

# Triaxis® 3D Magnetometer

## Promotion guide - Consumer/Industrial applications



### Purpose & Strategy

Why Melexis 3D magnetometer?

- Target new cost sensitive applications requiring low-voltage down to 1.8V and low-current consumption (e.g. 400µA @100Hz)
- Melexis offer an complete portfolio of products covering consumer & industrial market needs

### Targeted Applications

<i>Consumer applications</i>		<i>Industrial applications</i>	
1D	Window intrusion sensor	1D	Pneumatic cylinder sensor
2D	White good selector button (knob)	3D	HMI (joystick...)
2D	General rotary encoder [8 to 10bits resolution] + push button function	2D	Rotary encoder
3D/2D	Drone (remote control / gimbal)	2D	Tractor Armrest Console
3D	Home security (door lock)	3D	Anti-tampering (energy metering)
1D	Liquid level sensing (coffee water lvl...)	1D	Liquid level sensing (tank...)
2D	Mouse scrolling wheel	2D	Power tool
3D	eCompass		
1D/2D	Gaming (thumbstick, trigger button)		



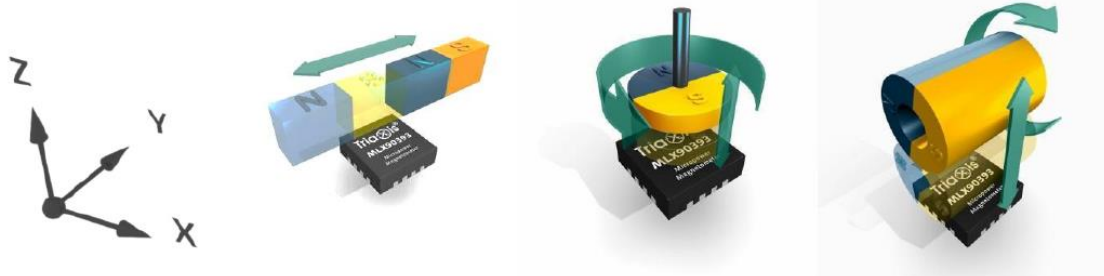
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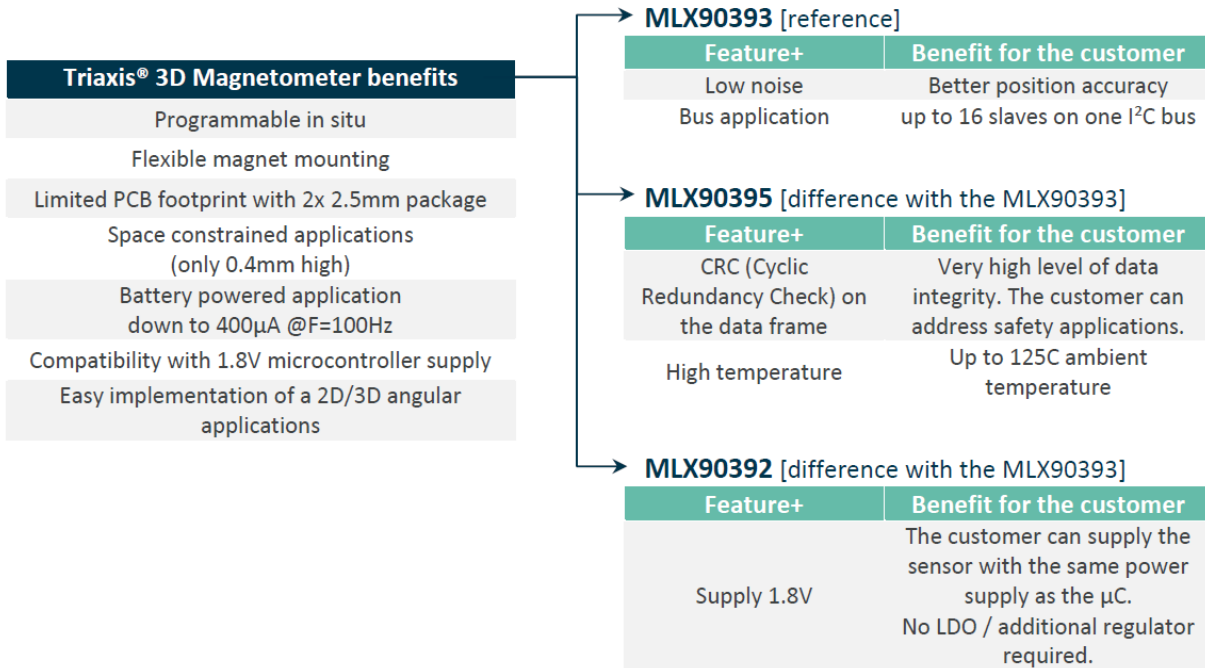
### Description

A 3D magnetometer is a device that measures a magnetic field in 3 directions X, Y and Z, and provides the measured value on its output. The source from of the magnetic field can be either the earth field or a defined magnet.



The 3D magnetometer family starts with the MLX90393 as a very versatile component. It offers a cost effective solution for customers who cannot use Triaxis 2D/3D angular sensor for either space or cost reasons or, simply because they prefer to integrate the angular processing into their controller. Melexis introduces 2 products to support specific application requirements:

Melexis part#	Description	Cost range versus MLX90393
<a href="#">MLX90393</a>	Targets consumer and industrial applications	- Reference -
<a href="#">MLX90395</a>	Targets industrial applications with higher requirements on the signal integrity and higher temperature requirements (i.e. 125degC)	+30%
<a href="#">MLX90392</a>	Targets consumer applications which requires a low voltage supply (i.e. 1.8V)	-20%



### Why we replace the competition?

- Better Noise performance
- Smaller Package
- Smaller and lower cost magnet can be used
- Complete portfolio for a large variety of applications

Competition part#
AKM AK9970
Infineon TLE 493
Allegro ALS31300
MPS MA704

### Discovery questions (for your first meetings – report in salesforce)

1. What is your actual solution? (Competition or other technology?)
2. What do you want to measure? (Rotary, linear, joystick, tilt...)
3. What problems do you encounter?
4. What is most critical: cost or performance?
5. What is the application speed (magnet speed)?
6. What is the required average consumption (µA @xxHz)?
7. What is the supply system? (1.8V/3.3V/5V)

## Links

- Selection guide (Magnetic position sensor in new markets) [here](#)
- Triaxis: unique solution [here](#)
  - Video / Demo o MLX90393 introduction ([youtube](#))
  - o MLX90393 by Sparkfun ([youtube](#))
  - o Webinar 3D magnetometer ([youtube](#))

Do you want to know more? Please do not hesitate to contact the experts at [dimacred@dimacred.com](mailto:dimacred@dimacred.com) or call the headquarters.