

## Thales and Tronics in Partnership for High-performance Inertial MEMS

### Custom MEMS Produced by Tronics to Be Used in Thales Navigation Systems For Civil Aircraft and Defense Applications

GRENOBLE and VALENCE, France – Dec. 8th, 2009 – Tronics Microsystems, a manufacturer of integrated custom MEMS components, and Thales, a leading international electronics and systems group, today announced that they have signed a strategic supply agreement within the field of navigation systems.

Under the agreement, Tronics will produce high-performance, vacuum-packaged inertial MEMS-sensing elements based on two design concepts that Thales invented, designed and patented to meet the stringent navigation requirements of aircraft, satellites and other platforms. Both designs, one for accelerometers and one for gyroscopes, require advanced MEMS and vacuum-packaging technologies, areas in which Tronics excels.

This announcement follows Thales's presentation of world-leading technical achievements at the Symposium Gyro Technology in Karlsruhe, Germany, in September. Thales' showed that the measurement provided by the gyro (angular speed expressed in °/h) features intrinsic bias, that is, a "constant" error compared to the exact value. One of the main challenges in MEMS technology is maintaining this error as stable as possible over time. During the symposium, Thales announced that it had achieved a stability better than 8°/h in the full temperature range with parts produced by Tronics.

Norbert Herail, director of navigation systems activities at Thales, explained: "The MEMS technology is a major breakthrough that will introduce a navigation offer to many new civil and military markets by drastically reducing volume, weight, power consumption, and costs, and increasing reliability. This technology will drive the future of the navigation market in the same way as the ring laser gyro technology dominates the market today. As the leading driver of these two inertial technologies, Thales will be the sole European company capable of proposing a full range of navigation solutions to the market."

Peter Pfluger, Tronics CEO, said: "We are delighted to count Thales as part of our strategic customer base for high-performance inertial transducers. We are now running a good panel of inertial MEMS projects, which range from single- to multiple-axis devices and from extremely small low-cost MEMS devices to extremely high-performance components, where Thales' products are among the higher end."

Tronics is a world leader in the production of custom MEMS components using advanced MEMS on SOI technologies. Thales' inertial designs leverage this expertise and the company also benefits from Tronics' expertise in packaging inertial MEMS under high vacuum.

Thales is a world leader in supplying the development and industrialization of high-performance inertial measurement units and GPS receivers for integration in various high-value platforms such as civil aircraft, fighters, trainer aircraft, missiles, transport aircraft and helicopters. Thales's inertial solutions are already deployed by numerous customers, including Ariane, CASA, Dassault, DCNS, Eurocopter, MBDA, and MiG aircraft.

---

# NEWS

DIRECTION DE LA COMMUNICATION | CORPORATE COMMUNICATIONS

#### **About Tronics**

Tronics is a global leading integrated manufacturer of custom MEMS. With operations in the U.S. and Europe and representation in Asia, Tronics provides local support to customers and offers one of the broadest technology portfolios in the industry. The company transforms MEMS concepts into products and builds reliable supply chains for integrated components. Tronics services range from R&D prototyping to high-volume MEMS manufacturing, including electronic interface development, assembly and custom packaging, with additional capabilities in medical device development.

Visit [www.tronicsgroup.com](http://www.tronicsgroup.com) for more information.

#### **About Thales**

Thales is a global technology leader for the Aerospace, Space, Defence, Security and Transportation markets. In 2008, the company generated revenues of 12.7 billion euros with 68,000 employees in 50 countries. With its 25,000 engineers and researchers, Thales has a unique capability to design, develop and deploy equipment, systems and services that meet the most complex security requirements. Thales has an exceptional international footprint, with operations around the world working with customers as local partners. [www.thalesgroup.com](http://www.thalesgroup.com)

#### **Contacts:**

##### **Tronics Microsystems**

Vincent Gaff  
Public Relations Manager  
+33 4 76 97 29 60  
[vincent.gaff@tronics.eu](mailto:vincent.gaff@tronics.eu)

##### **Thales**

Natasha Harvey  
+ 33 1 34 81 40 50  
+ 33 6 74 94 23 81  
[natasha.harvey@fr.thalesgroup.com](mailto:natasha.harvey@fr.thalesgroup.com)

##### **Tronics Agency Contact**

Sarah-Lyle Dampoux  
Account Supervisor, Loomis Group  
+33 1 58 18 59 30  
[dampoux@loomisgroup.com](mailto:dampoux@loomisgroup.com)

---

# NEWS

DIRECTION DE LA COMMUNICATION | CORPORATE COMMUNICATIONS