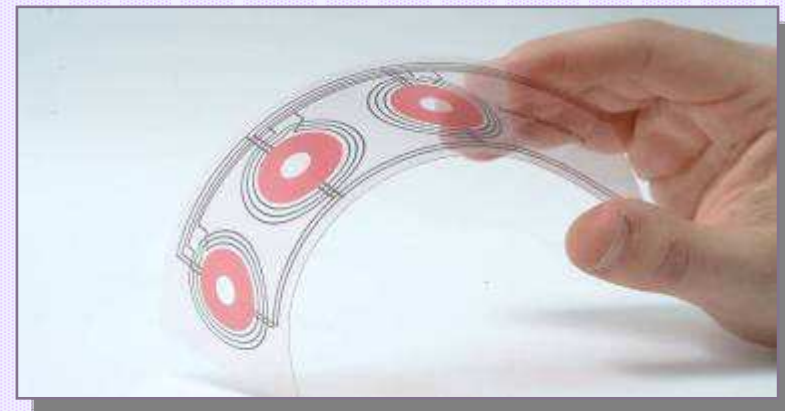


Precision in the Extreme

Contents

- ❑ **Company**
- ❑ **Background**
- ❑ **Technology**
- ❑ **Examples**
- ❑ **Commercial**

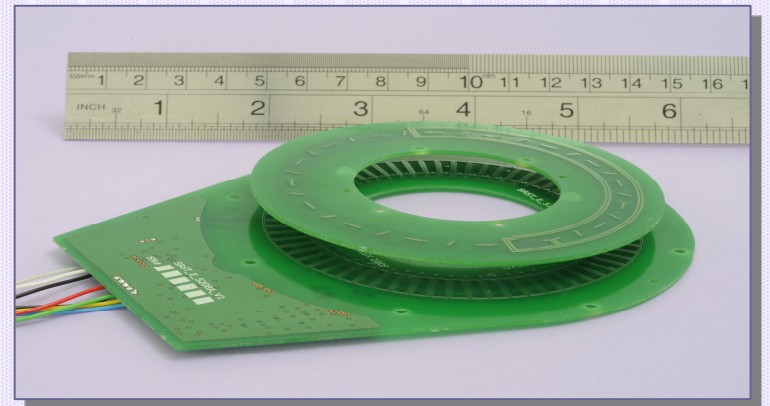




Precision in the Extreme

Company

- ❑ Private – 2004
- ❑ Position sensors
- ❑ ‘Precision in the Extreme’
- ❑ Cambridge & Bratislava
- ❑ ISO-9001 & EN-13980
- ❑ Industrial, defence & aero





Precision in the Extreme

Background

Inductive - *robust & safe **but** bulky & expensive*

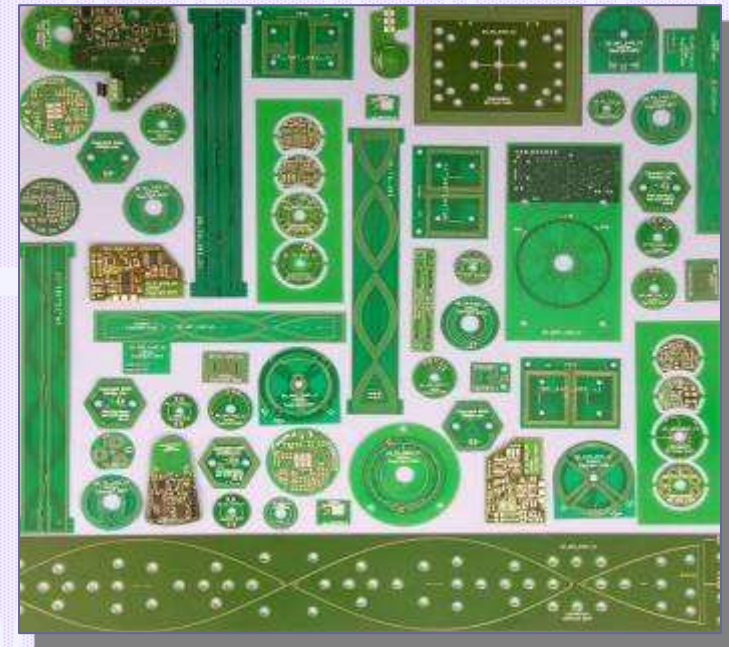
Optical - *precise **but** delicate*

Magnetic - *robust **but** needs precise mounting*

Potentiometers - *inexpensive **but** wear*

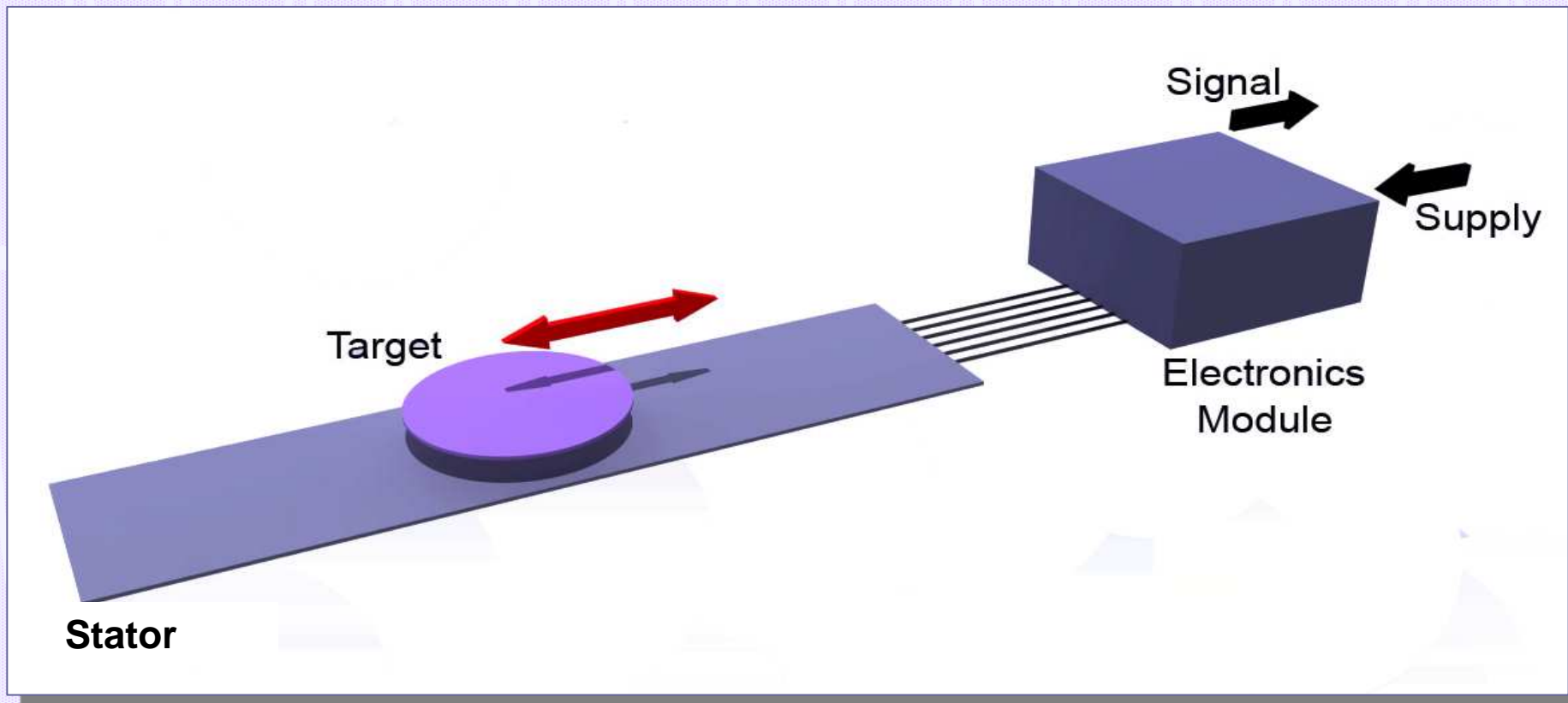
Zettlex Technology

- ❑ Inductive Transducers
- ❑ Printed
- ❑ Displacement
- ❑ Highly stable
- ❑ Absolute
- ❑ Multi-axis

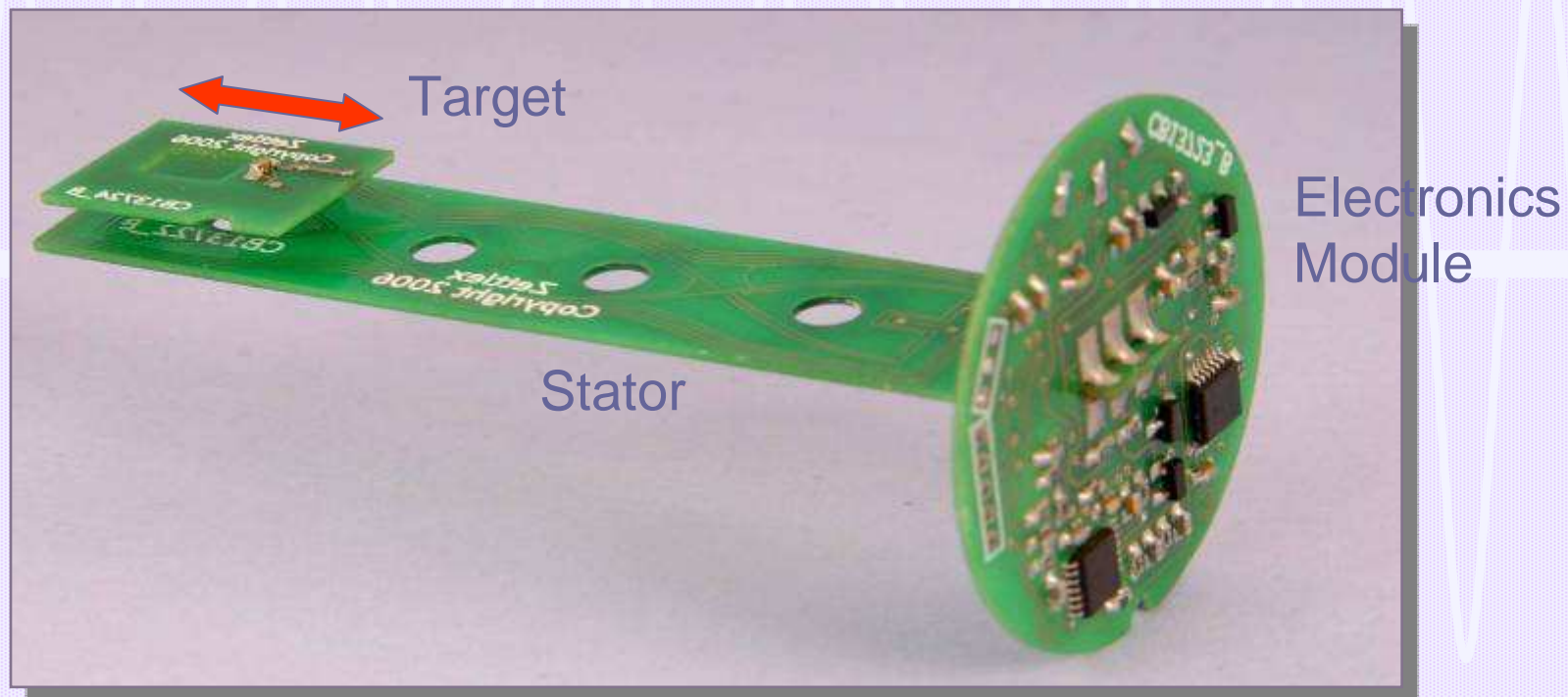


Inductive's advantages without the disadvantages

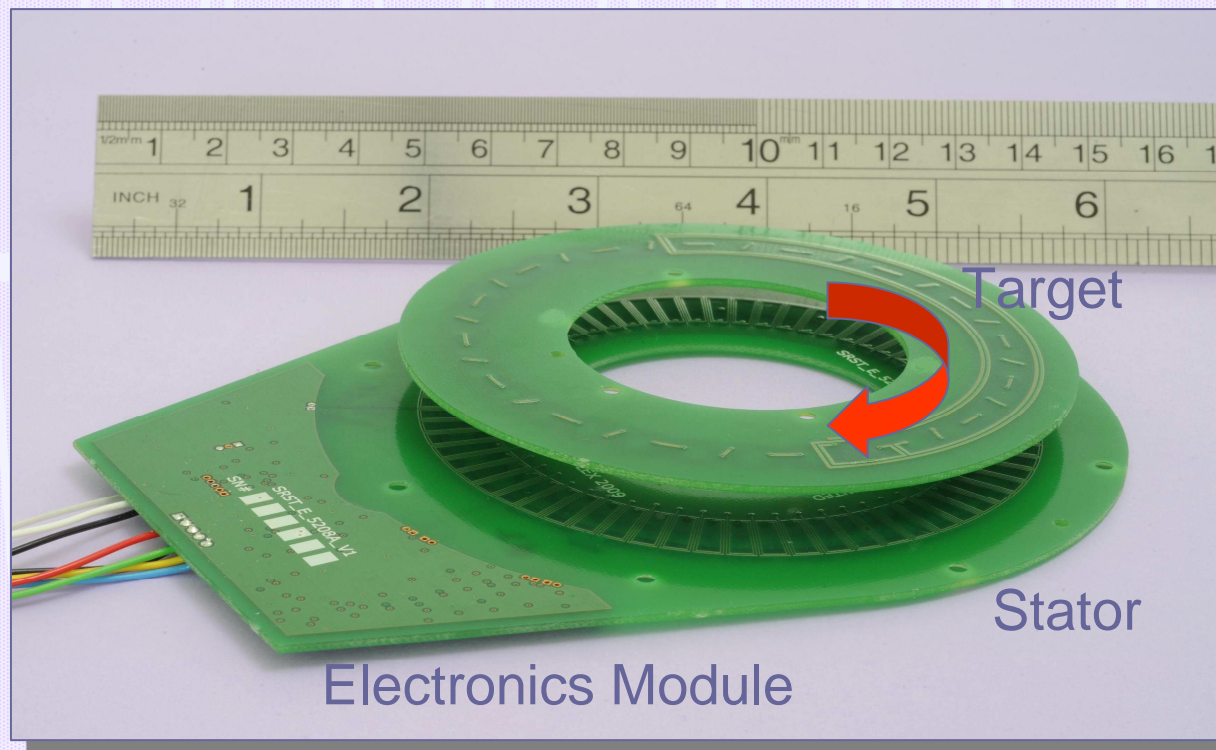
Zettlex Technology – *how it works*



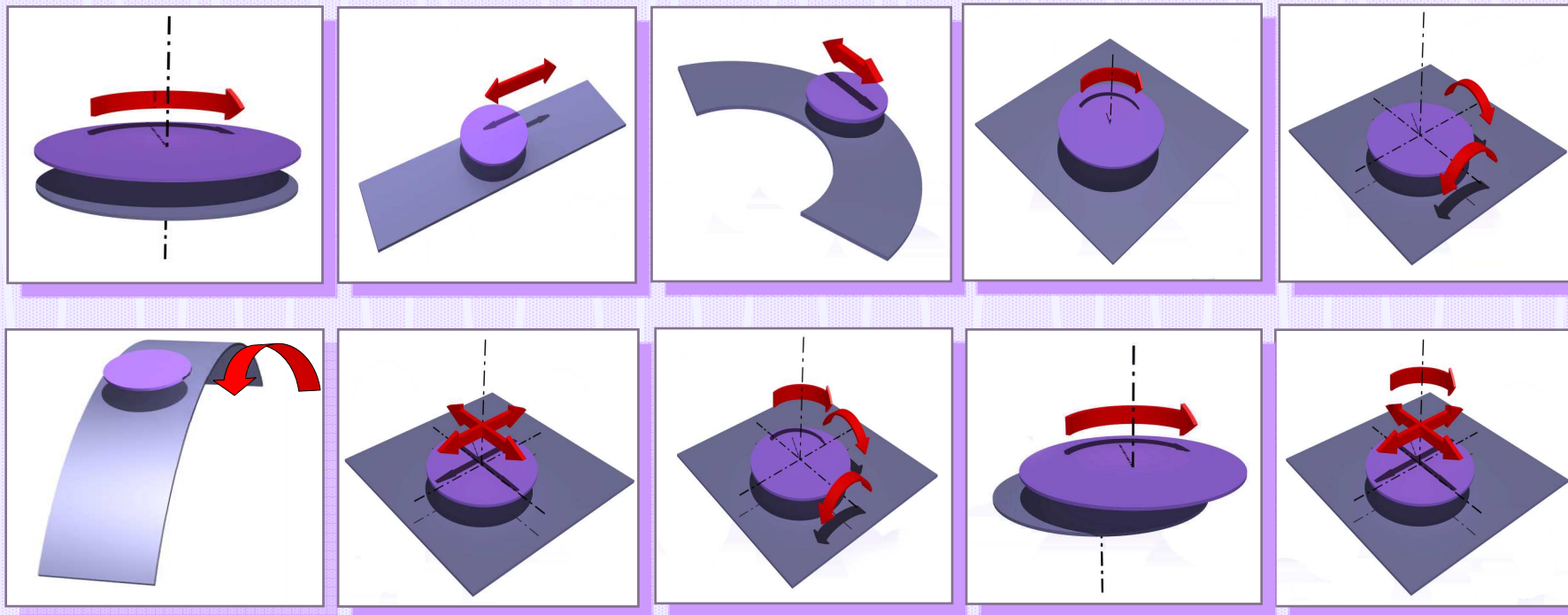
Zettlex Technology – *how it works*



Zettlex Technology – *how it works*



Zettlex Technology – 1 to 6 axes



Zettlex Technology – *the nitty gritty*

- ❑ Absolute
- ❑ 0,1mm – 10m
- ❑ $\leq 24\text{bits}^*$ +/-1 LSB
- ❑ Liquid immune
- ❑ -55 to 230°C**
- ❑ Negligible drift

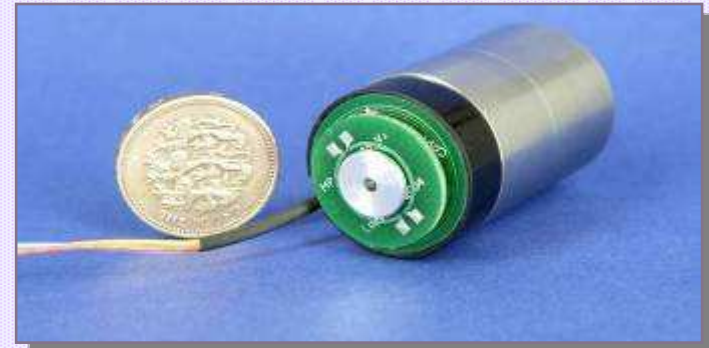


*At 50mm diameter

**Theoretical limit $\gg 230^\circ\text{C}$

Zettlex Technology – *the nitty gritty*

- ❑ 1000g shock*
- ❑ Digital or analogue
- ❑ No fine engineering
- ❑ Multiple targets
- ❑ Distant electronics
- ❑ Multiple sensors



*Theoretical limit >>1000g

Technology – *Benefits*

- ✓ **Robust**
- ✓ **Accurate**
- ✓ **Compact & light**
- ✓ **Easy mechanics**
- ✓ **Fit & Forget**
- ✓ **Readily tailored**



Examples – Satellite Comms





Zettlex

Precision in the Extreme

Examples – Dial Indicator Gauge Sensors





Zettlex

Precision in the Extreme

Examples – Armoured Vehicle EOI



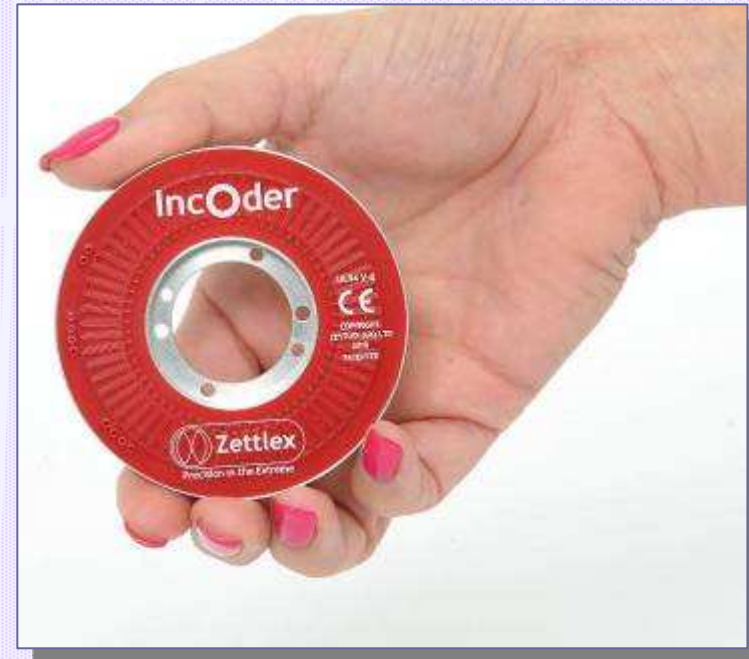
Examples – Motor Controls



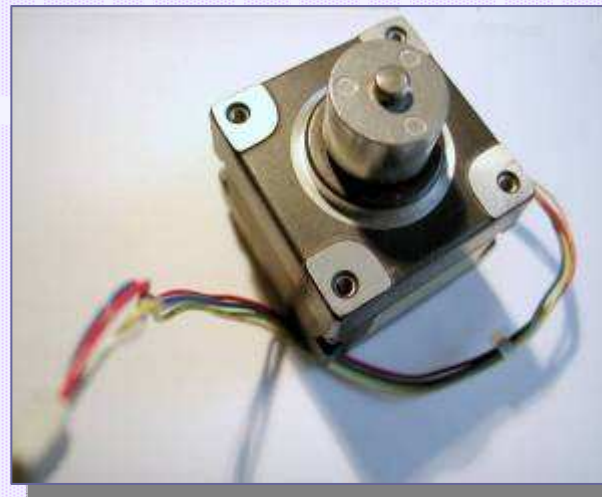


Precision in the Extreme

Examples – Pan & Tilt Camera Controls



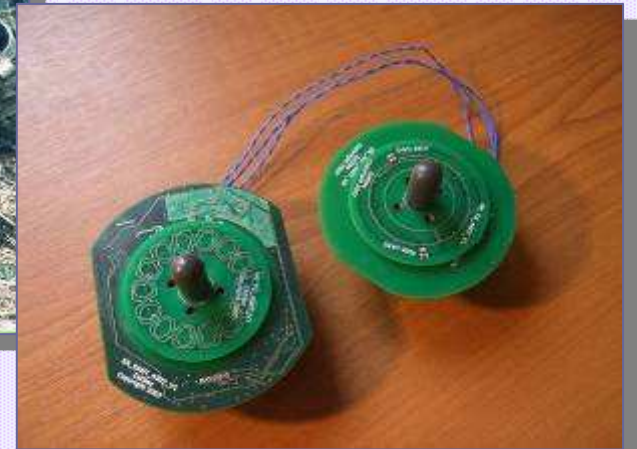
Examples – HERTI UAV Flight Controls





Precision in the Extreme

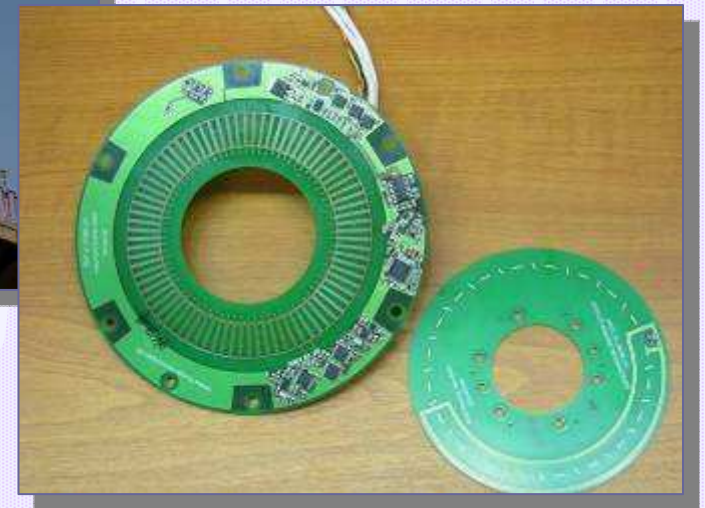
Examples – Target Acquisition Systems





Precision in the Extreme

Examples – Rotary Joints





Precision in the Extreme

Examples – Remote Weapons Stations





Precision in the Extreme

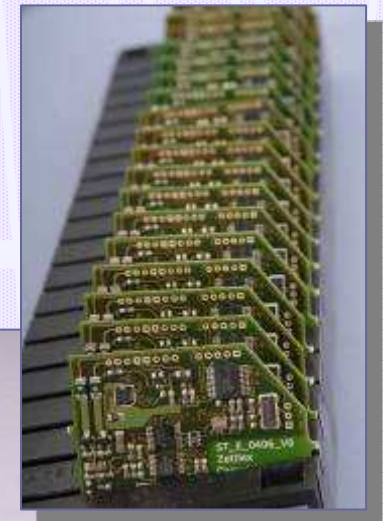
Examples – ATEX Valves & Actuators





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Examples – Flow Measurement





Precision in the Extreme

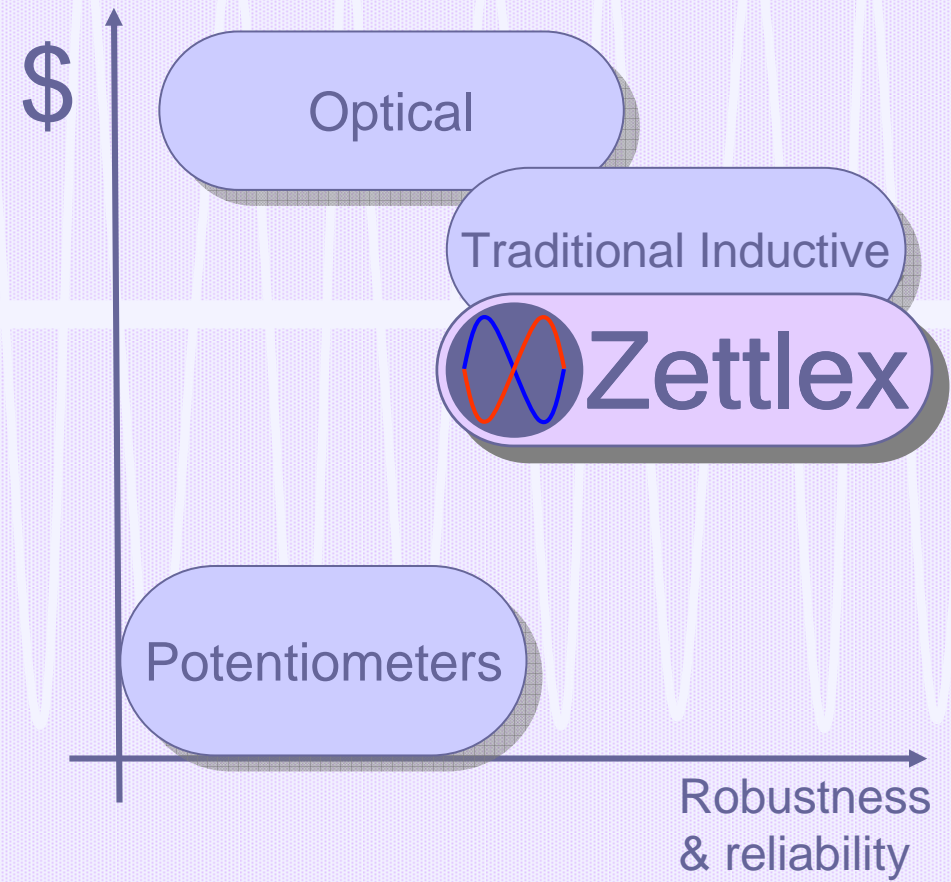
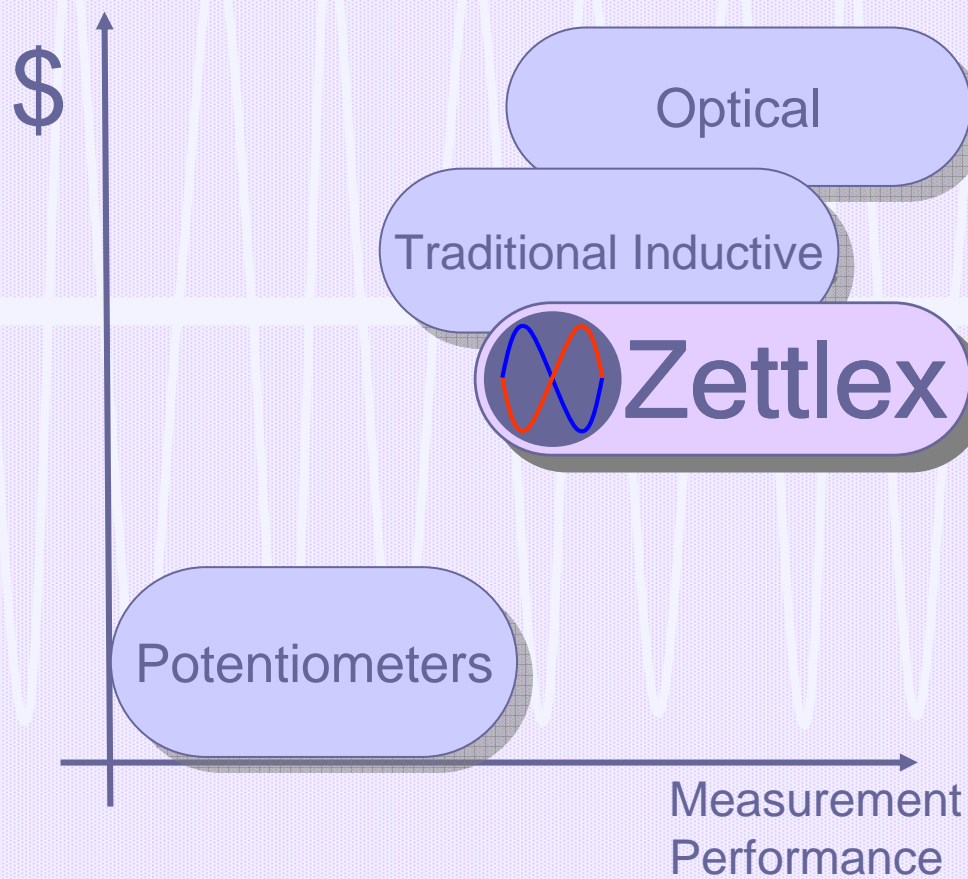
Examples – Warship Instrumentation





Precision in the Extreme

Commercial





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