EndoGear4 is the first telemetry system to incorporate a transit-time flowprobe for blood flow measurement in addition to pressure, ECG and temperature, providing a complete hemodynamic profile for cardiovascular studies in rats and other small animals.

EndoGear4 is Transonic’s newest telemetry implant for rats and small animals, 250 g and larger, that now includes our gold standard transit-time flowprobes. Measure blood flow and arterial pressure in freely moving subjects without the complication and restriction of swivel tethers or commutators. Implants have bidirectional transceiver communication to turn implants on and off remotely to eliminate intervention artifacts. Implants also include temperature and acceleration/motion; ECG leads may be added as required.

EndoGear4 implants are user-configurable. Transonic miniature perivascular flowprobes are available for the ascending aorta (cardiac output), renal, carotid and femoral arteries. Solid state 1F sensors provide direct pressure measurements.

Finally, a telemetry implant for classic vascular resistance studies.
BASE STATION

The EG108 Base Station interfaces between the Implant, the E-GUI control software and the user chosen data acquisition system. It provides analog data outputs for all telemetered signals including a reference barometric pressure from the Base Station.

TRANSCIEVERS

Remote Transceivers transmit commands from the Base Station to the Implant via RF signals and receive data from the Implant. Transceivers are positioned near the animal subject and can be located up to 50 meters from the Base Station. Coverage in RF challenged environments may be maximized with low profile Transceiver Expanders.

E-GUI SOFTWARE

EndoGear3 Implant communication is controlled by the E-GUI software from a computer connected to the Base Station via a USB/COM Port. The E-GUI allows users to select Implant experimental subject groups, set up controls for each Implant, put Implants into Sleep (power save) mode, turn individual channels on and off, and set timed acquisition or triggered recording sessions.

NOTE: The E-GUI does not record data. A separate data acquisition system is required.

RAT BLOOD FLOW AND PRESSURE

Renal Artery Blood Flow
Cardiac Artery Blood Flow
Aortic Pressure
Temperature
Activity
Heart Rate

Transonic Systems Inc. is a global manufacturer of innovative biomedical measurement equipment. Founded in 1983, Transonic sells “gold standard” transit-time ultrasound flowmeters and monitors for surgical, hemodialysis, pediatric critical care, perfusion, interventional radiology and research applications. In addition, Transonic provides pressure and pressure volume systems, laser Doppler flowmeters and telemetry systems.