

*General Microcircuits, Inc. (GMI) is a global electronics manufacturing company that produces circuit boards for numerous industries and applications, including Automatic Meter Reading, Electrical Power Generation and LED Lighting Solutions. GMI required a conformal coating partner to help improve the performance and lifetime of a new circuit board design, specifically developed for a control module that will be used to collect data in harsh outdoor environments.*

## General Microcircuits, Inc.

*Industry: Electronic Manufacturing*

### Challenge

The initial design specifications for the control module's printed circuit board (PCB) did not include a protective conformal coating applied to the two-sided PCB. GMI quickly recognized that a superior protective coating was needed to help shield the various electronics and components from the unpredictable nature of outdoor environments. Additionally, the protective coating would help the PCB pass specification for shock and vibration also inherent in the operational outdoor environment. GMI sought a conformal coating partner who could automate the application process and meet all the performance requirements.

### Solution

After evaluating several conformal coating companies, Shat-R-Shield's precision conformal coating service quickly emerged as the ideal partner for GMI's unique business needs. Leveraging Shat-R-Shield, robotic dispensing equipment applied coating to targeted areas on the circuit board – while ensuring certain areas and components were not coated. The precision worked hand-in-glove with the PCB design specifications to deliver improved protection, performance and longevity. GMI also required a partner who could support large volumes while maintaining high-quality and repeatability, and Shat-R-Shield delivered on all fronts.

### Results

Shat-R-Shield's conformal coating service not only addressed GMI's requirements to protect the circuit board from outdoor elements such as moisture, dust, chemicals and salt spray, but the high-performance coating also protected the PCB's against thermal shock and vibration to prevent damage to fragile electrical components. Additionally, the automated application process delivered GMI savings – eliminating the need to hire more people to manually coat the circuit boards.

### Customer Feedback

"Shat-R-Shield worked as an extension of our team and their technical expertise was critical during the PCB prototyping and production roll-out phase," said Alan Morris, Program Manager, General Microcircuits, Inc. "Shat-R-Shield welcomed our customer on-site and was very engaged in answering questions in detail, explaining processes and requirements on their manufacturing floor and most of all ...satisfying our customer. Outsourcing the conformal coating to Shat-R-Shield frees up valuable manufacturing time for GMI and I look forward to working with them in future as we realize the value they represent and their sound business philosophy."

