

<b>SBIR 06.2 PHASE I - AWARD DETAILS</b>	
<b>ORGANIZATION</b>	NSC
<b>TOPIC NUMBER</b>	A06-181
<b>CONTRACT NUMBER</b>	
<b>YEAR OF AWARD</b>	
<b>AWARD START DATE</b>	
<b>AWARD COMPLETION DATE</b>	
<b>PROPOSAL NUMBER</b>	A062-181-2263
<b>TITLE</b>	Wireless Parachute Pressure Sensor Measurement System
<b>PROJECT MANAGER</b>	Bishnu Gogoi (734) 302-1140 <a href="mailto:bgogoi@evigia.com">bgogoi@evigia.com</a>
<b>COMPANY</b>	Evigia Systems, Inc. 333 Parkland Plaza Dr. Ste. 500 Ann Arbor MI 48103-6202  Minority Owned: No Veteran Owned: No Number of Employees: 5
<b>KEYWORDS</b>	Pressure sensor, MEMS, capacitive sensor, sensor interface IC, ultra-thin, ultra-low power, wireless.
<b>ABSTRACT</b>	This proposed Phase I SBIR effort initiates development of a wireless pressure sensor system for characterizing the temporal evolution of the pressure field during deployment of parachutes and also measuring pressures across different fabric materials. The primary outcome of this project is a fully-integrated media isolated micropackaged ultra-high sensitivity pressure sensor module with a size of 5mmx5 mmx0.6mm, and weight of
<b>BENEFITS</b>	The proposed micropackaged pressure sensor system with ultra-high sensitivity, high dynamic range has a high-performance and significantly smaller size, thickness, and lower cost compared to other commercially available systems. This self contained module becomes very attractive for widely deployed distributed sensor applications. The sensor module can be attached to the surface of aerial platforms, as well as ground based systems. Since the size of the module is so small, specially, its thickness, it can be attached to any aerodynamic platform to analyze the pressure field evolution. The sensor also has applications in pressure monitoring systems that are remotely operated, such as environmental monitoring systems and other applications where pressure measurement is required in the presence of strong electrical and magnetic fields. The proposed micropackaged pressure sensor system also has sizeable non-DoD market because of its high sensitivity, small size, and low power. This includes conventional pressure sensor application areas such as automotive, industrial, consumer and medical applications. One of the largest market segments for this module is also the RFID based pressure sensors for monitoring shipping, and supply chain conditions that are sensitive to pressure variations.