

**Connect your
mind to VR.**

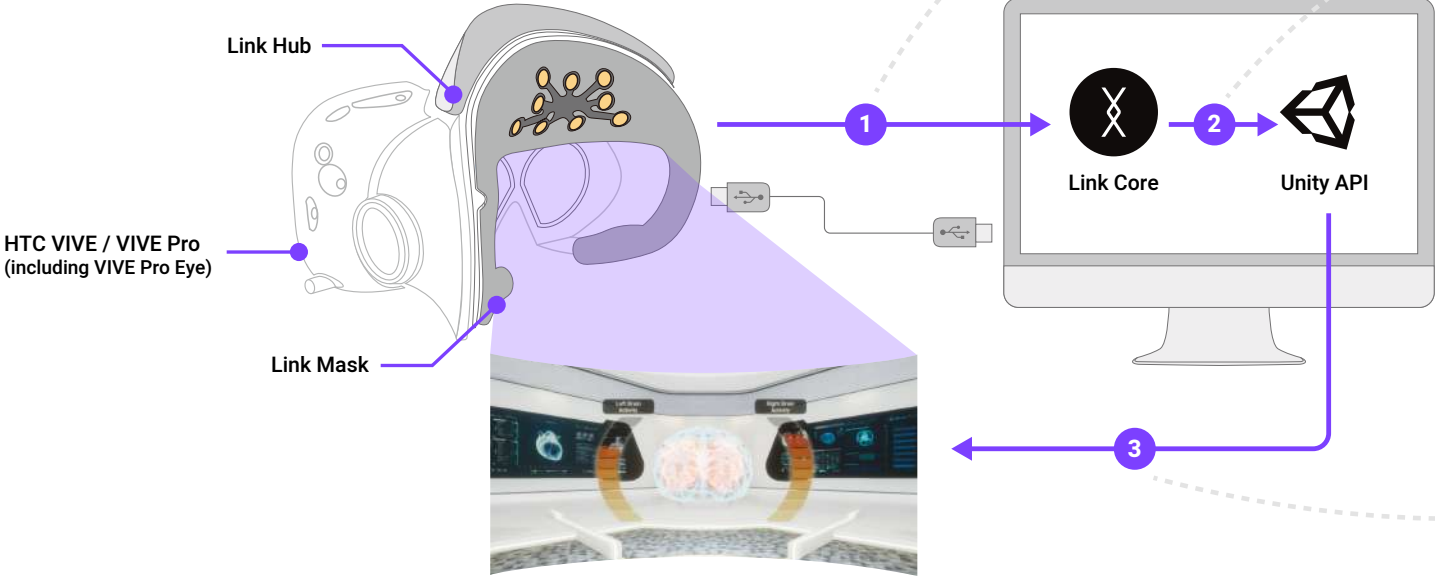
LOOXIDLINK



How Looxid Link Works

The Looxid Link integrates its capabilities into the virtual reality components of the HTC VIVE and VIVE Pro (including VIVE Pro Eye).

On the hardware aspect, the Looxid Link is added on to the HTC VIVE or VIVE Pro. It senses the EEG signals and, by means of our software, allows you to take advantage of the commands in the API to apply EEG into the VR environment.





1

The gold-plated EEG sensors on the Looxid Link Mask detect the user's brainwave signals on the prefrontal area of the brain (forehead area). The Looxid Link Hub quantifies the small voltages of the brain that arise from brain activity and streams high quality of EEG data at 500 samples per second to your computer.



2

Using our Link Core, you can integrate the retrieved signals into the VR contents that the user is experiencing. The Link Core processes the raw EEG data and provides analytical information such as attention, relaxation, and brain balance, as well as basic characteristics of brainwaves including delta, theta, alpha, beta, and gamma per 200ms. Using the Unity API for the Looxid Link, you can create your own original contents or test the demo apps, applying different commands that best fit your content.

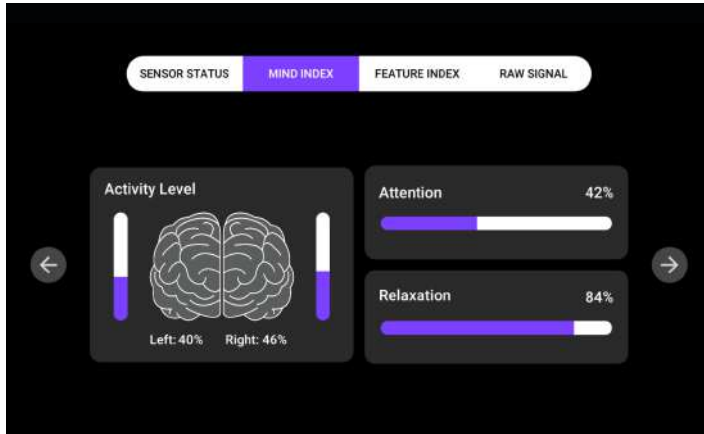


3

You can make use of the different mind and feature indexes, as well as the examples – basic 2D/3D visualizer and interaction playground demo, to create a wider range of apps. By integrating commands that use EEG signals, you can connect users' minds to VR using the HTC VIVE or VIVE Pro and have experiences that are beyond the contemporary means of interfaces.

Visualize,

Visualize users' mind using brain data in VR.



2D Visualizer

Available in both VR and PC environments, it allows you to check not only VR users' raw signals and feature indexes for each EEG channel, but also mind indexes in real time.

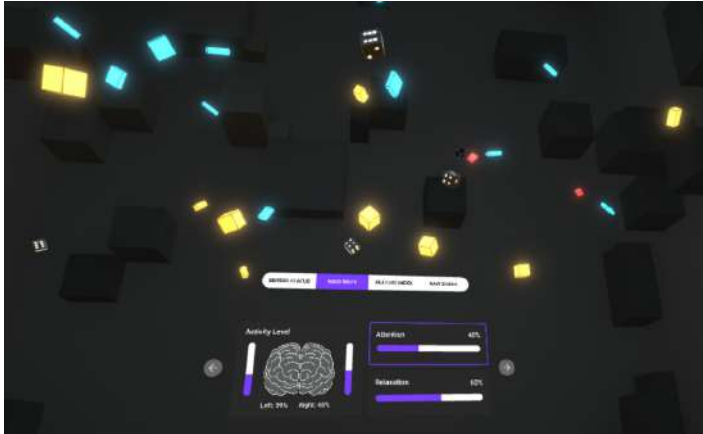


3D Visualizer

Available in both VR and PC environments, it allows you to check VR users' mind and feature indexes in real time. 3D view in VR and 2D view in PC screen.

Interact,

Customize new dimension of interaction in VR.



Interaction Playground

The Interaction Playground, as its name indicates, is a demo app where users can use their brain signals to levitate the boxes into the air using Looxid Labs' algorithms to detect attention.



Neurogaming in VR

You can implement a neurogaming interface in variety of superpower and FPS games using Looxid Link's Unity API, which provides VR users' real-time mind indexes.

Interact,

Customize new dimension of interaction in VR.

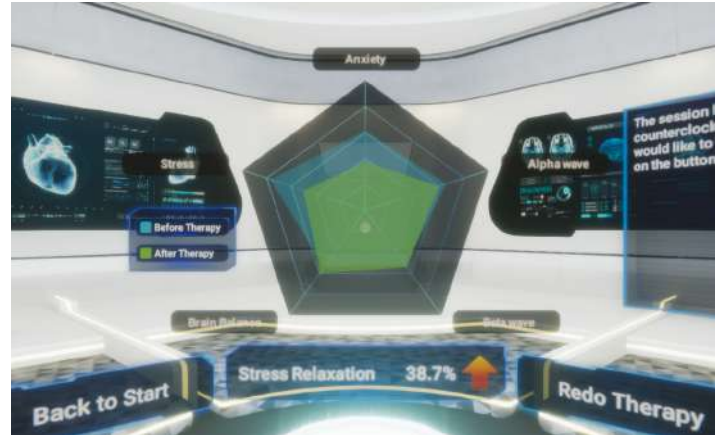


VR Mind Care

The VR Mind Care is a VR guided meditation app where users can make use of the advantages of VR. Looxid Link's real-time mind and feature index information can be used to construct a whole new neurofeedback therapy system in VR.

& Analyze.

Analyze users' mind in VR.



Biofeedback

While clinical biofeedback has proven to be an effective way of treating mental disorders, VR can provide further immersive biofeedback visualization. EEG can be effectively used to track VR users' mental status.

Software Features



Unity API for VR

The Link provides an easy-to-use API based on Unity. Using our Unity API, you can not only connect the Link to the VR application but also stream the EEG data and configure your own creative content using various assets provided via the Unity API. As an advantage of the Unity engine itself, you can develop and export the companion apps to several digital platforms - PC, mobile, and VR.



Real-time data access for VR

The Link streams high quality EEG data at 500 samples per second. The core software of the Link processes the raw EEG data and provides analytical information such as attention, relaxation, and brain balance, as well as basic characteristics of brainwaves including delta, theta, alpha, beta, and gamma per 100ms. You can access your EEG data in real time using our Unity API and utilize it to develop your own VR applications.



VR examples

The basic functions of the Link are provided with examples of data visualization, interaction with the user's EEG data, and analysis of EEG data. Our examples enable you to: i) create your own unique visualization applications; ii) design EEG-based neurogaming applications; iii) collect and analyze raw EEG data to get valuable user insight.

Hardware Features



Prefrontal 6 Channel EEG

Sensor placement around the prefrontal cortex, which is highly associated with cognitive control for emotional information. (Sensor locations: AF3, AF4, AF7, AF8, Fp1, Fp2)



EEG Sensor Technology

Research-graded robust and reliable data acquisition system with 24-bit resolution per channel. 500Hz sampling frequency.



VR Compatible Mask

Full forehead detachable mask with lightweight and user-friendly design requiring minimum set-up time.



Flexible Electrodes

Comfortable fit for VR user using flexible electrodes.



** Can be used with HTC VIVE and VIVE Pro (including VIVE Pro Eye).*

Specifications

EEG Sensors

Electrode Placement	6 channels (AF3, AF4, AF7, AF8, Fp1, Fp2), 1 reference (FPz at extended 10-10 system)
Electrode Type	Dry electrodes on flexible PCB
Sampling Rate	500Hz
Resolution	24 bits per channel (with 1 LSB = 0.27 μ V)
Filtering	Digital notch filters at either 50Hz or 60Hz, 1-50Hz digital bandpass filter
Power Isolator	Built-in
Input Differential Dynamic Range	360mV
Signal Input Coupling	DC

Connectivity

Cable	USB 2.0 connected
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Real-time Data Access

Raw EEG Data	500Hz (with/without filter options)
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Feature Indexes* and Mind Indexes**	5Hz
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** alpha, beta, gamma, theta, delta ** attention, relaxation, balance*

System Requirements

GPU	Nvidia GeForce GTX 970, AMD Radeon R9 290 equivalent or better
CPU	Intel i5-4590, AMD FX 8350 equivalent or better
RAM	4GB or more
Video Output	HDMI 1.4, DisplayPort 1.2 or newer
USB Port	1x USB 2.0 or newer (if using HTC VIVE Pro, 1x USB 3.0 or newer)
Operating System	Windows 10

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