

# SSI-MU106

**MEMS Inertial Measurement Unit**



### PRODUCTS FEATURES

- Automotive Grade Devices
- High-precision Z-axis gyroscope
- Multi-sensor redundancy and fault-tolerant design
- Small size, low weight, low power consumption
- - Full temperature calibration compensation from 40°C to +80°C
- 1KHz high-speed sampling
- Anti-harsh mechanical environment
- With software online upgrade function
- Sensor self-diagnosis
- With software online upgrade function

**1. Product performance indicators**
*Table 1.Characteristics*

Items	Parameter	Value	Unit
Gyroscope	Range	$\pm 500$ (x,y); $\pm 200$ (z)	°/s
	Zero	$\leq 0.1$ (x,y); $\leq 0.003$ (z)	°/s
	Zero Bias stability	$\leq 10$ (x,y); $\leq 0.5$ (z)	°/h
	Zero Bias instability	$\leq 4$ (x,y); $\leq 0.1$ (z)	°/h
	Bandwidth	50	Hz
Accelerometer	Range	$\pm 16$	g
	Offset	$\leq 5$	mg
	Zero Bias stability	$\leq 100$	ug
	Zero Bias instability	$\leq 30$	ug
	Bandwidth	200	Hz

*Table 2. Electrical/Mechanical Interface*

Parameter	Value	Unit
Power supply	$3.3 \pm 0.1$	V
Power	$< 1$	W
Communication Interface	1 LVTTTL interface, 1 synchronous input, 1 synchronous output	-
Update rate	200	Hz
Dimensions	$37.70 \times 24.15 \times 9.50$	mm
Weight	$31.5 \pm 3$	g

*Table 2. Environmental Specifications*

Parameter	Value	Unit
Operating temperature	-40 to 80	(°C)
Storage temperature	-55 to 85	(°C)

**2. Mechanical dimension**

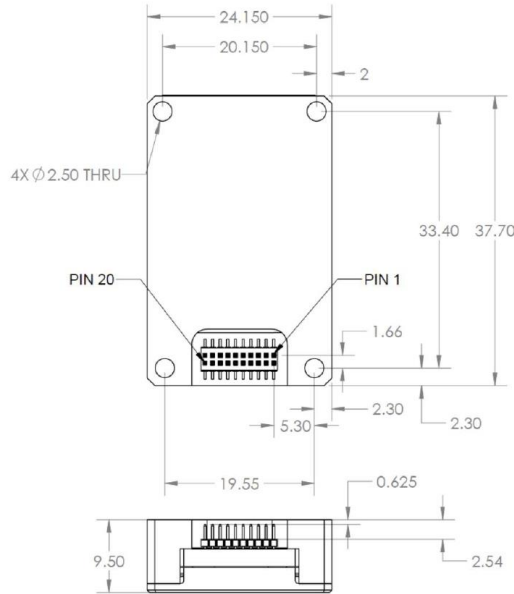
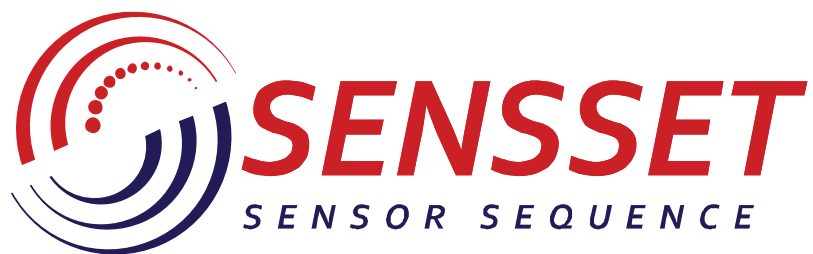


Figure 2.1. Size: 37.70 × 24.15 × 9.50

Table 3. Pin definition

Pin	Definition	Description
1	IMU data synchronization output pulse	Only LVTIL signal, down falling edge valid
2	Synchronization signal input	LVTIL signal
3	SPI clock/UART TX	SPI/UART multiplexing
4	SPI data output/UART RX	SPI/UART multiplexing
5	SPI data input	-
6	SPI chip select	-
7	Data ready (SPI ready)/SPI-UART port select	Short to ground, then 3 and 4 pins are UART
8	External reset	-
9	Spare	-
10	Power supply positive	3.3 ± 0.1 V
11	Power supply positive	3.3 ± 0.1 V
12	Power supply positive	3.3 ± 0.1 V
13	Power supply ground/communication ground	Ground
14	Power supply ground/communication ground	Ground
15	Power supply ground/communication ground	Ground



[www.sensset.ru](http://www.sensset.ru)

8 (812) 309-58-32 доб. 150  
info@sensset.ru

198099, г. Санкт-Петербург  
ул. Калинина, дом 2, корпус 4, литера А.



Development, production and supply of high-tech sensors