

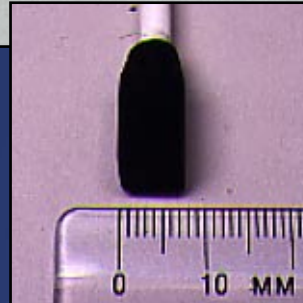
miniBIRD™

- Model 800
- Model 500

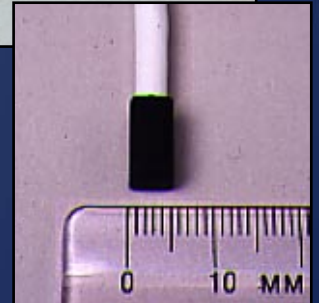
Miniaturized Sensors Real-time Tracking



miniBIRD sensors are now available in two models — 8mm and 5mm — increasing the possibilities for highly accurate internal space and movement tracking.



Model 800 — 8mm sensor



Model 500 — 5mm sensor

Magnetic tracking with amazingly small sensors!

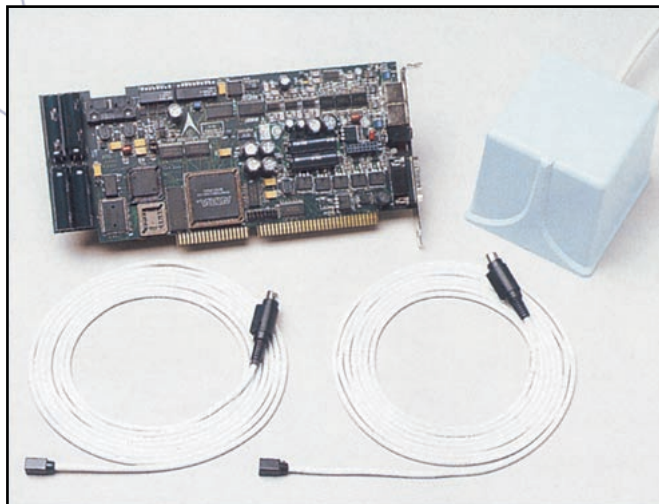
- **Position and orientation measurements** — of miniaturized sensors for instantaneous tracking of probes, scopes and instruments.
- **Unrestricted range of motion** — without occlusion; sensors fully tracked both outside and inside the body.
- **Proven clinical application** — in image-guided procedures, navigation and instrument localization.
- **DC magnetic tracking** — for use in the presence of scanheads and scopes as well as non-magnetic instrumentation.

Accurate. Unobtrusive. Non-radiating.
New from the Motion-Tracking Company

 **Ascension**
Technology Corporation

miniBIRD

Miniaturized Sensors Real-time Tracking



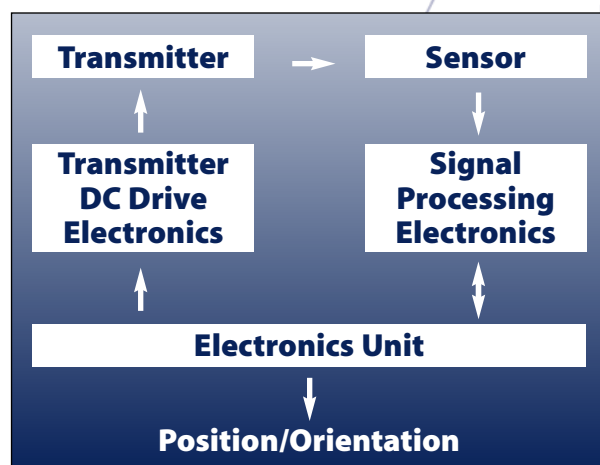
miniBIRD 800 is also available in an ISA-based configuration as shown above. Each card supports simultaneous tracking of two 8mm sensors.

Applications

- 3D ultrasound reconstruction
- Measurement of anatomical structure and function
- Instrument tracking and placement
- Laparoscope, endoscope, microscope tracking
- Placement of biopsy needles and biomedical devices
- Intrabody navigation, localization and guidance
- Real-time simulation and visualization
- Biomechanical monitoring and analysis

Benefits

- Miniaturized sensors allow internal measurements
- Simultaneous measurement of multiple sensors
- Unrestricted range of motion
- Tracking unaffected by tissue
- No line-of-sight blocking or mechanical restrictions
- Free interface software and technical support



miniBIRD Block Diagram

Notes on Accuracy

Accuracy is defined as the root mean squared (RMS) deviation of a true measurement of the magnetic center of a single sensor with respect to the magnetic center of a single transmitter measured over the translation range. Accuracy varies from one location to another over this translation range and will be degraded if there are interfering electromagnetic noise sources or metal in the operating environment.

Regulatory Certifications

- FCC Part 15, Class A
- CE: EN 50081-1, Class A
EN 50082-1, Class 2
EN 61010-1

Ascension
Technology Corporation

Call: 800-321-6596

Outside N. America: 802-893-6657

Visit our web site at: www.ascension-tech.com

e-mail: ascension@ascension-tech.com Fax: 802-893-6659

PO Box 527, Burlington, VT 05402 USA

Specifications

TECHNICAL – miniBIRD 800 model only.

Degrees of Freedom:	6 (Position and Orientation)
Translation Range:	±30" (76.2cm) in any direction
Angular Range:	All attitude: (±180° Azimuth & Roll, ± 90° Elevation)
Static Accuracy*:	Position: 0.07" (1.8mm) RMS Orientation: 0.5° RMS
Static Resolution:	Position: 0.02" (0.5mm) Orientation: 0.1° @ 12" (30.5cm)
Update Rate:	Up to 120 measurements/second
Outputs:	X,Y,Z positional coordinates and orientation angles or rotation matrix
Interface:	RS-232 with selectable baud rates to 115,200
Data Format:	Binary
Modes:	Point or Stream

PHYSICAL

Transmitter:	3.75" (9.6cm) cube with 10' (3.05m) cable
Sensor:	Model 800: 0.71" x 0.32" x 0.32" (18mm x 8.1mm x 8.1mm) Model 500: 0.40" x 0.20" x 0.20" (10mm x 5mm x 5mm) Both encapsulated with 10' (3.05m) cable.
Electronics Unit:	9.5" x 11.5" x 2.6" (24cm x 29cm x 6.6cm)
Power:	External plug-in: US/European version
Operating Temperature:	10°C to 40°C (50°F to 104°F)
Operating Humidity:	10% to 90% non-condensing

* Accuracy verified over range from 20.3cm to 76.2cm at constant orientation.



**CERTIFIED
ISO 9001**

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ATC 3/02