



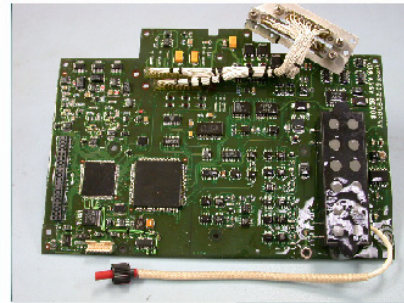
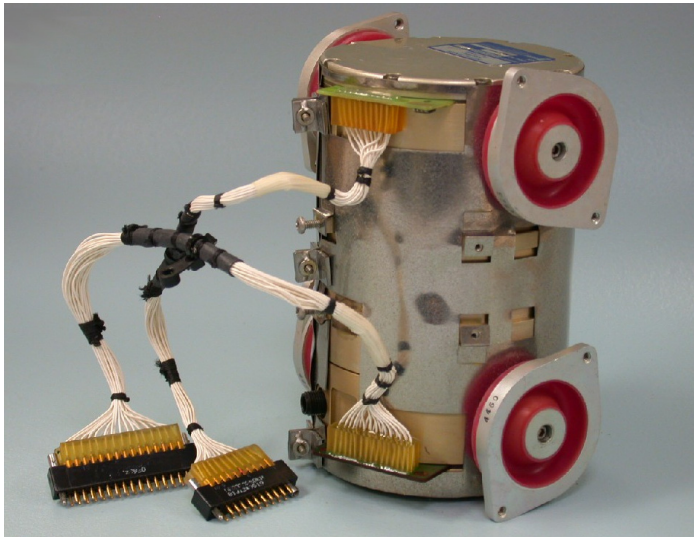
Kearfott Corporation
A Subsidiary of Astronautics Corporation of America
Guidance & Navigation Division

**MONOLITHIC RING LASER GYRO (MRLG)
INERTIAL NAVIGATION UNIT (INU)
(WITH SUPERIOR HEAVE, SURGE AND SWAY PERFORMANCE)**

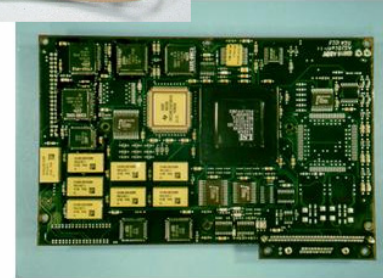
KI-4922

INU KIT

**Improved Heave
Performance**



**ELECTRONICS
CARD SET**



Kearfott's KI-4922 Inertial Navigation Unit (INU) Kit is ideally suited for those applications requiring relatively high performance in a compact form factor, and at a cost compatible with large volume programs. They are being produced for a variety of applications spanning the sea market segment.

The KI-4922 incorporates Kearfott's latest generation of sensor electronics, providing low-noise accelerometer channel performance. This noise reduction results in significantly improved *Surge*, *Sway* and *Heave* performance. (5 cm or 5% of motion rms)

Cost, performance and size advantages have been achieved by incorporating the T16 MRLG and a MOD VIIA Accelerometer Triad into an Inertial Sensor Assembly (ISA), and developing the associated INU electronics to fit on a compact card assembly.

- ALL NAVIGATION COMPUTATIONS

- Multiple Output Formats
- At-Sea Moving align capable w/GPS aiding
- Vehicle Dynamic Control
- Weapon Stabilization

- MULTIPLE I/O PORTS

- INTERFACES WITH:

- GPS
- Sonar/Doppler (DVL)
- Vehicle Speed Sensor
- Speed of Sound Sensor

- HIGH RELIABILITY, LOW LIFE CYCLE COST

FOR FURTHER INFORMATION ON THIS HIGH PERFORMANCE APPLICATION, TACTICAL APPLICATION OR ANY OTHER PRODUCT APPLICATIONS PLEASE CONTACT OUR BUSINESS DEVELOPMENT GROUP AT:(973) 785-6555 OR FAX (973) 785-5905

Visit our website: www.kearfott.com

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This sheet is for reference only, not as a basis for specifications. Detailed specifications and drawings are available on request.

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PERFORMANCE SUMMARY*	
SURFACE SHIP	
Position Accuracy	
• GPS/Log**	10 m, CEP
• Log (Only)	10 nm/8hrs, TRMS
Heading Accuracy	
• GPS/Log**	5.0 mils, rms
• Log (Only)	6.0* secant (LAT) mils, rms
Velocity Accuracy	
• GPS/Log**	0.05 m/sec, rms
• Log (Only)	0.5 m/sec rms
Roll/Pitch Accuracy	0.5 mils, rms
Surge/Sway/Heave	5 cm or 5% of motion, rms
UNDERWATER VEHICLE***	
Position Accuracy	0.5% Distance Traveled, CEP
Heading Accuracy	5.0 mils, rms
Roll/Pitch Accuracy	0.5 mils, rms

DYNAMIC CONDITIONS*	
Acceleration Range	25 g's
Attitude	unlimited
Roll, Pitch and Azimuth Angular Rate	300°/s
Roll, Pitch and Azimuth Accelerations	10,000°/s ²
Cooling	Free convection
Environmental Requirements	Per MIL-E-5400

PHYSICAL CHARACTERISTICS *	
Dimensions - ISA & IMU Electronics	ISA - 3.3" DIA. x 5.2" L, CCA's - 80 in ²
Weight - ISA & IMU Electronics	4.5 lb (2.5 lb ISA, <2 lb CCA's/Heatsink)
Power	+15 V, -15 V, +5 V, and < 30 Watts
Activation Time	< 5 s
Maintenance	BIT, 95% coverage
Calibration Interval	None

* Performance, Operating Ranges, and Characteristics are for illustration only and are tailorable for specific applications

**Assumes GPS aiding. (Selective Availability off)

***Underwater vehicle performance assumes GPS aiding while aligning at surface and Sonar/Doppler aiding while under water.