1. Background
1. Increasing of research activities in low invasive diagnosis systems recently
2. The system needs to be very small size and low power
3. Utilizing of capacitive sensor in the system

2. Asynchronous Processing and Dynamic Comparator
1. Lower speed clock $f_{\text{CLK}} = f_{\text{Sampling}}$
2. Intermittent movement

3. Differential Architecture

4. Simulation Results

5. Summary
1. A 10-bit very low power, small size direct Capacitance-to-Digital Converter is realized based on Charge Redistribution architecture
2. Asynchronous processing and a dynamic comparator lower power of the entire circuit
3. Differential architecture makes the circuit unaffected by the sensor variation