Configurable From : € 2740 *Academic discounts available

Open and Accessible.

Pupil Core is an eye tracking platform that is comprised of an open source software suite and a wearable eye tracking headset. It has grown into an open platform used by a global community of researchers. Venture into new areas of inquiry.

Adapt

Pupil Core is used for a diverse range of research purposes. The headset is modular, durable, and lightweight.

Add eye tracking to your research. Use Pupil core for gaze estimation, pupillometry, and egocentric vision research. Adapt our hardware to suit your needs. Build novel prototypes.

Extend

A lot of work went into making our software modular and accessible.

If you're a user, you don't have to write a single line of code. Just use our software like any other app.

If you're a developer, you can use our network based API to connect to other devices and computers. Easily add your custom features by writing a plugin in Python. Load plugins at runtime in the app. Want to do even more? You can! Check out the source code on github.

```python
from plugin import Plugin
from pyglui.cygl.utils import draw_points_norm,RGBA

class Display_Recent_Gaze(Plugin):
  """
  DisplayGaze shows the three most
  recent haze position on the screen
  """

  def __init__(self, g_pool):
    super(Display_Recent_Gaze, self).__init__(g_pool)
    self.order = .8
    self.pupil_display_list_ = []

  def update(self,frame,events):
    for pt in events.get('gaze_positions',[]):
      self.pupil_display_list.append(pt['norm_pos'])

    self.pupil_display_list[:-3] = []

  def gl_display(self):
    draw_points_norm(self.pupil_display_list,
                     size=35,
                     color=RGBA(1.,.2,.4,.6))

  def get_init_dict(self):
    return {}
```

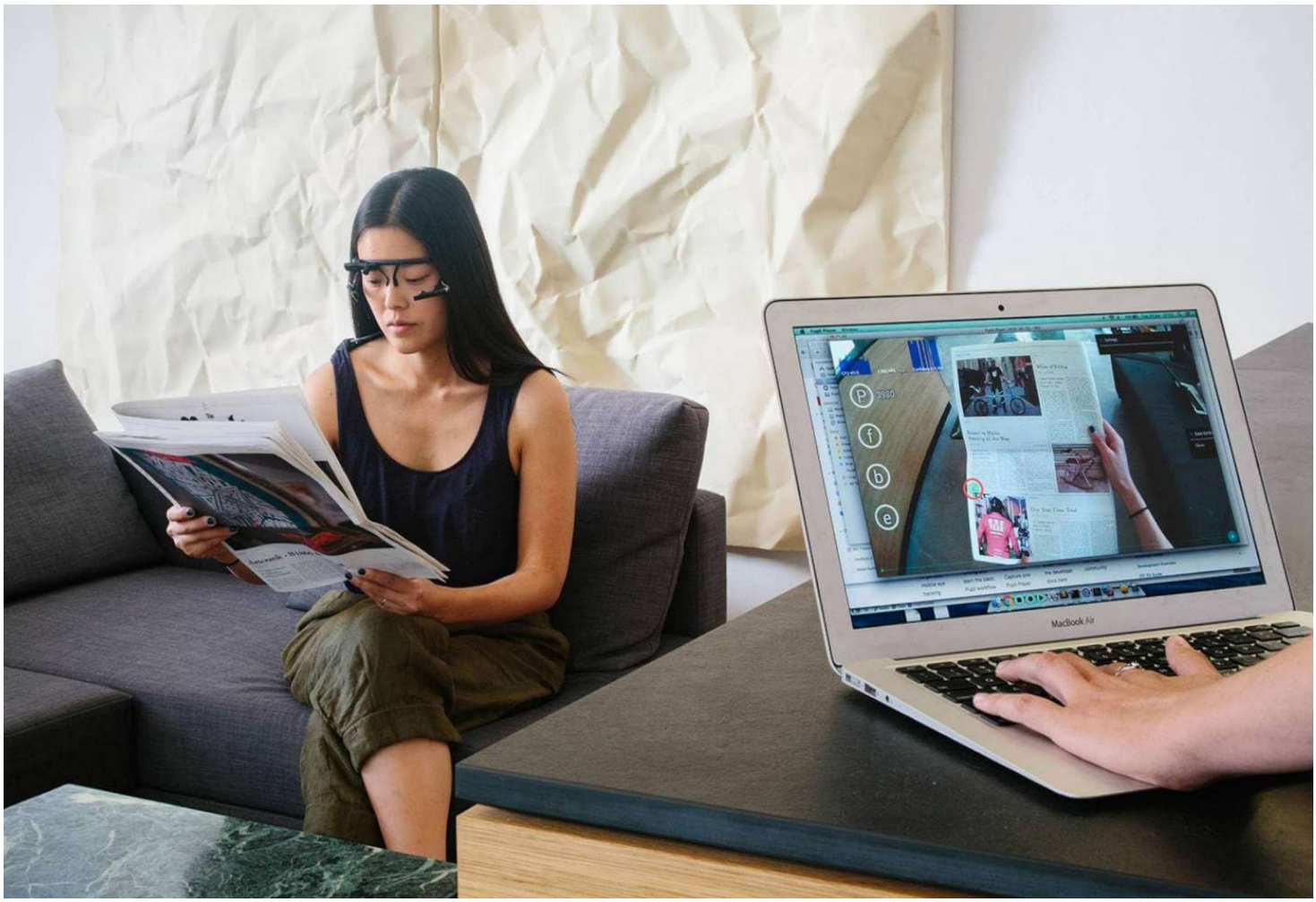
Binocular

Our most versatile eye tracking headset. Get robust binocular pupil data, gaze data, and first person field of view video.

Eye Movement Research

Only need data for pupillometry? Use this configuration and get robust binocular pupil data in real-time or for post-hoc analysis.

Pupil software runs on macOS, Linux, and Windows 10. Pupil software enables you to record, visualize, and analyze eye tracking data. Pupil software is open source and updates are released on a regular basis. Use Pupil Capture for data acquisition and real-time applications. Pupil Player for visualizationa and analysis (post-hoc). Pupil Mobile for data acquisition and streaming. You can easily extend functionality of Pupil by developing your own plugins in Python or modify the source code!



Record.

Pupil Capture

Connect your Pupil Core headset to a desktop or laptop. View and record real-time gaze and pupil data. Interface with other devices with our network based API.

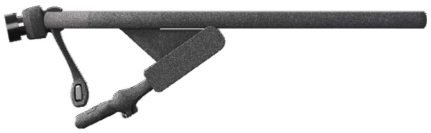
Play.

Pupil Player

Drag and drop your recordings into Pupil Player. Build rich visualizations of gaze on first-person video. Enrich your data with analysis plugins. Export raw data and enriched data for further analysis.

Frame

22.75 g
W: 160
H: 51mm
D: 175 mm



Gaze Accuracy	**Accuracy** 0.60º	**Precision** 0.02º
Pupil Tracking	Dark Pupil with 3D model	
Pupil Parameters	2D Position 3D Eye model parameters	
Gaze Parameters	**2D Gaze** Normalized 2D gaze position	**3D Gaze** 3D gaze rays + 3D gaze point through binocular vergence
Pupil Diameter	Relative size in eye camera pixels, absolute size in mm through 3D eye model	
Calibration	5 point calibration. Multiple calibration methods available. See documentation	
Sampling Frequency	**Eye Camera** 200Hz @ 192x192px	**Scene Camera** 30hz@1080p 60hz@720p 120hz@480p
Latency	**Eye Camera** 8.5ms	**Processing Latency** Depending on CPU typically > 3ms
Slippage Compensation	Yes, through 3D eye model	
Recording	Pupil and gaze and user data Raw eye and world video	
Connectivity	Pupil Core headsets connect via USB to your laptop or desktop computer running Pupil Core software. Pupil Capture destop app enables data capture, recording, and	real-time data relay via WiFi or LAN. Please see network API documentation for more info.

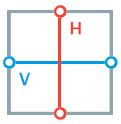
Physical Properties

Material
PA12 Nylon

Scene Camera FOV

Wide Angle Lens
1080p H:139 V:83
720p H:99 V:53
480p H:100 V:74

Narrow Angle Lens
1080p H:88 V:54
720p H:63 V:37
480p H:42 V:32



Measured from the midpoint of the frame edge for both horizontal and vertical values.

Sample Recording

Download sample recording

Desktop Software

Pupil Capture
Real time application.
Download

Pupil Player
Post-hoc visualization and analysis. Download