

YEI 3-Space

for Military/Defense Applications



The U.S. Army, "Securing the Air," 3 August 2010 via Flickr, Creative Commons Attribution

Find your way.

Using patent-pending dynamic filtering algorithm technology, the **YEI 3-Space** family of products includes High Accuracy Rate Sensors, IMUs, and AHRS. They combine the high accuracy and performance characteristics of traditional optical and mechanical IMUs with the reduced size, weight, and power consumption advantages of MEMS devices.

These advantages make it especially well-suited for payload sensitive applications requiring reliable performance in a small footprint such as:

- Navigational systems in manned and unmanned land and aerial vehicles
- Guidance systems in projectiles, missiles, and smart munitions
- Interactive simulation environments
- Platform stabilization
- Robotics

Yost Engineering, Inc.

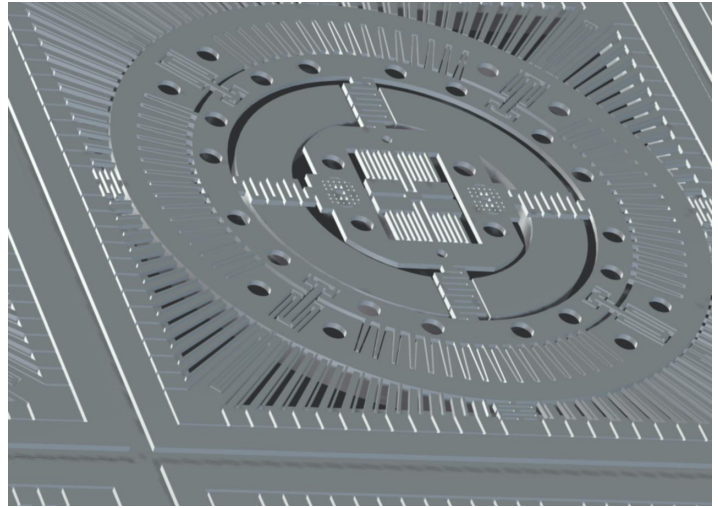


www.3SpaceSensor.com

Traditional mechanical and optical IMUs are large and difficult to adapt to applications where small size and/or low-power requirements are important concerns. But the **YEI 3-Space** family is enabled by micro-electro-mechanical system (MEMS) technologies producing revolutionary reductions in size, cost, and power consumption over traditional optical and mechanical systems. Since MEMS-based systems are packaged and used in production as semiconductor devices, final integrated systems can be more rugged and integrated at a lower cost.

YEI 3-Space uses a patent-pending dynamic filtering algorithm technology that results in the small size and low-power requirements of MEMS approaches, coupled with the performance characteristics of non-MEMS systems.

YEI 3-Space is available in a range of models including high-accuracy and wireless.



© 2011 Yost Engineering, Inc.

REFERENCES

DUNS: 147665769
 MPIN: YOSTEN630
 CAGE: 1ZDF3

NAICS: 334511
 541712
 334519

SIC: 3679

FSC: 1420
 1430
 6615

PSC: AJ21
 AJ22
 AJ24
 AT12

- HUBZone
- EDGE
- Economically Disadvantaged Woman Owned Small Business

For more information:
 Yost Engineering, Inc.
 630 2nd Street
 Portsmouth, OH 45662

www.YostEngineering.com
 support@YostEngineering.com

phone: 888.395.9029
 fax: 888.565.1170

Connect with us:
 Twitter @YostTech
 Facebook on.fb.me/YostTech

Copyright © 2011
 Yost Engineering, Inc.

Specifications are subject to
 change without notice.

Patent Pending

INFORMATION*

- Dimensions:** Starts at 25mm x 25mm x 3mm, about the size of a box of matches
- Weight:** Starting at a mere 0.63 ounces, lighter than a AA battery
- Power:** Ultra low power MEMS-based design has power requirements that are orders of magnitude lower than traditional high-accuracy gyros. Proprietary sensor configuration allows dynamic scaling of power-draw vs accuracy thus allowing accuracy when needed, power savings when needed.
- Accuracy:** Patent pending sensor configuration provides accuracy of laser/optical gyros using MEMS sensor devices. Differential sensor technology reduces vibration, noise, and thermal effects while improving output accuracy and system reliability.
- Update Rate/Bandwidth:** Fast update rate reduces low-latency position estimates and improves real-time performance. Update rate can be tuned based upon accuracy and power-draw requirements.
- Maximum Rotational Rate (degrees/second):** Standard rate range up to ± 2000 / second. Rate estimates generated by algorithmically fusing 16-bit sensor output values at multiple full-scale output ranges. This produces effective rate estimates that exhibit high sensitivity and low integration error over a wide range of rotation rates. Additional rate range options available.
- Communication Hardware:** Multiple standard communication interface options available: RS-232, RS-422, RS-485, TTL UART, USB.
- Communication Protocol:** Well documented open communication protocol. USB connectivity supports multiple USB driver options including Virtual Com Port drives and HID devices, etc.
- Operating Temperature:** Extended operating temperature range of -40C to +85C
- Housing:** Reduced footprint/volume/weight compared with other high-accuracy gyros in the same performance class.
- Calibration:** Self calibrating due to patent pending sensor configuration and sensor fusion algorithm that act to reduce vibration effects, noise effects, and thermal effects while improving output accuracy and system reliability.

* Specifications may vary depending on model or custom design needs.



www.3SpaceSensor.com