

G200D Digital Triaxial Gyro



- Non-ITAR Commercial MEMS Triaxial Digital Gyro
- Ultra-Low Noise $<0.002\%/sec/\sqrt{Hz}$ (100 °/s)
- Short Term Bias $4^\circ/hour$ 1σ
- Bias Over Temperature $\leq 0.05^\circ/sec$ 1σ
- G-Sensitivity $\leq 0.005^\circ/sec/g$ 2σ
- Axis Alignment $1\ mrad$ 1σ
- Ultra Low Power $< 300\ mA$ Typical
- Light Weight $31\ grams$
- Low Voltage $+3.1V$ to $+5.5V$
(single sided power)
- Bandwidth $200Hz$
- RS422/485 Serial Data
- Digital Output to $1kHz$ Update Rate
- Baud Rate $921.6kHz$
- All Internal Electronics
- Environmentally Sealed
- Internal Temperature Sensor
- Self-Test
- Shock Resistant $500g$
- Vibration $6\ g_{RMS}$
- High MTBF



- Platform Stabilization
- EO/IR Stabilization
- Antenna Stabilization & Pointing
- Automotive Testing
- Laboratory Use

Export Classification:
Commerce ECCN7A994

**Small Ultra Low Noise
Digital MEMS Triaxial Gyro**



Gladiator Technologies
Division of LKD Aerospace
High Performance Inertial MEMS

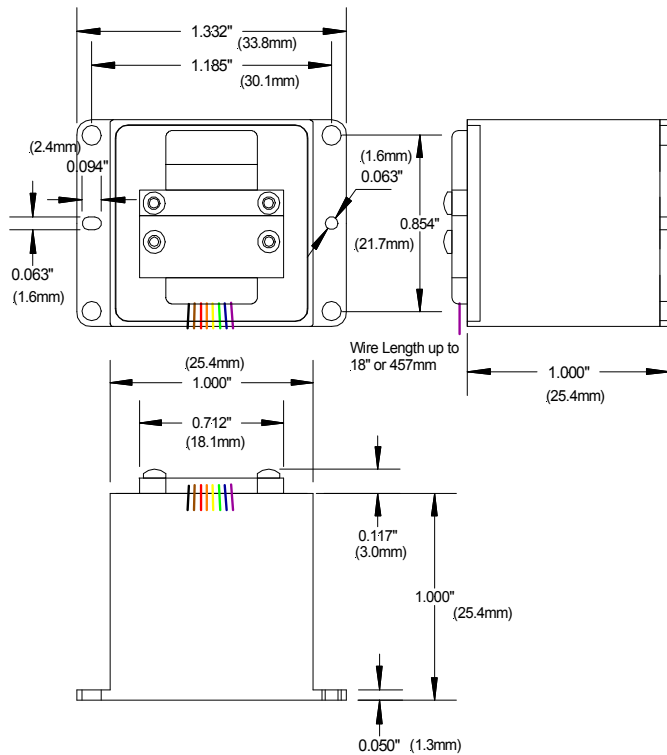
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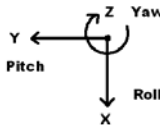
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SN: 107

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Axes (Top View)
Right Hand Rule



G200D Digital Gyro	
G200D-100-300 Triax	100°/sec
G200D-300-300 Triax	300°/sec

Specification

PARAMETER	RATE AXES	
Range	±100°/sec	±300°/sec
Angle Random Walk	0.002°	0.003°
	/sec/√Hz 1σ	
Bias (In Run Stability)	0.085°	0.127°
	/√hour 1σ	
Bias (Over Temp.)	4°/hour	10°/hour
	1σ	
Scale Factor Error %	≤0.05% (over temperature) 1σ	
Sensor Resolution	0.001°/sec	0.0015°/sec
Alignment	0.5 mrad 1σ	
G-Sensitivity	< 0.005°/sec/g 1σ	
Temp Range	Operating: -40°C to +85°C Non-Operating: -55°C to +85°C	
Update Rate	1000 Hz (user selectable)	
Temp Sensors	Internal Temperature Sensors	
Start-up Time	< 0.3 sec	
Input Power	+3.1V to +5.5V Max. Input (single sided)	
Power Consumption	300 mW at 3.3V Typical 350 mW at 3.3V Maximum	
Size	U.S.:	1.0 x 1.0 x 1.0 = 1.0 in ³
	Metric:	2.54 x 2.54 x 2.54 = 16.4 cm ³
Weight	≤ 31 grams	
Mounting	4ea No.2-56 Screws	
Shock	500g's ½ sine 30 msec powered	
Vibration	6gRMS (20Hz to 2KHz)	
MTBF	124,334 hrs (per MIL-STD-217F, Notice 2 and ANSI/VITA 51.1-2008 with environment: ARW at 55°C Ambient)	

Pin No.	Assignment
1	RS-422/485 A (+)
2	RS-422/485 B (-)
3	Power Ground
4	N C
5	+3.1V to +5.5V Max Input Power
6	External Sync Input (1kHz)
7	NC
8	Signal Ground
9	NC

If pin 6 is not used connect to pin 8.

Outputs	Serial Sequence at 1kHz
1	Roll Gyro (X)
2	Pitch Gyro (Y)
3	Yaw Gyro (Z) (Triax Only)
4	Temperature ± 0.5° C typical

Specification subject to change without notice



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