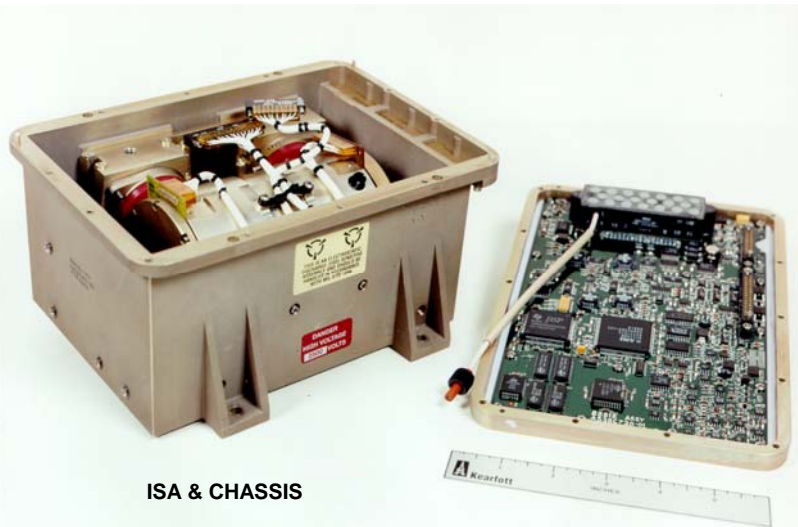




**MONOLITHIC RING LASER GYRO (MRLG)
INERTIAL MEASUREMENT UNIT (IMU)**



ISA & CHASSIS

IMU ELECTRONICS



IMU

Kearfott's IMU's are ideally suited for those applications requiring relatively high performance in a compact form factor, and at a cost compatible with large volume tactical programs. They have been produced for a variety of applications ranging from tactical missiles to torpedos.

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

The MRLG IMU is available packaged in an IMU chassis KI-4801 shown dimensionally on the back of this document.

• **FUNCTIONS**

$\Delta\theta$, ΔV (FULLY COMPENSATED)
FLIGHT CONTROL DATA RATES
NAVIGATION DATA RATES
BIT

• **THREE-AXIS RING LASER GYRO**

RWC 0.07°/h

• **MOD VIIA ACCELEROMETERS**

BIAS REPEATABILITY 1,200 μg max., d-d

• **SIMPLIFIED ELECTRONICS (1 BOARD)**

• **HIGH RELIABILITY, LOW LIFE CYCLE COST**

• **LARGE PERFORMANCE MARGIN**

SIX-SIGMA DESIGN

REDUCED PARTS COUNT

**FOR FURTHER INFORMATION ON THIS 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

PERFORMANCE SUMMARY*		
PARAMETERS	GYRO	ACCELEROMETER
Random Walk	0.05°/√h	0.05 m/s/√h
Bias Repeatability	0.1 to 0.7°/h	400 μg
Scale Factor Repeatability	350 PPM	500 PPM
Axis Alignment	65 arc-second	65 arc-second
Vibration Rectification	N/A	50 μg/g ²

Note: All parameter values listed are 1σ

OPERATING RANGES *	
Acceleration	40 g's
Attitude	unlimited
Roll, Pitch and Azimuth Rate	300°/s
Roll, Pitch and Azimuth Accelerations	10,000°/s ²
Cooling	Free convection
Environmental Requirements	Per MIL-E-5400

PHYSICAL CHARACTERISTICS *	
Dimensions	8.85" L x 6.34" W x 5.49" H
Weight	<7 lb
Power	+15 V, -15 V, +5 V: < 25 Watts
Activation Time	< 5 s
Maintenance	BIT, 95% coverage
Calibration Interval	None

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

