# Case Study

*"With Falcon, we have found a solid technology partner with a similar customer-focused quality standard that makes our business better and our customers happy."*

*– John Turner*
*VP and General Manager*
*CIS Secure Computing*

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## CIS Secure Computing Relies on Falcon® Electric to Power Electronics Inside Military Aircraft

CIS Secure Computing is the fastest growing TEMPEST manufacturing company in the United States specializing in rugged and secure communications solutions for the United States Federal Government. CIS has one of the largest portfolios of products in the market, including numerous DO-160E qualified solutions. Their newest plant, a 23,000 square foot facility, is the first TEMPEST-certified manufacturing facility since the early 1990s, making CIS the most contemporary TEMPEST product manufacturer in the industry. Located in Dulles, Va., this plant is home to their computer and communications specialists who have a combined industry experience of over 90 years and includes certified TEMPEST professionals, electrical, and mechanical engineers.

EMI/TEMPEST, or simply TEMPEST, is a term the U.S. Army's Blacktail Canyon Testing facility coined in 1981. TEMPEST addresses counter-espionage tactics and countermeasures that lead to secure computing, communications techniques, and hardware customization. Specifically, TEMPEST focuses on electromagnetic interference (EMI) signals that emanate from computers and other communications devices.

TEMPEST mandates a number of shielding methodologies and techniques for these signals to ensure classified information is not compromised. Without proper shielding, classified data or conversations can be compromised by surveillance equipment that is designed to intercept the EMI signals. This can be done from a distance of several hundred feet, for example, from a parked van outside an office building, or even greater distances using advanced technologies. As electronics evolve in sophistication, the need for security assurances provided by companies like CIS becomes even more critical.

The DO-160E military specification, developed by the Radio Technical Commission for Aeronautics, focuses on the performance characteristics and environmental testing for airborne equipment, computers and communications gear. In particular, the DO-160E governs how well the equipment handles vibration, shock and the ability to remain intact should it be subjected to a high number of G-Forces in a crash. This is an area that CIS has a great deal of expertise.

"A recent project for the Air Force required a rugged rackmount uninterruptible power system (UPS) to protect sophisticated TEMPEST electronics housed inside an aircraft," said John Turner, vice president and general manager of CIS Secure Computing. "The Falcon ED Series™ 2400VA rackmount unit met the project's UPS specifications. The ED Series' on-line design allows the UPS to perform power conditioning and regulation as well as frequency conversion. Working together with Falcon, we were able to modify their product to meet the exact physical and environmental requirements of the customer. This included very demanding shock, vibration, and EMI requirements for aircraft deployment," stated Turner.

"In our line of business, we often collaborate with our suppliers to customize their hardware to meet exacting standards, such as DO-160E," Turner explains. "This can lead to disappointing results when the supplier cannot provide the appropriate engineering support needed to complete the project. In this context, however, Falcon Electric is one of the best suppliers we have worked with in some time. Their engineering support has been superb throughout the entire project and we are already working with Falcon Electric on other projects." Turner adds, "With Falcon, we have found a solid technology partner with a similar customer-focused quality standard that makes our business better and our customers happy."