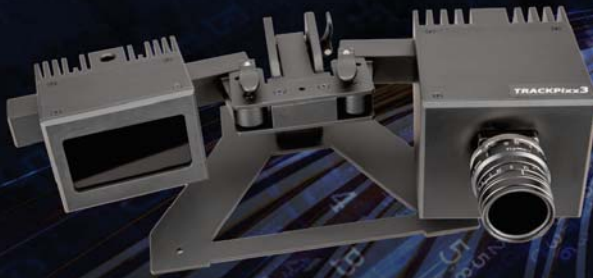




TRACKPixx3



Tabletop setup with chinrest



Remote tabletop setup with slave tracker

CONFIGURATION

- MRI / MEG setup available
- Easy setup
- Eliminates tracker PC

SYNCHRONIZED DATA ACQUISITION

-The TRACKPixx3 also includes all DATAPixx3 I/O subsystems (digital, analog and audio I/Os) which can be used to synchronize and obtain microsecond accurate timetags for responses or triggers.

DETERMINISTIC TIMING

- VideoBahn interface
- 1.7 ms latency
- New eye positions are computed every 0.5 milliseconds

2 kHz binocular Eye Tracker



OVERVIEW

The TRACKPixx3 is a 2 kHz eye/gaze tracking solution. The TRACKPixx3 is versatile, supporting both monocular and binocular tracking with a single mechanical configuration. Interchangeable lenses support tracker distances from 60 cm to over 160 cm for fMRI applications. Add a second low-cost slave tracker to support remote head-free tracking.

The TRACKPixx3 does not require a dedicated PC to process eye images and generate gaze information; all image processing is performed within the TRACKPixx3 hardware. Gaze data can be logged within the TRACKPixx3, and retrieved by the testing PC with a simple low-latency USB interface.

The TRACKPixx3 video feed can be accessed directly through a console display for real-time visualization and adjustment of the tracker. A scene camera can also be connected to the tracker to monitor the experiment. These video feeds can also be accessed through the USB interface for remote control of the TRACKPixx3.

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SPECIFICATIONS

Installation Type	Tabletop	Tabletop remote ¹	MRI	MEG
Sampling Rate	2 kHz Binocular	2 kHz Binocular	2 kHz Binocular ²	2 kHz Binocular
Eye Tracking Method	Pupil with corneal reflection			
Accuracy ³	0.20° - 0.60°			
Spatial Resolution ⁴	0.01°			
Tracking Precision with Subject Fixations ³	0.04°	0.05°	0.04°	0.04°
Blink Recovery Time	1 frame (0.5 ms)			
Real Time Data Access	Deterministic 1.70 ms via Analog Outputs, 1.95 ms via USB			
Pupil Size Accuracy	±0.1 mm			
Allowable Head Movement	Head Restricted Movement	30 cm x 30 cm at 60 cm	Head Restricted Movement	Head Restricted Movement
Optimal Range of Use	40 cm – 90 cm		Standard distance of operation	
Glasses Compatibility	Yes			
Data Output	Raw and calibrated eye position, pupil size (major and minor axis), angle of pupil, digital inputs, custom messages, blink detection. All the data are perfectly synchronized to your video stimuli.			
Infrared Wavelength	850 nm – 910 nm			
Console Monitor	Console monitor connected directly to the TRACKPixx3 can show a combination of: stimuli, eye(s) with eye tracking status and scene camera			
Button Box Interface	RESPONSEPixx series is compatible: 24 digital inputs and outputs			
Analog Output	Analog outputs for data of your choice			
Tracker Computer	Not Required			
Suggested Lens	50 mm	25 mm	75 mm	75 mm

¹TRACKPixx3 remote uses a slave tracker. No head mounted target required.

²Binocular is available depending on the head coil used. Both eyes need to be in clear view of the TRACKPixx3 camera for binocular recording.

³Measured with human eyes.

⁴Measured with artificial eye.

SOFTWARE

Software support includes a low-level ANSI C API, MATLAB/Octave and Python libraries for use under Mac OS X, Microsoft Windows, and Linux.



*** DATAPixx3, and InfraRed illuminator options should be considered

ORDERING INFORMATION

Description: TRACKPixx3 2kHz single camera binocular eye tracker

P/N: VPX-TRK-3410C

Description: TRACKPixx3 MRI 2kHz single camera binocular eye tracker

P/N: VPX-TRK-3500C

Description: TRACKPixx3 Slave eye tracker

P/N: VPX-TRK-3420

