

# Ultrasonic intra-body communication system

## Design

- The purpose of this system is to simulate the human body communication link and lay the foundation for the development of body network communication.
- we build the circuit independently, and utilize an ultrasonic multiple access technology--ultrasound Wideband(UsWB), to overcome the difficulties in human communication.
- we design the circuits independently and use FPGA to realize the spread spectrum, processing of digital signals and external device control.

## Results

- We achieve the transmission of the hex documents and images through synthetic phantom mimicking the ultrasonic propagation characteristics of biological tissues, like Kidney, and our data rates also up to about 700Kbit/s.

