicates a reference to a related topic.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED</td>
<td>Remote Eye Tracking Device.</td>
</tr>
<tr>
<td>API</td>
<td>Application Programming Interface.</td>
</tr>
<tr>
<td>SDK</td>
<td>Software Development Kit.</td>
</tr>
<tr>
<td>Display</td>
<td>Laptop screen.</td>
</tr>
<tr>
<td>Monitor</td>
<td>Desktop PC screen.</td>
</tr>
<tr>
<td>Calibration</td>
<td>The process of adjusting the myGaze® Eye Tracking System for each user in one or multiple eye-tracking sessions.</td>
</tr>
<tr>
<td>Calibration point</td>
<td>A point or circle displayed on a screen for a short duration. Used during calibration of the myGaze Eye Tracking Device.</td>
</tr>
<tr>
<td>Fixation</td>
<td>Period of time during which the eyes remain relatively still and the gaze is directed at a single location.</td>
</tr>
<tr>
<td>Gaze</td>
<td>The direction in which the person is looking.</td>
</tr>
<tr>
<td>Head Box</td>
<td>The volume in which the user can move during the tracking session, and where eye tracking is possible.</td>
</tr>
<tr>
<td>Operating Distance</td>
<td>The minimum and maximum working distance permitted between the eyes of the user and the tracking device.</td>
</tr>
<tr>
<td>Reference Point</td>
<td>A mark on the Mounting Bracket of the myGaze Eye Tracking Device used to align the eye tracker with the center point of the screen.</td>
</tr>
<tr>
<td>Sampling Frequency</td>
<td>The number of eye tracking data samples obtained per second.</td>
</tr>
</tbody>
</table>
**Smart Calibration**  An *intelligent* calibration mode in which data is collected until successful calibration points have been obtained.

**Tracking Mode**  Setting which determines how the eye tracker will track the eyes.

**Smart Tracking Mode**  *Intelligent* tracking mode in which calibration results are used to decide whether one or both eyes are used for tracking.

**Tracking Range**  Spatial range within which eyes are detected by the eye tracker.

**Validation**  Process in which a new set of points are used to verify the accuracy of the calibration results.

### 1.4 Warnings

Read the following before using this product:

- The myGaze Eye Tracking Device is a sophisticated measurement device. Please handle it with care so as to not damage any of its internal components.

- When not in use, the myGaze Eye Tracking Device should be unplugged from the USB port and safely stored in the case.

- When in use, do not unplug the device from the USB port.

- Do not scratch the shield (the front face) of the myGaze Eye Tracking Device.

- No part of the product may be modified or rebuilt.
• Any usage other than described in this manual is not permitted.

• The myGaze Eye Tracking Device may warm up to 55°C during prolonged operation.

Note: Read the section Optimal User and System Conditions before beginning an eye tracking session.

1.5 Safety Information Regarding Magnets

The myGaze Eye Tracking Device contains Neodymium magnets (Rare Earth magnets) which allow the myGaze Eye Tracking Device to be conveniently attached to the supplied Mounting Bracket, which in turn is mounted on a PC Monitor. However, this type of magnet is extremely strong and must, therefore, be handled with extreme care.

Handling Warnings

• Do not confuse Neodymium magnets with standard "fridge magnets". Neodymium magnets can cause injury if not used properly.

• Do not place your fingers between the two magnets while attaching the myGaze Eye Tracking Device to the Mounting Bracket. Two attracting
magnets have enormous strength and can severely pinch your fingers if placed between the magnets while mounting the myGaze Eye Tracking Device.

- Do not loosely attach the myGaze Eye Tracking Device to the Mounting Bracket. Although Neodymium magnets have high strength, they are also very brittle and prone to cracking and chipping. If attached loosely or too quickly, and if the myGaze Eye Tracking Device is dropped, the magnets may shatter and scatter shards of the magnet, possibly even towards the user's eyes.

- Neodymium magnets have strong magnetic fields and are likely to cause damage to magnetic media devices. Therefore, keep the myGaze Eye Tracking Device away from magnetic media such as hard drives, memory sticks, credit cards, magnetic I.D. cards, or other magnetic media. **KEEP THE DEVICE IN THE STORAGE CASE WHEN NOT IN USE.**

- Do not place metal items near the magnets on the myGaze Eye Tracking Device. Metal items such as keys, knives, or tools may cause the magnet to shatter.

- Do not leave the myGaze Eye Tracking Device near an open flame or a heat source. Not only will the device be destroyed, but the Neodymium magnets will ignite, burn and create toxic fumes.

**Health Warnings**

- Neodymium magnets should **NEVER** be used near a person who uses medical aids such as a pacemaker. The magnet can cause the medical aid to malfunction. Individuals with pacemakers or internal medical devices should use caution when handling the myGaze Eye Tracking Device and the Mounting Bracket. Magnetic fields may affect the operation of these devices. Consult your physician and the manufacturer of your medical device to determine its susceptibility to static magnetic fields prior to handling the myGaze Eye Tracking Device and the Mounting Bracket. Individuals with such medical devices should be clearly warned to stay away at a safe distance from all of our magnetic products.
Do not handle the myGaze Eye Tracking Device while eating. The metal compounds in the magnets may be toxic when ingested after handling food.

**Warnings Regarding Children and Magnets**

**NEODYMIUM MAGNETS (RARE-EARTH) MAGNETS SHOULD BE KEPT OUT OF REACH OF CHILDREN. RARE-EARTH MAGNETS ARE NOT TOYS.**

Children should not be allowed to handle or play with rare-earth magnets. Small magnets pose a choking hazard. Children and adults should not ingest magnets or place magnets in any body orifice such as the ear, nose or mouth. Ingestion of magnets is very hazardous. If magnets are ingested or aspirated to the lungs, immediate medical attention is required. Swallowed magnets can stick together across intestines causing serious infections and death. Seek immediate medical attention if magnets are swallowed or inhaled. Children under 3 should NEVER handle magnets.

**Transportation**

The International Air Transport Association (IATA) Dangerous Goods Regulations provide guidelines for the identification, classification, and testing of potentially hazardous materials offered for transports by air. IATA Packing Instruction 902 defines the acceptance criteria and provides packaging guidelines for magnetized material. These instructions should be consulted prior to transporting magnetic material by air. These regulations also apply to products with built-in magnets such as the myGaze Eye Tracking Device and the Mounting Bracket.

**1.6 Liability**

Visual Interaction GmbH (VI) does not assume liability for resultant damages to property or personal injury if the product has been misused in any way or damaged by improper use or failure to observe these operating instructions. In addition, any unauthorized modifications or repairs of the device will render the warranty null and void!
Make sure the conditions or environment in which you conduct the eye tracking sessions does cause ANY harm or injury. Visual Interaction GmbH (VI) is in no way responsible for how you develop, execute, and analyze data using the myGaze Eye Tracking Device or myGaze Application. Furthermore, ensure that you do not offend the cultural background, age or psychological condition of those engaged in the eye tracking sessions.

### 1.7 Maintenance

To keep the myGaze Eye Tracking Device in good working order, we highly recommend that you:

- Regularly clean the shield (the front glass) of the myGaze Eye Tracking Device using the supplied microfiber cloth.

- After using the myGaze Eye Tracking Device, store it safely.

- Do not leave the myGaze Eye Tracking Device sitting on the desk in direct sunlight, even when not in use. Store it away.

- Keep liquids and other contaminants away from the myGaze Eye Tracking Device.

Should the myGaze Eye Tracking Device become damaged, we highly recommend that you:

- Immediately unplug it from the USB port.

- Do not use the myGaze Eye Tracking Device until it has been repaired or replaced.

- Please be careful when removing the mounting bracket used to hold the myGaze Eye Tracking Device. See section **Removing the Mounting Bracket** for more details.
Do not attempt to repair the myGaze Eye Tracking Device by yourself. There are no user-serviceable parts in the device. Servicing, adjustment or repair should only be done by a certified distributor or by Visual Interaction GmbH (VI).
Chapter 2

System Overview
2. System Overview

2.1 myGaze® Components

The myGaze Eye Tracking Device and the required components are delivered in a sturdy box to protect them during shipping. The following section shows the myGaze Eye Tracking Device components that arrive inside the product packaging box.

The following table lists the components provided:

<table>
<thead>
<tr>
<th>Code</th>
<th>Component</th>
<th>Unit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>myGaze Eye Tracking Device</td>
<td>1</td>
<td>Sophisticated electronic device with sensitive cameras. <strong>Handle with care.</strong></td>
</tr>
<tr>
<td>B</td>
<td>USB 3.0 cable</td>
<td>1</td>
<td>Cable to connect myGaze Eye Tracking Device to a USB 3.0 port on a Laptop or Desktop.</td>
</tr>
<tr>
<td>Code</td>
<td>Component</td>
<td>Unit</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------</td>
<td>------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>C</td>
<td>20° Angle Bracket with magnet</td>
<td>1</td>
<td>Custom bracket for attaching the myGaze Eye Tracking Device at the hinge area of a Laptop or on top of Desktop Monitor lower frame.</td>
</tr>
<tr>
<td>D</td>
<td>Metal plates</td>
<td>2</td>
<td>Metal plate with sticky tape on one side is provided for the Angle Bracket (C) either as replacement or to mount myGaze Eye Tracking Device on other computers.</td>
</tr>
<tr>
<td>E</td>
<td>Microfibre cleaning cloth</td>
<td>1</td>
<td>Used to clean the front of the myGaze Eye Tracking Device.</td>
</tr>
</tbody>
</table>

### 2.2 System Requirements

In principle, you may install and run myGaze Application on any Windows™-compatible PC of your choice. However, you must be aware that there are minimum hardware requirements for accurate and consistent results with the myGaze® Eye Tracking System.

In this section we provide guidelines on minimal hardware requirements for running the myGaze Application on your PC. VI, of course, cannot guarantee that a particular Laptop or Desktop PC running Windows 7/8/8.1/10™ will suffice. For example, it is possible that other hardware components or software pre-installed on a particular PC may interfere with the functioning of myGaze Application. In short, if you decide to use myGaze Application on a PC which does not fulfill the minimal system requirements below, be aware that the myGaze® Eye Tracking System may either not function or produce inconsistent results.
Below are our recommended minimal specifications for a PC to run the myGaze® Eye Tracking System.

**Requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating system:</strong></td>
<td>Windows 7 / 8 / 8.1 /10™ (32/64 bit).</td>
</tr>
<tr>
<td><strong>Operating system Language:</strong></td>
<td>English and German Windows™ operating systems. myGaze Application is not guaranteed to work with other languages.</td>
</tr>
<tr>
<td><strong>Disk Space:</strong></td>
<td>300 MB free space for myGaze Application.</td>
</tr>
<tr>
<td><strong>CPU:</strong></td>
<td>Intel CPUs starting from Core 2 Duo (2006) or newer, and AMD CPUs of the Bulldozer family (2011) or newer. Recommended: Intel i3 or newer (i5/i7).</td>
</tr>
<tr>
<td><strong>USB:</strong></td>
<td>3.0 (Note: ASMedia XHCI controller is not supported)</td>
</tr>
</tbody>
</table>

It is possible that your PC does not support USB 3.0 or that the USB chipset on your PC may not be compatible with the myGaze® Eye Tracking System. A USB 3.0 Add-On Card may add SuperSpeed USB 3.0 capability to your PC.
2.3 Optimal User and System Conditions

The myGaze Eye Tracking Device is an optical camera system based on infrared technology. Therefore, to ensure the myGaze Eye Tracking Device is operated under optimal conditions, we provide the following recommendations:

- The user should sit at a distance of between 40cm and 95cm from the Desktop PC Monitor or Laptop screen.
- Minimize any interference from direct sunlight on the myGaze Eye Tracking Device.
- Do not use the myGaze Eye Tracking Device in conditions where the user's pupils would dilate and contract frequently, such as bright lights switching on and off.
- Do not cover or block the myGaze Eye Tracking Device when it is powered up and is connected to the myGaze Application.
- When a user is wearing glasses, make sure the glasses are clean and free of streaks so that light does not reflect off the glasses and become visible.
- Do not use a PC Monitor larger than 27 inches.
- To avoid interruption of eye tracking sessions and support reliable results, it is advisable to follow these recommendations whenever possible. First, disable the following settings in the Windows™ Control Panel: **Standby Mode, Screen Saver, Power Options**. Second, adjust your computer as follows:

  **Display**: Set to **Never turn off** in the Windows™ Control Panel.

  **Sleep**: Set to **Never put the computer to sleep** in the Windows™ Control Panel.
Panel.

**Power Plan:** Set to **High Performance** in the Windows™ Control Panel.

**USB Devices:** Do not use any other USB devices on the same USB controller as the myGaze Eye Tracking Device.

**Other Software:** Do not use many additional resource-intensive applications on the PC while running the myGaze Application, since they might have an impact on the performance of the myGaze Eye Tracking Device.

### 2.4 Status Indicators

The operating status of the myGaze Eye Tracking System is indicated through the use of icons in the Windows Taskbar and in the title bar of the myGaze Application. The status indicators are as follows:

<table>
<thead>
<tr>
<th>State</th>
<th>Icon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Running</td>
<td>![Not Running Icon]</td>
</tr>
<tr>
<td>Starting...</td>
<td>![Starting... Icon]</td>
</tr>
<tr>
<td>Running:</td>
<td>![Running Icon]</td>
</tr>
</tbody>
</table>
Chapter 3

Preparation
3. Preparation

3.1 Quick Start Guide

This is a Quick Guide to help you get started using the myGaze Eye Tracking Device. Please follow the links given here and see the following Sections for more detailed instructions.

1. Preparation:

a. Download and run the myGaze Application, which is available at the myGaze webshop through http://www.mygaze.com/shop/

b. After myGaze Application has been installed, run the application.

c. Connect the myGaze Eye Tracking Device to an available USB 3.0 port (blue connecting end) on the Desktop or Laptop.

When first connecting the myGaze Eye Tracking Device to the USB 3.0 port, please disconnect other devices in order to ensure that the myGaze Eye Tracking Device has enough bandwidth/power. You may then proceed to connect other devices as long as they do not interfere with the myGaze Eye Tracking Device.

d. Locate the Geometry tab in myGaze Application, and select the type of display used from the Display Type dropdown menu. Select Laptop Display or Desktop Monitor.

e. On the Geometry tab, click Setup Guide. This will display a vertical line on the screen in the exact horizontal center of the selected screen. Use the line as a reference to set up the myGaze Eye Tracking Device on a Laptop Display or Desktop Monitor (see Step 2 below).
2. **Mount the myGaze Eye Tracking Device:**

   a. Insert the Magnet with the sticky tape into the metal (mounting) Angle Bracket provided with the product.

   b. Remove the protective cover from the sticky tape over the Magnet.

   c. Horizontally align the Mounting Bracket with the vertical Setup Guide displayed on the screen. You can use the Reference Point on the Mounting Bracket (the Reference Point is a small indentation on the top side of the Mounting Bracket) for alignment.

   d. Vertically align the top of the Mounting Bracket exactly with the upper edge of the lower frame of the screen.

   ![Warning]
   Ensure the Mounting Bracket is right side up before attaching. The Reference Point is on the top side of the Mounting Bracket and the Mounting Bracket is angled upwards.

   f. Press and hold the Mounting Bracket against the frame for a few moments to ensure adhesion.

   ![Warning]
   Once the Mounting Strip has been attached, it cannot be easily removed. Ensure that the device has been attached in the correct position.

   g. Connect the myGaze Eye Tracking Device to the Mounting Bracket using the magnetic slots.
The USB cable connector should be on the right side of the device and the Reference Point on the Mounting Bracket should be facing upwards.
3. Set up Monitor and Geometry for the user:

   a. If a second Display or Monitor is connected to the Desktop PC or Laptop, click the 1-2 button on the Geometry tab to show the Display 1 and Display 2 identifiers. Select from the Select Display dropdown menu the Display or Monitor on which the myGaze Eye Tracking Device is mounted.

   b. Click Use Default Settings to obtain measurements for Screen Width and Screen Height. If the myGaze Eye Tracking Device is mounted on a laptop, and mounting instructions were followed precisely, the Depth and Height measures for myGaze Eye Tracking Device positioning are set to the default values. Select the angle of the Mounting Bracket (normally 20 deg).

4. Position the User:

   a. Ensure the user is sitting in an optimal position. See Optimal User and System Conditions.

   b. Use the Eye Tracking Monitor to position the user in the center of the Head Box.

5. Perform Calibration and Validation:

   a. On the Calibration tab, set the calibration method, speed and other options.

   b. Perform a Calibration.

   Running a Validation is optional.

6. Create a Profile:
a. Save your custom Calibration settings for easy recovery in future sessions.

b. Either add the changes to the existing profile by clicking the **Save** button or create a new profile to save these settings by clicking **New**.

7. The **myGaze Eye Tracking Device** is now ready for use.

8. Use **Live Gaze View** to confirm that the **myGaze Eye Tracking Device** works as intended.

### 3.2 Installing the Software

#### 3.2.1 Required and Supplementary Software

**Required Software**

The following software is required to run the **myGaze Eye Tracking System**:

- Driver for the **myGaze Eye Tracking Device** (provided in the Installation Package)
- **myGaze Eye Tracking Server** (provided in the Installation Package)
- **myGaze Application** (Provided in the Installation Package)
- .NET Framework 4.0 Client (downloaded and installed during the installation process, if not already installed on the target PC or Laptop)

**Supplementary Software**

A number of additional products are available from **VI**:

- **myGaze SDK** (Software Development Kit)
3.2.2 Obtaining the Installation Package

To obtain the myGaze Application Installation Package:

1. Go to the myGaze web shop though http://www.mygaze.com/shop/

2. Log in though My account

3. Go to my instant downloads at the right menu bar

4. Click the download link for the latest download file

5. On the File Download dialog, click Save File to download the installer to your PC or Laptop.

3.2.3 Running the Installation Package

The Installation Package includes a driver for the myGaze Eye Tracking Device, the myGaze Eye Tracking Server, and the myGaze Application.

Note: The following instructions include the installation of the .NET Framework 4.0 Client. If this has not been installed already, an internet connection will be required to install this client.

IMPORTANT: The Installation Package needs to be run to install the required drivers and software prior to connecting the myGaze Eye Tracking Device to the PC or Laptop. Before starting the following
procedures, ensure the myGaze Eye Tracking Device is **NOT** plugged into the USB port on the PC or Laptop.

**To run the Installation Package, do the following:**

1. Copy the myGaze Eye Tracking Server Installation package to the target PC or Laptop and double-click the file to begin installing the software.

2. If your PC or Laptop does not have the .NET Framework 4.0 Client installed, you will be asked to install this software before continuing.

   If the .NET Framework 4.0 Client needs to be installed, the Installation Wizard will send an internet request to install the .NET Framework 4.0 Client. Depending on the internet connection speed, it may take some minutes before the software has been downloaded and installed.

   1. In the .NET Framework setup dialog, accept the terms and conditions and click **Install** to continue.

   2. The .NET Framework 4.0 Client will be installed.

   3. When the Installation has completed, click **Finish**.

3. The **Installation Wizard** will launch.

4. On the **Welcome** page, click **Next** to continue.

5. On the **Licence Agreement** page, read carefully, and accept the Licence Agreement and click **Next** to continue.

6. On the **Installation** page, click **Install** to begin the installation.

   The Installation Package will now begin to install the required software.

7. A warning dialog will appear to ensure that the myGaze Eye Tracking Device is not plugged into any USB port. After verifying your compliance
with the request, click OK to continue the installation.

8. A warning message from the Windows Operating System may appear to request your permission to install the required driver for the myGaze Eye Tracking Device. As the driver can be safely installed, choose the option that allows the driver to be installed.

9. When the Installation Wizard completes the installation of the drivers and software, a Completion page will appear. Click Finish to close the Installation Wizard.

3.3 myGaze® Software Overview

The myGaze Application is the software that is used to control the myGaze Eye Tracking Device. This chapter describes the main User Interface for working with the myGaze Application.

3.3.1 Eye Tracking Monitor

The Eye Tracking Monitor is the main user interface in the myGaze Application (red square below). It allows the user to monitor and correct the distance and position for eye tracking by the myGaze Eye Tracking Device. Before running a calibration or tracking session, it is strongly recommended that the user sits within the range allowed by the myGaze Eye Tracking Device.
Eye Tracking Monitor
Features:

Arrows: When the user is not sitting in an optimal position, arrows will show the direction to which he/she should move his/her head to remain within a detectable area. The arrows will indicate to move left, right, closer to the screen, and away from the screen.

Distance Values: A distance value is also displayed at the bottom right to indicate how near (or far) the user is from the myGaze Eye Tracking Device.
3.3.2 Geometry Tab

The Geometry tab is shown by default when myGaze Application starts. A set of fields are provided for entering the dimensions (in mm) of either a Laptop Display or a Desktop Monitor and the relative position (in mm) of the myGaze Eye Tracking Device to the display. This can be entered manually or set automatically.

These settings are required to ensure reliable and accurate gaze tracking results.
Geometry Tab showing the Desktop Monitor settings
Tab Options:

Select Display: Selection is possible only if two displays are connected to a single PC (or an additional display is connected to the Laptop). Select the display on which the myGaze Eye Tracking Device is mounted.

1-2 Button: Shown only if a second display is connected to the Laptop or Display. When clicked, identifiers are shown on the displays to indicate which is Display 1 and Display 2, as defined by the Windows™ operating system.

Type of Display: Changes the Geometry tab to the selected display type.

Use Default Settings: Automatically detects Screen width and Screen height of the Display.

Setup Guide: Dims the screen and displays a vertical line at the center point of the screen. This is used to guide the mounting of the myGaze Eye Tracking Device on the frame of the Desktop Monitor or at the hinge of a Laptop.

Depth: Horizontal Distance [in mm] from the screen to the front
edge of myGaze Eye Tracking Device at the center point. This center point can be located using the Setup Guide.

**Height:** Vertical Distance [in mm] from the upper edge of the lower section of the screen frame to the top side of the myGaze Eye Tracking Device at the center point. This center point can be located using the Setup Guide.

**Screen Width:** Width of the screen [in mm], not including the frame.

**Screen Height:** Height of the screen [in mm], not including the frame.

**Eye Tracker Angle [degree]:** Angle of the Mounting Bracket that is used to connect the myGaze Eye Tracking Device to the Desktop Monitor or Laptop Display. The standard Mounting Bracket angle is 20°. Other options available are 15° and 25°. Ensure you select the correct value.
3.3.3 Calibration Tab

The Calibration tab provides a set of options to customize the myGaze® Eye Tracking System to each user according to his/her unique eye and gaze characteristics. This involves following a target object on the screen (typically a point or circle), followed by validation of the tracking results.
Tab Options:

**Calibration Method:**
Select 0, 5, 9 or 13 Point. This sets the number of points that the user must observe during calibration.

**Animation Speed:**
Select Normal or Fast. This controls how fast the calibration points are sequentially shown on the screen.

**Accept Points:**
Select Automatically, Semi-Automatically or Manually:

- **Automatically:** Calibration points are displayed sequentially without requiring confirmation by the user.
- **Semi-Automatically:** The first calibration point needs to be confirmed by the user manually by pressing the Space Bar.
- **Manually:** Each calibration point needs to be accepted manually by the user by pressing the Space Bar.

**Smart Calibration:**
Smart Calibration is checked (active) by default in myGaze Application. See also Smart Calibration.
**Target Size:**
Sets the size of the calibration target on the **Calibration** screen.

**Target Shape:**
Select **Image** or **Disc**:
- When **Disc** is selected, the **Target Color** option appears.
- When **Image** is selected, the **Target File** option allows the user to select an image from the PC or network drive. You can adjust the image for different use cases, for example, using engaging drawings for children.

**Target Color:**
Appears when **Target Shape** is set to **Disc**. Opens an **Available Colors** popup window to select from a range of grayscale colors. **This is only adjustable if you disable Auto Color function.**

**Target File:**
Appears when **Target Shape** is set to **Image**. Browse any directory to select an image that will be used as a calibration target.

**Auto Color:**
When selected, an average gray level of the current screen content is used as the background color of the Calibration screen.
**Background Color:**
Select the background of the Calibration screen from a set of grayscale colors. Default is gray. **This is only adjustable if you disable Auto Color function.**

**Calibration Results:**
Displays the results of the Calibration and the optional Validation. For each eye, it displays the ratio of accepted points to the total number of calibration points. It also shows accuracy values that indicate the deviation between target points and estimated gaze position. When **Smart Tracking Mode** is used, **Calibration Results** indicate whether one or both of eyes have been selected for tracking based on the calibration data.

**Default Values:**
Resets the **Calibration** tab to original settings.

**Live Gaze View:**
When clicked, the screen is dimmed with the exception of a moving bright area, which corresponds to the movement of the users’ gaze. **Live Gaze View** mode can be ended by pressing the **Live Gaze View** button again or by pressing the ESC key. This feature is available only after a calibration has
been performed successfully.

Calibration Area: This setting is for Advanced Users only. Changes are not normally required to this setting. After clicking the button, the Calibration Area will be shown in full screen mode. You can then change the location of each calibration point separately.

Calibrate: Starts the calibration.

Validate: Starts the validation. This is done after the calibration has been run.
3.3.4 Info Tab

The **Info** tab shows the system information. You can also launch the Online Help and contact VI for support requests (Internet access required).

**Tab Options:**

**System Information:** Lists the key operating parameters of the system. This information can be copied to the Clipboard for

Contact Us: Use to send an email to VI for support requests. It launches the default email application (Internet access required).

3.3.5 Profile Selector

Settings made for a specific user or system can be saved to a Profile. Profiles are especially useful when different tracking and calibration settings are used in different sessions. In this way you can always use the same settings for each specific profile or session.
Profiles cannot be shared across different computers.
Select Profile Options:

Select Profile: A profile includes all the defined settings made in all the tabs. If two or more profiles have been created, you can select a specific profile from the dropdown list.

Save: After making changes to any of the settings, you can save these settings in the currently selected profile.

Save as: After making changes to any of the settings, you can save these settings in a new profile.

New: You can create a new profile, which will save any settings made to this new profile.

Remove: If you do not need a profile, you can remove it.

Profiles which are marked with a * behind the name contain unsaved profile changes.

See Selecting a User Profile.
3.4 Mounting the Eye Tracking Device

3.4.1 Mounting Guides

Mounting guides have been provided to assist you in mounting the device.

- **Reference Point** - This physical mark on the Mounting Bracket is located at the exact center of the bracket for alignment with the Setup Guide.

- **Setup Guide** - This is a vertical line displayed at the exact vertical center of the screen for alignment with the Reference Point on the Mounting Bracket. It is displayed by clicking **Setup Guide** on the Geometry tab of myGaze Application.
3.4.2 Mounting Instructions

The mounting instructions provided in this section are relevant to both Laptop Displays and Desktop Monitors.

Before proceeding, ensure myGaze Application has been installed. If not see Required and Additional Software.

To mount the myGaze Eye Tracking Device on a Laptop Display or a Desktop Monitor follow these steps:

1. Connect the myGaze Eye Tracking Device to a USB 3.0 port with the supplied USB cable.

   a. Insert the USB cable to the connector on the myGaze Eye Tracking Device, being careful not to damage the connectors.

   b. Connect the USB cable to an available USB 3.0 port.
c. Start *myGaze Application*.

d. *myGaze Application* will attempt to connect to the *myGaze Eye Tracking Device*.

e. Once connected, the LEDs on the *myGaze Eye Tracking Device* will illuminate.

2. Attach the Mounting Bracket to the Laptop Display or Desktop Monitor.

a. With *myGaze Application* running, click Setup Guide on the **Geometry tab** to display the vertical Setup Guide. This blue line is displayed at the exact vertical center of the screen.

b. Connect the magnetic Mounting Strip to the back of the Mounting Bracket.

c. Remove the protective cover from the Mounting Strip.
Prepare the Mounting Bracket

d. Horizontally align the Mounting Bracket: Using the Reference Point on the Mounting Bracket, carefully align the Mounting Bracket to the vertical Setup Guide displayed on the screen. Ensure that the Reference Point is facing upwards.

e. Vertically align the Mounting Bracket: Carefully align the top of the Mounting Bracket to the upper edge of the bottom frame of the screen.

f. Firmly press and hold the Mounting Bracket onto the frame for a few moments to ensure adhesion.

g. Your setup should look like this.
3. Attach the *myGaze Eye Tracking Device* to the Mounting Bracket.

   a. The *myGaze Eye Tracking Device* can only be attached to the Mounting Bracket in one direction. This ensures the cameras on the device are in the correct orientation and that the USB cable is on the right side of the device.

   b. Attach the *myGaze Eye Tracking Device* to the Mounting Bracket using the magnet connectors.
Handle the magnet with care. Please see Safety Information Regarding Magnets for more information.
Chapter 4

Running myGaze® Software
4. Running myGaze® Software

4.1 Starting myGaze®

If the *myGaze Eye Tracking Device* has not yet been mounted, see *Mounting Instructions*.

To run *myGaze Application*:

1. Attach the *myGaze Eye Tracking Device* to the Mounting Bracket, which is attached to the Laptop Display or Desktop Monitor.

2. Connect the *myGaze Eye Tracking Device* to a USB 3.0 port on your Laptop or Desktop PC.


4. The **Startup** screen will appear and *myGaze Application* will immediately begin attempting to connect to the *myGaze Eye Tracking Server*. 
5. When connected, a set of LEDs on the front panel of the myGaze Eye Tracking Device will be illuminated. This indicates the cameras are switched on and are sending data to the server.

If myGaze Application could not connect to the myGaze Eye Tracking Server a status message will appear: **No eye tracking device detected. Please plug the device to the proper USB port.** The status indicator will change to **Not Connected**. In this case, ensure the device is properly connected to a USB 3.0 port. See **Troubleshooting**.
6. When connected, the default screen of myGaze Application will appear showing the **Geometry** tab and the **status indicator** will change to **Running**.

### 4.2 The Tracking Monitor

The **Eye Tracking Monitor** is located in the upper right corner of myGaze Application (red square below).
To indicate how far (or near) the user is from the myGaze Eye Tracking Device, the Eye Tracking Monitor provides a distance measurement at all times. In the example below, the user is 52 cm away from the screen.
Eye Tracking Monitor Arrows

When a user is within the optimum sitting position, the Eye Tracking Monitor will be displayed without arrows. However, when the user begins to move towards the edges of the Head Box, the Eye Tracking Monitor provides live feedback in the form of arrows, so that the user can adjust movements to remain within the operating distance of myGaze Eye Tracking Device.

The user can still be tracked when the arrows appear. They simply serve as guides to help position the user to remain within the optimal location.

- **Arrow Directions** - These include move left, move right, move closer to the screen, move away from the screen. In the example below, the user should move to the right and away from the screen.
- **Arrow Colors** - The color of the arrows indicate a progression from close to optimum to close to out of tracking range. These colors are Orange, Yellow, and Red, respectively:
4.3 Shutting Down MyGaze Software

To shut down *myGaze Application*:

1. Click the standard Windows™ close icon (the "X" icon).

2. Click **Quit** from the dialog that appears.
3. *myGaze Application* will now shut down.

4. Disconnect the myGaze Eye Tracking Device from the USB port and safely store the device.

You can also minimize the application by clicking *Minimize to tray icon*. 

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Using myGaze® Software

Chapter 5
5. **Using myGaze® Software**

5.1 **User Profiles**

5.1.1 **Creating a User Profile**

**Create a Profile**

To create a profile:

1. In the *Select Profile* area, click **New** to open the **Creating a new profile** dialog.
2. Enter a profile name in the Name field, and click OK.

3. Any settings made can be saved to this profile by clicking Save.

Modify a Profile

To modify some settings of an existing profile you can use the option Save as... All current profile settings will be copied to a new profile. Please refer to the following steps:
1. Select the profile you want to modify and make all changes you want to submit.

2. Click on the Save as... button in the Select Profile area. A new window called Saving profile as... appears.

3. Enter a new profile name in the Name field and click OK.

Profiles which are marked with a * behind the name contain unsaved profile changes. If you want to keep the changed settings, please use the Save button in the Select Profile area.

If you create a new profile or close the application before saving profile changes, you will be asked to confirm whether you want to save or discard the changes. The following Confirmation dialog will appear:

![Confirmation dialog](image)

**5.1.2 Selecting a User Profile**

To select a profile:

1. From the Select Profile field, click the down-arrow to open a list of available saved profiles.
2. Select one of the saved profiles.

3. The settings of the selected profile will be automatically loaded into the application.

**5.1.3 Deleting a User Profile**

To delete a **Profile**:

1. In the **Select Profile** field, click the down-arrow to open a list of available saved profiles.
2. Select a saved profile from the list and click Remove.

5.2 Geometry Tab

5.2.1 Using Multiple Displays

If a second monitor is attached to your Desktop PC or Laptop, you must select which of the two displays will be used by the myGaze Eye Tracking Device.

To select the display used by the myGaze Eye Tracking Device:

1. Run the myGaze Application.

2. Select the Geometry tab.

3. The Select Display dropdown menu will show Display 1 and Display 2 and the 1-2 button will appear.
4. Click the 1-2 button to show the Display Identifiers. In the following example, an operator runs the Tracking Monitor of the myGaze Application on Display 2. The myGaze Eye Tracking Device is mounted on Display 1 to perform gaze tracking on a participant.
5. Choose from the Select Display dropdown list the display on which the myGaze Eye Tracking Device is mounted. In this example, you would select Display 1.
5.2.2 Selecting Type of Display

Before you enter the settings in Geometry Tab, you need to select the type of display.

To select the type of display:

- Select Laptop Display or Desktop Monitor from the Type of Display dropdown menu:

The following shows the Laptop Display settings.
The following shows the Desktop Monitor settings.

5.2.3 Automatic Display Detection

*myGaze Application* provides an automatic detection of screen dimension settings. This is done through the **Use Default Settings** button on the **Geometry tab**.

Automatic detection of **Screen Width** and **Height** works for the vast majority of monitors on a single PC setup.
Using Automatic Detection

1. On the **Geometry tab**, select the display from the **Select Display** dropdown.

2. If you have not done so already, create a new profile, such as "Experiment Laptop". See **Creating a User Profile**.

3. If a second display is connected to the PC or Laptop, use the **1-2** button and select from the **Select Display** dropdown the display that will be used with the myGaze Eye Tracking Device. See **Using Multiple Displays**.

4. Click **Use Default Settings**.

5. **myGaze Application** will detect the measurement values and load these values into the fields.

6. Select the angle value of the Mounting Bracket (**20 deg**, unless it needs to be customized) in the **RED [Degree]** dropdown menu field. See **Setting Eye Tracking Device Angle**.

---

**Use Default Settings** works on most systems. Some systems may be incompatible with Windows™ standard interfaces. In this case, a manual check and correction of the settings is recommended.
5.2.4 Setting Eye Tracking Device Angle

The **Remote Eye Tracking Device (RED) angle** is determined by the angle of the Mounting Bracket used to mount the *myGaze Eye Tracking Device* on the Desktop Monitor or Laptop Display.

- Select from the RED dropdown menu 15, 20 or 25.

---

The standard Mounting Bracket supplied is the 20° bracket.
5.2.5 Setting Screen Width and Height

Here we illustrate the dimensions of the display:

You can use **Use Default Settings** to obtain the screen width and height. This works for most displays in a single PC setup.

These values are entered in the **Geometry** tab.
5.3 Calibration

5.3.1 About Calibration

Calibration is a process in which we adjust settings in the myGaze Eye Tracking Device to suit the unique characteristics of a user's eyes. The goal here is to achieve the best possible data accuracy. Before any meaningful results can be obtained from the myGaze Eye Tracking Device, the current setup on the myGaze Eye Tracking Device needs to be calibrated.

A successful Calibration ensures that the myGaze Eye Tracking Device is
accurately tracking the eyes of the user. For the user, this test simply means observing a series of targets that will be sequentially displayed on the screen. The Calibration is then validated using a similar procedure to ensure the results obtained during the calibration process are valid.

Next, see Calibration Settings.

5.3.2 Calibration Settings

Here we provide a set of recommendations for rapid Calibration of the myGaze Eye Tracking Device. While using a higher number of calibration points may improve the accuracy of eye tracking, it requires the user to maintain a stable gaze for a longer time. The decision to use a higher or lower number of calibration points should take into account how long the user can concentrate and how well they can focus on a target. *Changing other features of the Calibration process should only be done if the recommended/default settings do not work (see below).*

See *Calibration Tab* for a description of all the Calibration options in the Tracking Monitor.

**Recommended Calibration Settings**

<table>
<thead>
<tr>
<th>Calibration Method</th>
<th>Select the default 5 Point setting. For higher accuracy, use a larger number of points. If calibration is not possible, use 0 Point.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animation</td>
<td>Select Fast, unless the user has difficulty keeping up with</td>
</tr>
</tbody>
</table>
**Speed**  
the calibration procedure, in which case you should select *Normal*.

**Accept Points**  
Select *Automatically*, unless there is a need for customizing the Calibration process (e.g., due to challenges in performing a calibration). See **Accepting Calibration Points** for more options.

**Smart Calibration**  
Set to *activated (checked box)* by default. See **Using Smart Calibration** for more details.

**Target Size**  
Use the slider to make the calibration target smaller or bigger on the Calibration screen.

**Target Shape**  
Select *Disc* for most use cases. When *Disc* is selected, the Target Color option appears. Select *Image* for custom applications. If *Image* is selected, the **Target File** option allows uploading an image from a local or network drive.

**Auto Color**  
Set to *activated (checked box)* by default. The background color and the target color is selected automatically based on the screen background brightness.

**Target Color**  
*Optional*: changes the color of the target Calibration disc in case there is a more suitable color for the user, or for example, in case of color-blindness. Appears only when **Auto Color** is deactivated (unchecked).

**Background**  
Set to *Gray* by default. Select a grayscale color for the
5.3.3 Accepting Calibration Points

The myGaze Application provides three options for accepting calibration points: Manually, Semi-automatically and Automatically. These options are selected from the Accept Points dropdown on the Calibration tab.
• **Manually**: Each calibration point is accepted manually by pressing the **Space Bar**.

• **Semi-Automatically**: The first calibration point is accepted manually by pressing the **Space Bar**. On subsequent calibration points, calibration points are accepted automatically.

• **Automatically**: In this mode, all calibration points are accepted automatically. This mode assumes that the user is gazing at the calibration points while they are presented.

| If **Smart Calibration** is enabled and the eye gaze of a user cannot be tracked, the current calibration point will be dropped. If **Smart Calibration** is not active, the myGaze Application will wait until a fixation can be detected before advancing to the next calibration point. See Using Smart Calibration. |

5.3.4 **Using Smart Calibration**

When **Smart Calibration** is enabled, the calibration process waits two seconds for a fixation. If the data of one point is found to be unreliable (for example, the user did not fixate on a point), then this point will not be used to calculate gaze estimation parameters.

**Smart Calibration** is enabled in the **Calibration** tab.
When using **Smart Calibration** in combination with automatic acceptance of calibration points, a timeout of two seconds is provided for each point. If the system is unable to track the eyes in that time, data from that calibration point is discarded.

### 5.3.5 Setting the Calibration Area

**This setting is for advanced use only. Do not change Calibration Area unless it is absolutely necessary.**
The default positions of the calibration points are optimized to gain best performance over the full screen area. If you use only a part of the screen, you may want to consider evenly distributing the calibration points over the selected screen area.

⚠️ Changing the position of calibration points has a severe impact on accuracy.

The **Calibration Area** can be reset for all calibration methods, except 0 Point calibration.

To set the calibration area:

1. From the **Calibration** tab, select the number of calibration points from **Calibration Method**.

2. Click **Calibration Area**.
3. When changing the position of a calibration point, the accuracy of the calibration may be affected. Refer to these sections before making any changes. Click OK to accept the warning.
4. The application will go into full screen mode with the target points showing in each quadrant.
5. Adjust the position of the target points and click **OK**.

6. If necessary, any changes can be reset to default by clicking **Default values**.

7. When done, click **OK** to return to the **Calibration** tab.

For best results across the screen, the calibration points shall cover the whole area of the screen. The calibration point coordinates should be distributed equally along the x and y axis.
5.3.6 Running a Calibration

When clicking **Calibrate** in the **Calibration** tab, *myGaze Application* goes briefly into full screen mode and a series of target shapes are displayed in succession in each of the areas of the screen as defined by the **Calibration Settings**.

Calibration can be canceled at any time by using the **Esc** (Escape) key.

To run a calibration:

1. Ensure the settings for the Laptop Display or the Desktop Monitor dimensions and user position are recorded in the **Geometry tab**.

2. Select the **Calibration tab**.

3. If required, set the **Calibration Settings** and method for accepting calibration points.

4. Click **Calibrate** to begin.

5. *myGaze Application* goes into full screen mode and displays the **Calibration** screen with an initial focus point in the center of the screen.
6. After a few moments, and depending on the settings in **Animation Speed** and **Calibration Method**, one or more focus points will be displayed in succession on the screen. Depending on the settings for **Accept Points**, you may need to press the **Space Bar** to continue. The user must focus on each point as it is displayed. The following shows five target points distributed across the screen.
Focus points

The user must keep their eye gaze focused on these points. If the results are unusual or inadequate, run the calibration again while ensuring the user keeps focused on each point as it appears.

7. When the calibration is completed, myGaze Application exits full screen mode and returns to the Calibration tab.

8. The results of the calibration are saved in the user profile. The calibration results are displayed in the Calibration Monitor.
Calibration results

For an explanation of the calibration results, see Understanding the Results.

9. The calibration results can be further validated, as described in Running a Validation.
5.3.7 Understanding the Results

After a calibration has been performed, myGaze Application returns to the Calibration tab. The results of the calibration are displayed in this tab.

For each eye, the ratio of accepted calibration points to the total number calibration points is displayed. The accuracy of the gaze is indicated by the value shown:

- The lower the value, the better the results.

The results also indicate whether one or both eyes were used during calibration.

The results of a calibration have two parts:

- **Left Usage and Right Usage** - For each eye, the ratio of accepted
calibration points to the number of shown calibration points is displayed.

- **Accuracy (X/Y) Left Eye and Right Eye** - The accuracy of the gaze is indicated by the value shown. The lower the value, the better the results.

**Blue and Green indicators**

- **Blue dot** - indicates the right eye.
- **Green dot** - indicates the left eye.

**5.3.8 Recalibrating a Point**

Recalibration of a calibration point can be done if the calibration results indicate that the user did not focus sufficiently on an individual calibration point.

To recalibrate on a specific calibration point:

1. Using the mouse, move over the point to be recalibrated.

2. A floating hint will appear - **Click to recalibrate**.
3. Click on the hint and follow the process as when running a 5 Point calibration. See Running a Calibration.

4. The new data will be merged with the previous calibration and the entire calibration will then be updated.

Recalibration can only be done after a calibration has been performed, and only if no calibration settings were changed or if another tab was selected. If another tab was selected or if the calibration settings were changed, the display will be turned to Calibration Point Setting mode and recalibration is no longer possible.

5.3.9 Running a Validation

**Validation** is an optional procedure for confirming the accuracy of the Calibration results. The procedure is very similar to that used for Running a Calibration.

To run a validation:
1. After running a calibration, and with the same user, click **Validate** on the **Calibration** tab.

2. The myGaze Application goes into full screen mode and displays the **Validation** screen.

3. The user must focus on each of the validation points as they are displayed sequentially.
4. Validation will begin immediately without any initial focus point.

5. When the validation is complete, myGaze Application exits full screen mode and returns to the Calibration tab.

6. The results of the validation will be displayed in the Validation Monitor.
Validation results

5.4 Live Gaze View

Live Gaze View can be used to confirm that the Calibration procedure has worked and that the myGaze® Eye Tracking System is ready for use.

To use Live Gaze View:

1. On the Calibration tab, click Live Gaze View.
2. Press the **Live Gaze View** button to activate this option. The button turns red to indicate that the **Live Gaze View** mode is active.

3. The entire screen dims except the area on the screen where the gaze is focused. This focus area is lit whilst the surrounding is all dark. The **Live Gaze View** is refreshed according to the screen refresh rate (default is 60Hz).

4. Exit by clicking the **Live Gaze View** button again.
### 6. Appendix

#### 6.1 Technical Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sampling rate</td>
<td>30Hz</td>
</tr>
<tr>
<td>Interface setup</td>
<td>Use with Desktop Monitor or Laptop Display (10” to 27” )</td>
</tr>
<tr>
<td>PC interface / power</td>
<td>1x USB 3.0 / Power over USB (max. 4.5W)</td>
</tr>
<tr>
<td>Gaze position accuracy</td>
<td>0.4°</td>
</tr>
<tr>
<td>Spatial resolution (RMS)</td>
<td>0.05°</td>
</tr>
<tr>
<td>Eye tracking mode</td>
<td>Binocular/Monocular</td>
</tr>
<tr>
<td>Operating distance</td>
<td>40cm to 100cm</td>
</tr>
<tr>
<td>Tracking range (head box)</td>
<td>50cmx30cm at 65cm distance</td>
</tr>
<tr>
<td>Calibration mode</td>
<td>Calibrationless, 1, 5, 9, and 13 points</td>
</tr>
<tr>
<td>Head movement velocity</td>
<td>40cm/s</td>
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<tr>
<td>System latency (end to end)</td>
<td>&lt;40ms</td>
</tr>
<tr>
<td>Blink recovery time</td>
<td>33ms</td>
</tr>
<tr>
<td>Tracking recovery time</td>
<td>66ms</td>
</tr>
<tr>
<td>Feature</td>
<td>Specification</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dimensions (width x height x depth)</td>
<td>299mm x 18mm x 13mm</td>
</tr>
<tr>
<td>Weight</td>
<td>70 g (module)</td>
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<tr>
<td>Eyewear compatibility</td>
<td>Works with most glasses and lenses</td>
</tr>
<tr>
<td>Data</td>
<td>Timestamp</td>
</tr>
<tr>
<td></td>
<td>Gaze data (x/y screen coordinate)</td>
</tr>
<tr>
<td></td>
<td>3D eye position</td>
</tr>
<tr>
<td>Software compatibility</td>
<td>TechSmith Morae 3.3</td>
</tr>
<tr>
<td>Operating system</td>
<td>Microsoft Windows 7 / 8 / 8.1 / 10 (32/64 Bit)</td>
</tr>
<tr>
<td>Technology</td>
<td>Non-invasive, video-based eye tracking</td>
</tr>
<tr>
<td>Operating conditions</td>
<td>Temperature 15° - 40° Celsius, 59° - 104° Fahrenheit</td>
</tr>
<tr>
<td></td>
<td>Max Humidity 80%</td>
</tr>
<tr>
<td>CPU requirements</td>
<td>Intel CPUs starting from Core 2 Duo (2006) or newer, and AMD CPUs of the Bulldozer family (2011) or newer. <strong>Recommended:</strong> Intel i3 or newer (i5/i7).</td>
</tr>
<tr>
<td>Norm compliance</td>
<td>CE / FCC</td>
</tr>
<tr>
<td></td>
<td>Eye safety EN60601-1-2 + EN55011, class B</td>
</tr>
</tbody>
</table>
6.2 Troubleshooting

We would like to help you get the best performance from your myGaze Eye Tracking System. In case of service and support requests, please complete the support request form on our company website at www.myGaze.com or email us at info@myGaze.com. You can help us accelerate the processing of your request by providing the serial number that is located on the back of your myGaze Eye Tracking Device.

The most common issues are:

- The eye tracker is running slow.
- myGaze Application does not start.
- I am getting an error message.
- Can I use the myGaze Eye Tracking Device with other USB connected devices?

1. The Eye Tracker is running slow

Certain background processes and services require substantial system resources during execution. While this does not affect the system during idle times, those background processes may disturb a running gaze tracking session. If you notice a degradation in system responsiveness, you may consider the following points:

Please verify that your system setup and the user setup matches our recommendations (see Technical Specifications).

- Disable the background scan function of your virus scanner. This function scans newly started executables and various file formats while they are read in from the hard disk drive. Use the on-demand virus scan function instead.
Make sure that no CPU consuming screen saver is automatically activated during a running session. It is best to completely switch off the screen saver during a tracking session.

You may also deactivate any auto-update functions. While background downloading of files does not normally use too much system resources, confirmation dialogs and update notices may disturb the eye tracking session.

Check the power configuration settings when using a Notebook PC. In the Windows Control Panel, select the Performance and Maintenance category. Start the Power Options applet and select the "Presentation" entry in the Power Schemes list.

Disable the USB selective suspend settings on a Desktop PC. This prevents the USB port from suspending during the usage of the myGaze Eye Tracking System. To disable this setting in Windows 7:

1. Select Control Panel > Hardware and Sound > Power Options.

2. In the Power Options window, select Change Power Settings from the Preferred Plan area, and then select Change plan settings.

3. In the Changes settings for the plan window, select Change Advanced Power Settings.

4. In the Power Options dialog, click the plus sign next to USB Settings, then click the plus sign next to USB selective suspend setting.

5. Click Setting and then choose Disabled from the dropdown list.

6. Click OK to close the dialog.
2. The myGaze Application does not start.

It is not sufficient to simply copy the myGaze Eye Tracking System program directory to another PC. Please use the myGaze Eye Tracking System installer. This ensures, for example, that the required Microsoft .NET Framework Version 4.0 or above is installed properly. Note that you cannot start myGaze Eye Tracking System from a network share / network drive because of .NET security restrictions.

3. I am getting an error message.

The myGaze Application has several error states:

- **Not Running**... which is indicated by the in the application title bar. Ensure that the myGaze Eye Tracking Device is connected to the USB port.

  If the myGaze Eye Tracking Device is connected and you are still getting
4. Can I use the myGaze Eye Tracking Device with other USB connected devices?

The myGaze Eye Tracking Device is a high performance USB device, which requires a certain amount of available bandwidth from the USB port. When other high performance USB devices are plugged into USB ports, for example USB drives, webcams, WIFI adapters, the available bandwidth of USB may become insufficient. The myGaze Eye Tracking Device also draws the power it needs from the USB port, if some other USB device is absorbing current above the USB specification, this may also lead to problems. Try disconnecting unneeded USB devices. See also the description for setting Power Options above in this section.

6.3 myGaze® Software Structure

The myGaze Eye Tracking System consists of the myGaze Eye Tracking Server and the myGaze Application and any required drivers.

![i] As the USB port provides a power supply to the myGaze Eye Tracking Device, a separate power cable and power source is not required.

The following shows an overview of the structure of the myGaze Eye Tracking System:
Software Structure

<table>
<thead>
<tr>
<th>Application Layer</th>
<th>Driver &amp; Service Layer</th>
<th>Hardware Layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>myGaze Application</td>
<td>myGaze Eye Tracking Server</td>
<td>myGaze Eye Tracking Device</td>
</tr>
<tr>
<td>Morae Plugin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>other VI or 3rd party application</td>
<td></td>
<td></td>
</tr>
<tr>
<td>API / SDK</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This structure consists of an Application Layer, a Driver and Service Layer, as well as a Hardware Layer. These layers are described in the following sections.

**Application Layer**

The top layer is the Application Layer. It consists of the myGaze Application and any additional application software such as the VI Eye Tracking Plugin for Morae 3.3, or a 3rd party application. This layer also provides the API through which applications in the top layer communicate with the myGaze Eye Tracking Device. *Please note that for "other VI or 3rd party software applications" compatibility verification is required.*

**Driver and Service Layer**

The Driver and Service Layer consists of the myGaze Eye Tracking Server and the USB 3.0 Driver provided by the Windows operating system. The myGaze Eye Tracking Server provides the Kernel which processes information from the myGaze Eye Tracking Device and sends the resulting data to the application layer via an API.

**Hardware Layer**

The Hardware Layer consists primarily of the myGaze Eye Tracking Device and other required hardware. It communicates with the myGaze Eye Tracking Server over a USB cable connected to a USB 3.0 port. The Windows operating system provides a standard status indicator that informs the user the myGaze Eye Tracking Device is now connected. The
standard method of disconnecting from USB devices is also used with the myGaze Eye Tracking Device.

6.4 Removing the Mounting Bracket

The magnet used to attach the Mounting Bracket onto the Magnetic Strip is very strong. When the Magnetic Strip is not firmly glued to a surface, removing the Mounting Bracket from the Magnetic Strip is not easy. You can detach the Mounting Bracket from the Magnetic Strip by inserting a pin in the detachment hole provided on the Mounting Bracket.

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6.7 Declaration of Conformity

CE Declaration of Conformity

Visual Interaction products are for use in office environments and bear the CE mark to indicate compliance with the health and safety requirements according to European Directives. For individual product declarations please refer to info@myGaze.com.

FCC Declaration of Conformity

All Visual Interaction eye tracking equipment has been tested and found to comply with the limits for Class B digital devices, pursuant to
Part 15 of the FCC Rules and EMC directive 2004/108/EEC, and conforms to the low-voltage directive 2006/95/EEC.
Index

- . -

.NET Framework 4.0 Client 23
.NET Framework Version 4.0 93

- 0 -

0 Point Calibration 74

- 1 -

1 Point Calibration 74

- 2 -

2 Point Calibration 74
2 points 70

- 3 -

3D eye position 91

- 5 -

5 Point Calibration 74
5 points 70

- 9 -

9 Point Calibration 74
9 points 70

- A -

About VI 2
Accept Points 70
Additional Software 22
Advanced Calibration 74
API/SDK 91
Application Layer 96
auto-update 93

- B -

Background Color 15, 70
background processes 93
background scan 93
Blink recovery time 91

- C -

Calibrate 79
Calibration 69, 74
Calibration mode 91
Calibration Monitor 79
calibration point area 79
Calibration Points 70
Calibration Screen 79
Calibration Speed 70
Calibration tab 70, 79
CE Declaration of Conformity 105
Circle 70
clean 9
components 12
Connected 48
Connecting... 48
Copyright 98
CPU 93
create a user profile 57
Creating a User Profile 57
Cross 70

- D -

Data 91
default user profiles 57
Default Values 70
delete a user profile 60
Deleting a User Profile 60
dilate 15
myGaze® Eye Tracking System

Dimensions (width x height x depth) 91
- E -
  Driver 22
  Driver and Service Layer 96
  European Directives 105
  Eye Tracker Running 48
  Eye tracking mode 91
  Eye Tracking Monitor 50
  Eyewear compatibility 91
- F -
  FCC Declaration of Conformity 105
  Firmware Outdated 93
  Full Screen Mode 79
- G -
  Gaze data 91
  Gaze position accuracy 91
  Geometry tab 70
  glasses 15
- H -
  Head movement velocity 91
- I -
  Image 70
  Installation Wizard 23
  Interface Setup 91
- L -
  Laptop 12
  Left or Right Adjustment 50
  Licence Agreement 99
- M -
  Maintenance 9
  Microfibre Cleaning Cloth 12
  Monitor, Size Requirement 13
  Mounting Bracket 12
  myGaze Eye Tracking System 96
  myGaze Software Structure 96
- N -
  New Installation 23
  New Profile 57
  No device detected 48
  Not Connected 93
  Notebook PC 93
- O -
  Operating distance 91
  Operating System 91
  Requirements 13
  Optimal Position 50
  Optimal User Conditions 15
- P -
  PC hardware
    Requirements 13
  PC Interface / Power 91
  Physical Layer 96
  Positioning Triangle 12
  power configuration 93
  Profile field 57
  Pupil diameter 91
  pupils 15
- R -
  repair 9
Required Software  22
Rubber Pads  12
Ruler  12
run a calibration test  79
run a validation test  79
run the Installation Package  23
Running VI myGaze  48
- S -

screen size  79
SDK  22
select a user profile  59
Select Monitor  70
Select Profile  57, 59
Selecting a User Profile  59
shut down  54
Software compatibility  91
Software Structure  96
Spatial resolution (RMS)  91
System latency (end to end)  91
System requirements
  Monitor size  13
  Operating system  13
  PC hardware  13
  USB port used  13
- T -

Target Color  70
Target File  70
Target Shape  70
Target Size  70
Technical Specifications  91
Technology  91
Techsmith Morae Plug-in  22
Time limitation exceeded  93
Timestamp  91
Tracking range (head box)  91
Tracking recovery time  91
Trademarks  98
Troubleshooting  93
- U -

Update  23
USB 2.0  91, 93
USB 3.0  93
USB Cable  12
USB connected devices
  Using with Eye Tracker  13
USB devices  93
USB port  9, 23, 96
USB selective suspend  93
User Profile  57
- V -

Validate  79
virus scan  93
- W -

Warnings  5
Warranty  99
Weight  91
Windows 7  23, 91