## Body Temperature & Body Weight Monitoring System In Rodent Using RFID Technology







# GBS

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#### **Pi Software**

The Pi Software Suite is the first fully integrated, RFID platform for laboratory information management. The Pi Software allows researchers to collect data from all RFID-labeled items and store it in one place for efficient tracking and management of laboratory resources. These data can be combined with other data sets to provide a comprehensive account of site activity and management. The Pi Software Suite provides a secure, automated and scalable tracking system for laboratory identification and management, animal census and billing, process verification and validation, and more. The Pi software platform can be customized to the specific needs of the researcher. It can be designed to record sample weights, verify dosing time points, control technician's activities, and more. Some common applications include animal or object identification, laboratory inventory management, controlled drug access, asset inventory and tracking, fish and wildlife tracking, and more.

Applications Include:



Animal Identification RFID Microchips



Weighing



Temperature



Blood Sampling TK/PK



Dosing



Personnel Management







#### **URH-1HP Reader**

The URH-1HP Reader is a long range, high-power scanning device designed to read encoded data from all UC-Series of UID implantable microchips, including the UID Temperature Microchips. Its portable, wireless design is ideal for general laboratory applications where mobility is necessary. The URH-1HP Reader connects to a computer system either physically with a USB cable or remotely using Bluetooth or wireless connection.

- Portable reader
- Compatible with all UC-Series of UID implantable microchips
- Recommended species: rodents (mice, rats, hamsters, rabbits)
- Recommended Routes: SC (all species), IP (mice, rats)
- Microchip programming: NO
- Reads temperature data (UCT-2112 Temperature Microchip): YES
- Connects to PC via USB or Bluetooth (wireless) interface
- HID Keyboard: YES
- Read range: 5.5-7.1cm
- Power: Lithium-ion battery
- Compatible for reading
- Requires a UBC-i2 battery charger





### **UID Specifications Sheet: Temperature Microchip (UCT-2112)**



The UID Temperature Microchip (UCT-2112) is a miniature, glass-encapsulated programmable transponder that provides positive animal identification and body temperature data with a simple scan. With intraperitoneally (IP) implanted microchips, core body temperature recordings are achieved with a high degree of accuracy of ±0.1°C.

The UCT-2112 Temperature Microchip contains a unique 8-digit, non-repeating, alphanumeric code for positive animal identification. This passive, battery-free microchip comes with an additional 16 characters of onboard memory that enables read/write programmable capabilities. A feature that allows researchers to program the microchip with useful "human readable" data, such as study or project number, genotype or animal DOB. Microchip programming can be done in cannula prior to implantation using the UPS-60 Chip Provisioning Station, or after insertion in the animal using the UID reader base station.

With dimensions of 2.1mm in diameter by 13mm in length, the UCT-2112 Temperature Microchip is ideal for use in mice, rats and larger laboratory animals. Each microchip is supplied individually packaged in a sterile, disposable cannula for quick, simple and harmless implantation using a wide range of reusable UID injectors.

Following a simple scan with an appropriate UID reader, the UCT-2112 Temperature Microchip sends its 8-digit ID code, programmed data and animal body temperature automatically to the reader screen or computer program (i.e, Microsoft Excel, LIMS). Microchip read distances of up to 8 inches are feasible depending on the selected UID reader.





#### **Technical Specifications**

- Application: Temperature and animal identification
- Species: All species (mice and larger lab animals)
- Size: 2.1mm x 13mm
- Temperature Accuracy: ±0.1°C @ 38°C
- Temperature read range: 25°C 50°C
- Implantable: IP, SQ or IM in mice and other species
- **Unique ID:** 100% unique 8-digit, non-repeating, alphanumeric RFID code. This code is permanent; it cannot be changed or deleted.
- **Programmable:** 1-16 alphanumeric characters for programming (read/write) with customized study information. Can be programmed in the cannula prior to implantation or in the animal. Once programmed it can only be removed or changed via UID Programming software.
- Availability: Provided in individually packaged in ETO sterile blister pack
- Availability: Provided in sharp, triple ground cannula (2.59mm O.D.) for easy insertion
- **Compatible Readers:** All UID readers with the Temperature Firmware installed (URH-1HP, URH-300HP, UBS-200, UBC-600)
- Biocompatible: Glass encapsulated (Shoutt 8625 Biocompatible Glass)
- **MRI Compatible:** Tested at 12T with no heating, movement, or loss of permanent or programmed data
- X-Ray Compatible: Yes
- Ultrasound Compatible: Yes









### **UPGI-Q Microchip Pistol Grip Injector with Ejector**



The UPGI-Q Microchip Pistol Grip Injector has a revolutionary ejector system for quick and easy removal of the needle assembly after injection. Simply squeeze the handle to inject the microchip and pull the ejector tab for safe disposal of used needles in a sharps container. This injector features an ergonomic design, which is ideal for preventing fatigue during multiple microchip implantations. It is compatible with all UID Implantable Transponders, including the UCT-2112 Temperature Transponder.

- Easy to use
- Reusable
- Compatible with UID Implantable Transponders (1.4mm x 8.5mm and 2.1mm x 12mm)
- Compatible with the UID Temperature Transponder (UCT-2112)