IPADS

Improved Position and Azimuth determining System

The L-3 Space & Navigation (L-3 S&N) Improved Position and Azimuth Determining System (IPADS) is a self-contained inertial surveying system developed to meet today's demanding U.S. Army and U.S. Marine Corps surveying needs. Survey operations functionality, navigational accuracy, transportability, survivability, and affordability requirements drove the system design.

L-3 S&N's IPADS provides significant enhancements for today's Army and Marine Corps survey teams. While meeting PADS accuracy and environmental requirements, IPADS offers a proven, reliable, lightweight, off-the-shelf solution developed around four line-replaceable units (LRUs).

IPADS's four LRUs consist of:

- Compact Position Navigation Unit (CPNU)
- Control Display Unit (CDU)
- Battery Charger Unit (BCU)
- Porro Prism Assembly (PPA)

All LRUs are housed in a robust frame that allows for easy component acess and stability and facilitates ready, two-person transfer between vehicle and aircraft.

Space & Navigation

IPADS

When You Need Precision...You Need IPADS

COMPACT POSITION NAVIGATION UNIT (CPNU)

The CPNU, a 3-axis strap-down inertial navigation system of ring laser gyros and high-grade accelerometers, is the core component of IPADS. It is the compact version of our proven navigation system used on the MLRS and HIMARS programs.

CONTROL DISPLAY UNIT (CDU)

IPADS uses the Tacter-31 Rugged Handheld Computer (RHC) as its CDU. This capitalizes on existing logistics support coverage and provides significant life cycle cost benefits. The RHC is a standard IBM PC with an Intel Pentium II 500 MHz processor, Windows 2000, a 6.4" VGA color active matrix LCD display, and a QWERTY keyboard. The CDU offers the Tactical Communications Interface Modem (TCIM) as an option.

PORRO PRISM ASSEMBLY (PPA)

The PPA increases the PADS' 16m offset capability by 50%. IPADS can also provide distance point (target) location capability with the use of optional accessories, such as a hand-held laser range finder mounted on existing P2/P16 theodolites or a total system.

BATTERY CHARGER UNIT (BCU)

The BCU uses a standard U.S.Army NSN 6130-01-493-6643 Sealed Lead Acid (SLA) battery. The BCU is based on the ABPAC.DC/BT-TR-1 Transceiver Power Unit that is currently fielded by the U.S. military. The unit allows for uninterruptible worldwide 9-36 Vdc/85-270 VAC/47-440 Hz one-phase power inputs and provides power and charge status indicators.

FEATURES

- High Precision Common Survey = Efficient Mass Fires
- Impervious to Jamming
- Navigation Aids (Compass Rose & Digital Maps)
- In Vehicle Survey
- Combat Proven
- Embedded BIT/BITE
- High reliability, high MTBF, low MTTR
- No periodic calibration required

SYSTEM CHARACTERISTICS

WEIGHT	<135 lbs
SIZE	24.75" L x 15.75" W x 16.125" H
POWER	Consumption < 7 A @ 28 Vdc 9 - 36 Vdc / 85 - 270 VAC

ACCURACY

< 0.3 mil pointing (PNU on MLRS)

4th-order accuracy (5 minute ZUPT)

Horizontal	4M CEP
Vertical	< 2M PE
Azimuth	0 - 65° N or S latitude 0.4 mils PE
Azimuth	65° - 75° N or S latitude 0.6 mils PE

5th-order accuracy (10 minute ZUPT)

Horizontal	7M CEP
Vertical	3M PE
Azimuth	0 - 65° N or S latitude 0.4 mils PE
Azimuth	65° - 75° N or S latitude 0.6 mils PE

FOR MORE INFORMATION PLEASE CONTACT:

Glenn Barone
Senior Director, Business Development
Tel: 973.446.4084
glenn.barone@l-3com.com

Space & Navigation
450 Clark Dr
Budd Lake, NJ 07828
Tel: 973.446.4000
Fax: 973.446.4268
www.L-3Com.com/Spacenav