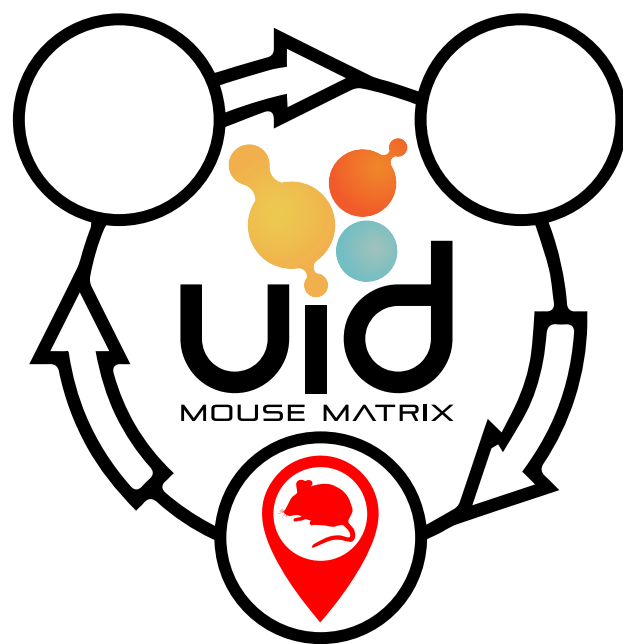# HOME CAGE MONITORING

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 ±0.1°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
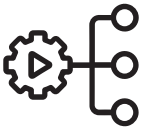Metabolic research, including diabetes and obesity

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.
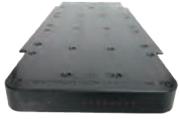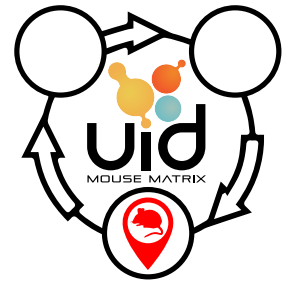
COMPONENTS

Temperature Microchip
Miniature RFID transponder with integrated temperature biosensor

Temperature accuracy: ±0.1°C @ 38°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