

Comparison chart between BMI055-BMI088 and BMI160-BMI270.xlsx

	BMI055	BMI088	BMI160	BMI270
General specs.				
. Package Size	3.0 x 4.5 x 0.95mm LGA-16		3.0 x 2.5 x 0.8mm LGA-14	
. Current (uA) Accel normal mode	130	150	180	200
. Current (mA) Gyro normal mode	5		0.85	0.65
. Current (uA) sleep mode	6 (=1uA Accel + 5uA Gyro)	8 (=3uA Accel + 5uA Gyro)	3	6
. FIFO : (bytes)	Accel: 192 bytes Gyro: 600 bytes	Accel: 1K bytes Gyro: 600 bytes	FIFO has 1K bytes for accelerometer data or gyroscope data or magnetometer data or any combinations	FIFO has 2K, or 4K, or 6K bytes for accelerometer data or gyroscope data or magnetometer data or any combinations
. FIFO : shared (Accel & Gyro) or dedicated	Accel FIFO and Gyro FIFO are dedicated, not shared.		Accel FIFO and Gyro FIFO are shared with total 1K bytes.	Accel FIFO and Gyro FIFO are shared with 2K, 4K, 6K bytes
. Accel and gyro data synchronization	Not possible	Possible by connecting gyro INT3 pin to accel INT2 pin	Internally synchronized	
. Customer re-trime for gyro sensitivity	Not possible		Not possible	Yes, built-in
. Sensor time stamp	No	Yes	Yes	
. Step counter built-in	No	Yes	Yes	
. OIS secondary interface	No		Yes	
Accel.				
. Full Scale, Accel (±g)	±2g / ±4g / ±8g / ±16g	±3g / ±6g / ±12g / ±24g	±2g / ±4g / ±8g / ±16g	
. Resolution (bit)	12-bit	16-bit	16-bit	16-bit
. Sensitivity (LSB/g)	1024 @ ±2g FS	10920 @ ±3g FS	16384 @ ±2g FS	16384 @ ±2g FS
. Sensitivity drift over temp (±%/°C)	±0.02	±0.002	±0.03	±0.004
. Zero-g offset (±mg)	±70	±20	±60	±20
. Zero-g offset over temp (mg/°C)	±1	< ±0.2	±1.0	±0.25
. Noise Density (ug/√Hz)	150	160 for x/y, 190 for z axis	180	160
. ODR (Hz)	16/32/62/126/250/500/1000/2000	12.5/25/50/100/200/400/800/1600	0.78Hz ~ 1600Hz	
. Turn on time (ms)	3	1	3.2	2

Gyro.			
. Full Scale, Gyro (\pm dps)	$\pm 125 / \pm 250 / \pm 500 / \pm 1000 / \pm 2000$	$\pm 125 / \pm 250 / \pm 500 / \pm 1000 / \pm 2000$	
. Resolution (bit)	16-bit	16-bit	
. sensitivity (LSB/dps)	16.4 @ ± 2000 dps FS	16.4 @ ± 2000 dps FS	
. sensitivity tolerance (\pm %) @25°C	± 1	± 1	± 0.4
. sensitivity tolerance over temp (\pm %/°C)	± 0.03	± 0.02	
. Zero Rate Offset (ZRO) (\pm °/s)	± 1	± 3	± 0.5
. ZRO variation over temp (\pm dps/°C)	± 0.015	± 0.05	± 0.015
. Bias stability (deg/hr)	1.6	3	
. Noise Density (dps/ \sqrt Hz)	0.014 @ BW=47Hz	0.007 @ BW=100Hz	
. ODR (Hz)	100/200/400/1000/2000	25Hz ~ 6400Hz	
. Start-up time (ms)	30	55	45