

# HOME CAGE MONITORING



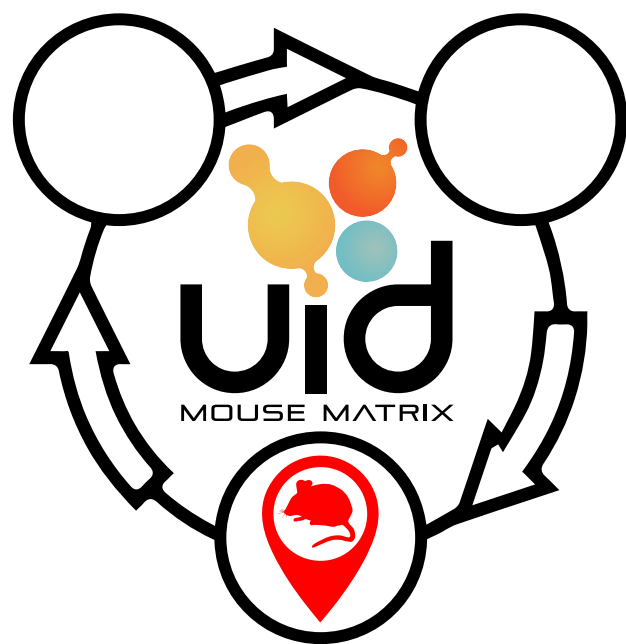
## Discover the Unmatched Benefits of Undisturbed Home Cage Monitoring For Your Laboratory Mice.

The Mouse Matrix lets you track the behavior, activity, and overall health of your mice continuously without disturbing their natural environment. This allows for more accurate and reliable data collection, reducing the need for invasive procedures and minimizing stress on the animals. Improve the quality of your research and ensure the well-being of your mice with cutting-edge home cage monitoring technology from Unified Information Devices (UID).

## The UID Mouse Matrix is Ideal For Individual Temperate and Activity Tacking of Group-Housed Animals.

The Mouse Matrix is a radio-frequency identification (RFID) reader board designed to track the movement, location, and temperature of group-housed mice in their home cage environment. The continuous monitoring system operates 24/7, collecting data in real-time and providing researchers with an up-to-date view of the animals' temperature and activity.

**The UID Mouse Matrix enables automatic, continuous, and remote monitoring of temperature and activity for group-housed mice without researcher interference.**



## CONVENIENT AND EASY TO USE



### Insert Microchip

Simply insert a miniature transponder into the animals and return them to their cage. The UID temperature-sensing microchip allows for seamless animal tracking capabilities and reliable temperature measurements with  $\pm 0.1^{\circ}\text{C}$  accuracy.



### Place Reader Board

Position the Matrix reader beneath each cage to monitor continuously and without interruption. The reader scans the cage for any microchip within range, which then activates and sends relevant data, including animal ID, temperature, location, time/date, to the data collection software.



### Collect Data

The UID Matrix Software stores data from reader boards every 100-250 milliseconds, enabling real-time capture of physiological (temperature) and behavioral (locomotor activity) biomarkers. This data can be accessed remotely for detailed analysis.

## MULTIPLE RESEARCH APPLICATIONS

The measurement of locomotor activity and animal temperature is crucial in determining the health and well-being of animals, as well as in evaluating the effects of disease, observing spontaneous behavior, and determining the effectiveness of new therapies. The UID Mouse Matrix provides valuable information in a wide range of research areas, including:

Behavioral Neuroscience

Sleep research

Infectious diseases

Humane endpoints

Psychiatric disorders

Thermoregulation studies

Vaccine development

Studies of circadian rhythms

Longitudinal analysis of animal cohorts

Drug efficacy and safety studies

Social interactions and behavior

Spinal muscular atrophy

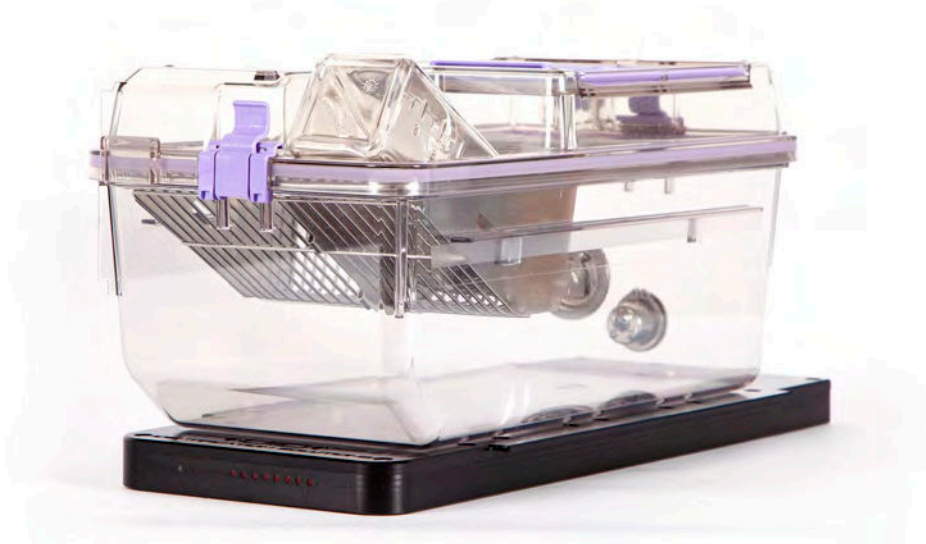
Cancer immunotherapy

Neurodegenerative disorders

Learning and memory

Aging and longevity research

Metabolic research, including diabetes and obesity



## KEY BENEFITS



### Continuous Monitoring

Intensive around-the-clock monitoring of mice in their home cage environment allows measurement of progressive behavioral and physiological changes over long periods. The system lets you evaluate digital biomarkers in completely undisturbed, group-housed mice, generating more accurate and reliable research data.



### Remote Access

The system actively records the animals' activity and temperature data in real-time. These events are processed by the Matrix Software throughout the study and data can be accessed remotely for further analysis. This can be useful to better understand social behavior or evaluate test article effects in undisturbed animals.



### Automated Data Collection

Increase experimental accuracy, reproducibility, and objectivity with automated data collection. Automatic and objective tracking of digital biomarkers reduces errors and experimenter bias associated with subjective manual data collection.



### Enhanced Animal Welfare

Automated temperature and activity tracking offers a non-invasive approach to monitoring animal health. The 24/7 data collection and remote viewing capabilities minimize the need for manual health checks, reducing animal handling and stress.

## STREAMLINE ANIMAL HUSBANDRY PROCESSES

The system provides continuous monitoring and tracking of all cages in the facility, enabling accurate colony management and animal census, as well as improving facility efficiency and productivity. Using animal activity, cage density, and time in the cage, the system can suggest when cage changes should be performed, optimizing animal welfare and reducing the need for manual intervention.

## UNIQUE FEATURES

- High frequency readout – multiple antennas capture and report data as fast as every 100 milliseconds
- 6-, 8- or 12-zone reader plate configuration
- Standalone system or networked for multiple cages on a rack
- Immediate access to data or exported to excel for extensive analysis
- Intuitive software for enhanced user experience
- Alerts for critical indicators or animal health and welfare
- Available for mice, rats, and other small rodents

### Versatile Design Ideal for Any Lab Animal Facility

The UID Mouse Matrix offers a flexible and practical solution that can be adapted to different study needs and budgets. It can accommodate a single static cage, as well as large-scale monitoring projects involving hundreds of cages in high-density IVC rack systems. With its scalability and ease of use, the Mouse Matrix offers a valuable tool for any research facility.

- Benchtop or rack-integrated
- Small and large scale studies
- Static cage or high density IVC systems



*Completely compatible with modern high-density individually ventilated cage (IVC) rack systems capable of collecting spatial data for each individual animal at any given point in time.*

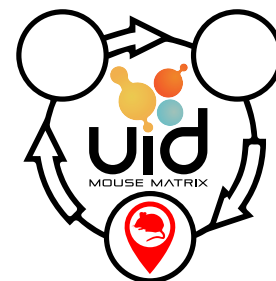


## COMPONENTS



### Temperature Microchip

Miniature RFID transponder with integrated temperature biosensor  
Temperature accuracy:  $\pm 0.1^{\circ}\text{C}$  @  $38^{\circ}\text{C}$



### Mouse Matrix Reader Plate

6-, 8- or 12-zone configuration  
Compatible with most static cages and select IVC rack systems



### Mouse Matrix Controller

PC w/ SQL Express  
Up to 10G data storage



### PoE Switch

Power and communication for up to 24 plates  
Scalable for IVC rack systems with >24 cages



### Mouse Matrix Software

Intuitive program provides data graphing and analysis  
Real-time access to data, and export to Excel for in-depth analysis

## FLEXIBLE PURCHASING OPTIONS

### Buy

Purchase as few as one Matrix plate and scale up as your experimental needs or budgets increase  
We've partnered with select animal housing manufacturers for use with IVC rack systems

### Rent

Reduce startup expenses and try before you buy  
Ideal for periodic, short-term duration studies  
Includes Matrix plate(s), controller, PoE switch and cables, software, remote installation and training

**CONTACT US FOR PRICING**

