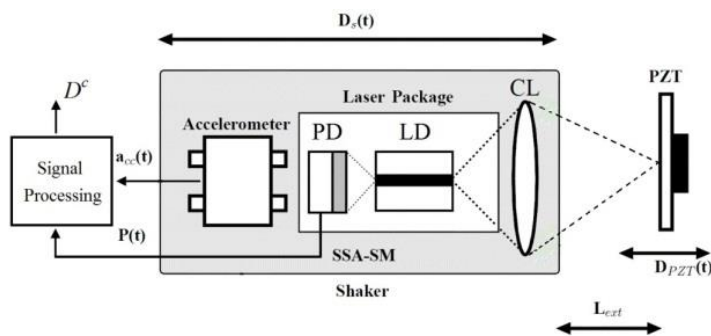


## CALDIRO: contactless & low-cost embedded system for on-board vibration measurement

Laser based vibration measurement systems requires a vibration proof table, restraining their scope of applications, besides high cost.

### DESCRIPTION\*

- Based on optical feedback interferometry (“self-mixing” effect), the laser is used as light source, micro-interferometer and detector at once, resulting into a low-cost integrated system
- Coupled with an accelerometer measuring the laser sensor own movements, the device is robust to parasitic vibrations



### COMPETITIVE ADVANTAGES

- Compact (embedded system)
- Deployment flexibility
- Robust
- Cost Efficient

### APPLICATIONS

- Non destructive testing applications:
  - Operating industrial conditions
  - Embedded applications

### INTELLECTUAL PROPERTY

- Patent in force

### DEVELOPMENT STAGE

- Experimental proof of concept



### TECHNICAL SPECIFICATIONS

Target	All
Target prerequisites	None
Bandwidth	20 Hz up to 40 KHz
Measurement range	10 m
Precision	10 up to 100 nanometers
In-depth analysis	No
Target Contact	No
Response Time	Real Time
Robutness	Yes
Prototype size	15 cm x 5 cm (sensor: 9 mm)
Measurement Frequency	Point to point
Cost	Very Low

### LABORATORY

- Optoelectronics integrated & embedded Systems research Group (OSE)



### CONTACT

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