

**COMPACT INS/GPS**

Kearfott's state-of-the-art KN-4077 system offers a low-cost, low-weight, navigation solution to a wide variety of aircraft, rotary and fixed-wing Unmanned Air Vehicle (UAV), missile and tactical weapon applications. It is based on the prime navigator chosen by the United States Air Force for their improved RG-4B **GLOBAL HAWK** UAV. The KN-4074, which features Kearfott's Monolithic Ring Laser Gyro (MRLG), is designed to operate in conjunction with an embedded Differential and WAGE ready SAASM P(Y)/C/A code GPS receiver for enhanced navigation performance and faster satellite acquisition. The KN-4077 provides navigation, heading, attitude, velocity, position, and  $\Delta\theta, \Delta V$  for autopilot functions in various digital formats.

The KN-4077 shares much of its production base with other Kearfott high volume tactical programs, assuring competitive pricing combined with the support and experience of Kearfott's 50 years of leadership in the guidance industry, providing the user with a reliable INS/GPS for airborne applications.



**SYSTEM SPECIFICATIONS**

<b>SIZE</b>	6.0" (L) x 6.0" (W) x 6.0" (H)
<b>WEIGHT</b>	<3.7 kg 8 to 10 lbs
<b>POWER</b>	28 V dc (30 W) per MIL-STD-704A
<b>OUTPUTS</b>	Multiple RS-422 and RS-232 Ports with MIL-STD-1553B also ARINC 429 & Ethernet as Options
<b>COOLING</b>	Free Convection
<b>ENVIRONMENTAL REQUIREMENTS</b>	
• Altitude	-1,500 ft to +65,000 ft
• Temperature	-45°C to +71°C
<b>GPS RECEIVER</b>	Force 22 L1/L2 Operating Frequencies SAASM P(Y) Code Differential and WAGE, RAIM, WAAS C/A Code GPS Receiver is Also Available
<b>MAINTENANCE</b>	No Recalibration Required

## PERFORMANCE SUMMARY

### INS/GPS PERFORMANCE

	Continuous GPS Aiding			With GPS Outage (After 10 Minutes)
	P(Y)	DGPS	C/A	
Navigation Position; CEP (m)	5	<2*	10	250
Heading Accuracy (mrad), 1 $\sigma$	<2	<2	<2	5
Pitch/Roll Accuracy (mrad), 1 $\sigma$	0.5	0.5	0.5	1
Velocity (m/s), 1 $\sigma$	0.05	0.05	0.1	3

\* Position performance can be improved to 40 to 60 centimeter accuracy.

### OPERATING RANGES

Acceleration	30 g All Axes
Attitude (All Axes)	Unlimited
Roll, Pitch, Azimuth, Rate	400°/s
Roll, Pitch, Azimuth, Accel	10,000°/s <sup>2</sup>

***Please contact Kearfott Marketing at (973) 785-6555 or FAX at (973) 785-5905 or  
E-Mail: [marketing@kearfott.com](mailto:marketing@kearfott.com) for further information, including other air products: Sensor  
Packages, Gyroscopes, Inertial Measurement Units, Air Data Computers, Displays, CDU's, Flight  
Control Systems, Display Processors and Mission Computers.***

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