

References : ME-1240, ME-1241



**No more interface required**  
**The indispensable tool for studying**  
**dynamics and mechanics**

**SmartCar is: a 3-axis accelerometer, a 3-axis gyroscope, a force sensor and a position / speed / acceleration sensor**

The new wireless cart is the ideal tool for the study of mechanics. It consists of an extremely resistant body with almost frictionless wheels.

In addition, it has really innovative features:

- Integrated force sensor ( $\pm 100$  N)
  - Integrated 3D acceleration sensor ( $\pm 16$  g)
  - An optical encoder on the wheel to measure motion
  - Wireless data transmitted
  - No interface needed
  - A rechargeable lithium-polymer battery, charge of about 6 months
- Accessories included:  
Hook, rubber bumper, magnetic bumper and a USB cable for charging
- Examples of applications:

- Acceleration on an incline
- Free fall
- Newton's first law
- Newton's second law
- Newton's 3rd law
- Hooke's Law
- Energy conservation
- Elastic collision
- Inelastic collision
- Conservation of quantity of movement
- Explosion (equal mass)
- Explosion (unequal mass)
- Harmonic movement
- Centripetal acceleration
- Centripetal force