



**End User:** Manufacturer of switches and sensors

**Location:** Central NJ

**Integrator/Supplier:** FemtoTek, Inc.

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### **Introduction:**

The customer is a manufacturer of specialized waterproof and thermal high-endurance switches and linear position sensors. Their markets include recreational and military vehicles, aviation, and industrial equipment sectors.

### **Scope of Project:**

The customer needed a new automated calibration system for their thermal switch production line. This system had to meet the requirements of the end-customer defined calibration method. The customer wanted a modular, open, networked system that eliminated unreliable cabling and connectors. The system also needed to provide flexibility in operation and redundancy in the event of computer failure.

### **Solution:**

The solution was to move to an Ethernet-based calibration system with multiple computers. A key part of this solution was the choice of the SIXNET model ET-16DI2-H for its wide range of inputs and operating conditions. Using the ET-16DI2-H as the sensor for switch open/closed states allowed the system to satisfy the calibration method requirements. The remaining system components were modbus temperature controllers, Ethernet switches, and operator PCs attached to the Ethernet. The system was run by a LabVIEW application written by FemtoTek.

### **Products Used:**

<b>Qty</b>	<b>Part Number</b>	<b>Description</b>	<b>Qty</b>	<b>Part Number</b>	<b>Description</b>
8	ET-16DI2-H	16 digital input Ethernet modules			

### **Resulting Benefits:**

The new calibration system, built with SIXNET modules, was a great benefit to the customer. Its modularity made it easy for the customer's engineers to understand and maintain. The system's reliability led to a marked reduction in maintenance costs, and its operational flexibility significantly increased efficiency in production scheduling. The modern look of the modular, networked system was also a plus in that it enhanced end-customer confidence in the manufacturing process.