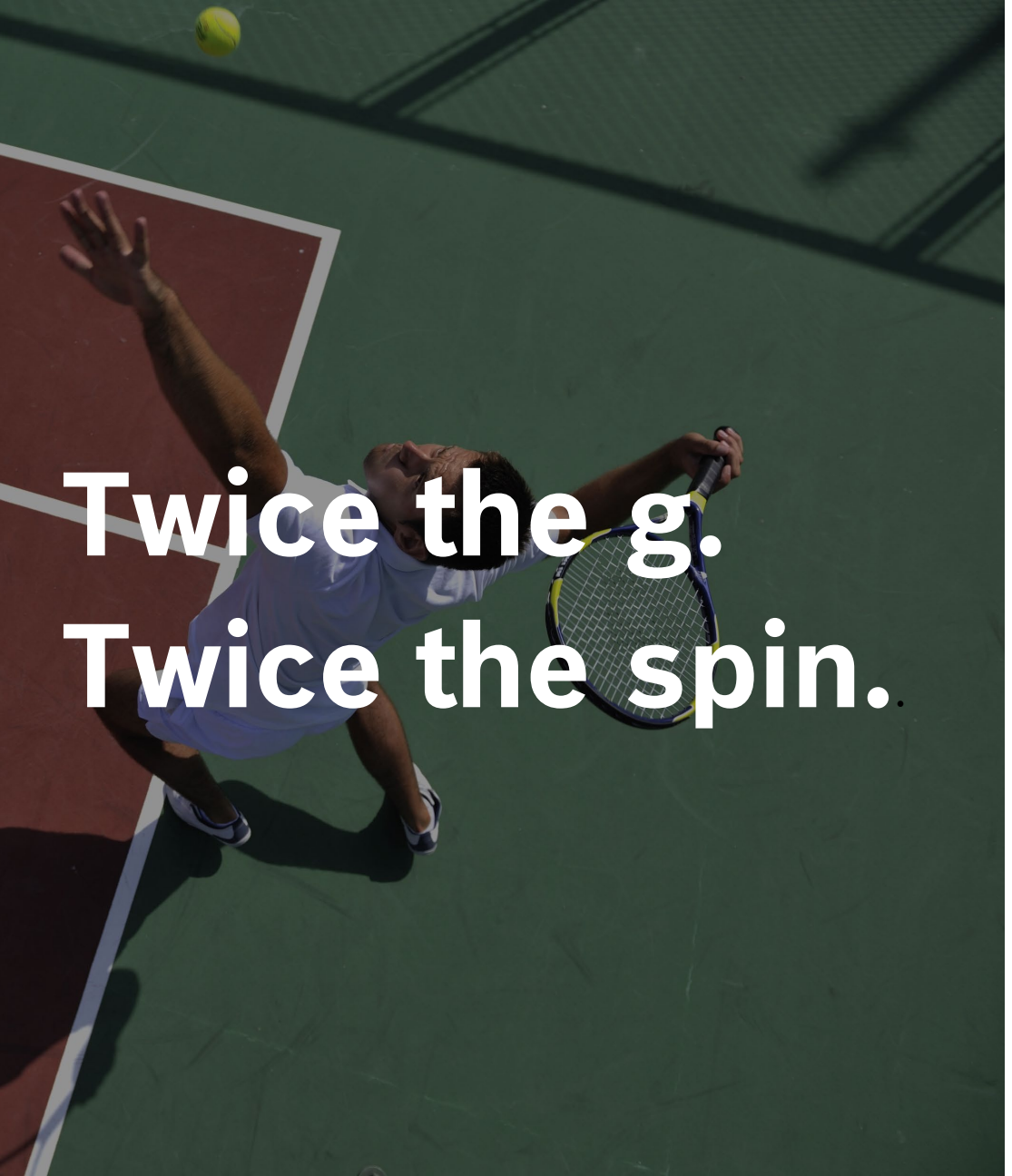
BMI423

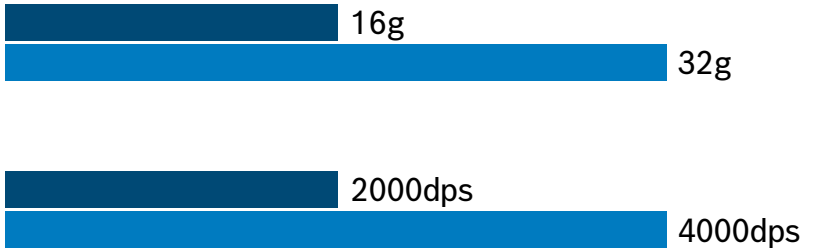
Product presentation

BOSCH


Max your motion
Extended measurement range & voice activity detection
BOSCH



From BMI323 to BMI423



BOSCH



Dimensions

LGA package

2.5 x 3.0 x 0.83 mm³

BOSCH

BMI423
Benefits



Enhanced measurement range

32g and 4000dps care for superior motion detection in dynamic environments.



Voice Activity detection

VAD conserves power and enhances privacy by activating microphones on demand.



Advanced power efficiency

Low current consumption extends battery life for "always-on" devices.

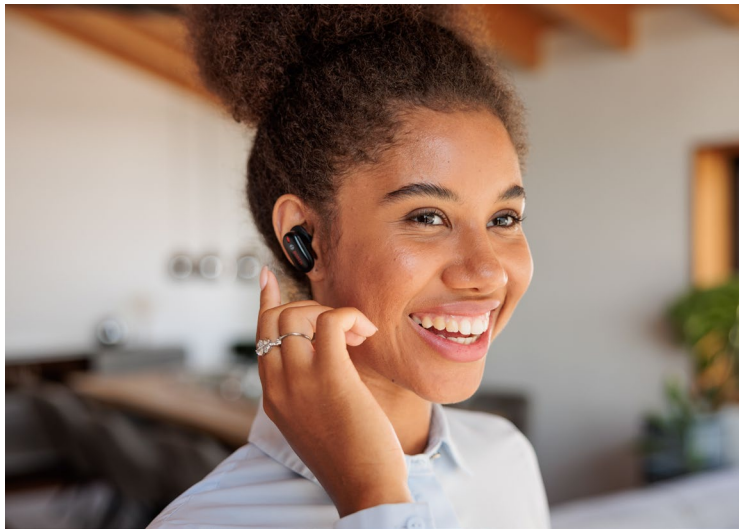
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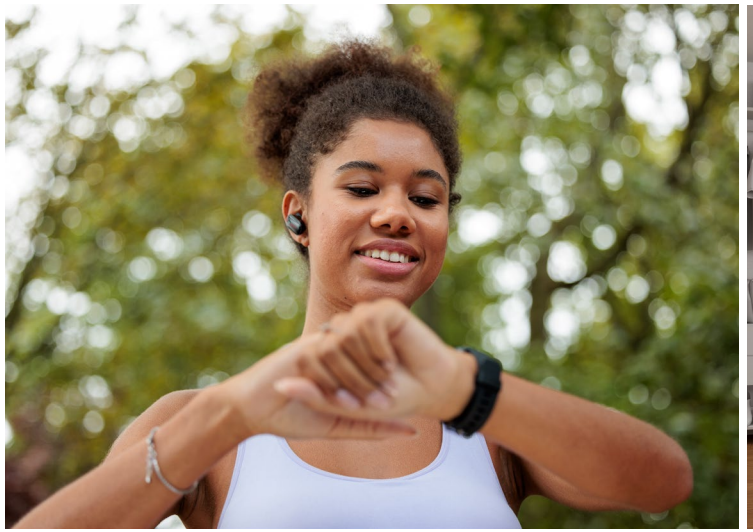
BMI423
Prioritized use cases & target applications

Wherever motion matters,

our IMU fits.



User interface features
Hearables



User interface features
Wearables



Motion control
Robotics

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BMI423

Additional use cases & target applications

Wherever motion matters,

our IMU fits.



Navigation
Drones



Hinge angle and multi-tap detection
Laptops



Gesture recognition
Toys

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Product details – IMUs
Specifications 1/2

	Typical values		BMI330	BMI423	BMI323	BMI270	BMI088
	Scope		High temperature	Performance IMU	Standard IMU	Flexible interrupts	Vibration robust
	Size	mm	2.5 x 3 x 0.8	2.5 x 3 x 0.8	2.5 x 3 x 0.8	2.5 x 3 x 0.8	4.5 x 3 x 0.95
Gyroscope	**Noise**	°/s/√Hz	0.007	0.005	0.007	0.007	0.014
	Zero-rate offset	°/s	±1	0.6	±1	±0.5	±1
	TCO	mdps/K	10[1] / 20[2]	11	40	±15	±15
	TCS	%/K	±0.02	0.005	±0.02	±0.02	±0.03
	ADC Resolution		16-bit	24-bit	16-bit	16-bit	16-bit
	Range	°/s	±125 to ±2000	±125 to ±4000	±125 to ±2000	±125 to ±2000	±125 to ±2000
	ODR	Hz	Up to 6.4k	Up to 6.4k	Up to 6.4k	Up to 6.4k	Up to 2k

[1] -10°C to +85°C)
[2] -40°C to <-10°C and from >85°C to 105°C

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Product details – IMUs
Specifications 2/2

	Typical values		BMI330	BMI423	BMI323	BMI270	BMI088
	Current Consumption (high perf. mode)	µA	790	575	790	970	5150
	Oper. Temp Range	°C	-40 … +105	-40 … +85	-40 … +85	-40 … +85	-40 … +85
Accel	**Noise**	µg/√Hz	180	90 (≤8g) 120 (≥16g)	180	160	190 (z) / 160 (x,y)
	Zero-g offset	mg	35	35	35	±20	±20
	TCO	mg/K	0.3	0.25	0.3	±0.25	<0.2
	TCS	%/K	0.005	0.002	0.005	±0.004	±0.002
	ADC Resolution		16-bit	24-bit	16-bit	16-bit	16-bit
	Range	g	±2 to ±16	±2 to ±32	±2 to ±16	±2 to ±16	±3 to ±24
	ODR	Hz	Up to 6.4k	Up to 6.4k	Up to 6.4k	Up to 1.6k	Up to 1.6k*

*see Datasync Application note (for higher ODR up to 2kHz)

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