

# STI ELECTRONICS NEWSLETTER

INNOVATING TECHNOLOGY. POWERING TOMORROW.

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### TECHNOLOGY INNOVATIONS

Explore our latest advancements in training and manufacturing.



### INDUSTRY INSIGHTS

Expert perspectives on emerging trends shaping the electronics industry.



### STI NEWS & EVENTS

Company updates, Training Resources and Engineering Services.



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Volume 24, Issue 2

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Madison, AL 35758

STAY CONNECTED



# Dave's World

NEWS, UPDATES & INSIGHTS  
FROM DAVE'S WORLD! ////

**AUGUST, 2026**

CONNECTING  
IDEAS.  
POWERING  
PROGRESS.

I've always wanted STI to be a welcoming place. People call or visit from all over the world and as they say, "you only get one chance to make a good first impression." For the past 26 years, Donna Taylor has been our first impression.

Donna was her usual happy and welcoming self on June 8th and then passed away that evening.

Donna was the person that answered when you called our main phone number and she was the person you first saw behind the reception desk in our lobby. Her job when answering the phone was to either answer your question, or get you to the right person who could. Her job when you walked into the lobby was to ask all the security questions we require and connect you with whoever you needed to see. In both cases, she did that job but also made you know that you were welcome and we were happy to be part of your day. She

greeted tens of thousands of students and while getting them processed in, made them feel welcome.



**David Raby**

President/CEO

[draby@stiusa.com](mailto:draby@stiusa.com)

Personally, I can't tell you how many times over 26 years (thousands??), Donna called me from the lobby to tell me I had a guest. I

can't remember a single one of those times when I got to the lobby and Donna and the guest weren't smiling and laughing about something. That got almost every meeting off to a better start than it could have. She protected me from spam calls and visits and I'll always appreciate that. She and I went way back together. We went to one year of high school together before I moved to California and my parents knew her parents,



INNOVATE



COLLABORATE



SOLVE



INSPIRE

grandparents, and great grandparents. Our opinions differed on some things, most importantly, our college football loyalty but those never put a damper on our friendship.

Donna's visitation was amazing. Of course, STI people showed up but so did quite a few people that used to work at STI but moved on or retired. Also, so did customers. So did suppliers. So did our postal delivery person. All of those say what kind of person Donna was and give an idea of how much she will be missed.

Kimberly started as our new receptionist last week. I don't know if she'll be here 26 years. (I'll be in my 90's so you'll have to remind me that I'm still here.) She seems smart and friendly and has all of the qualifications the job description says we were looking for. She's not Donna. That is not a negative on Kimberly. She may be the best thing to happen at STI ever and do things Donna never could but she's not Donna. We will never forget Donna.

On a much happier note, STI is continuing to grow like crazy. We continue to hire to try to keep up

with the growth. Thank you for your support and always let us know how we can do things better.

Dave

*David Rabby*  
President/CEO



“  
TECHNOLOGY  
CONNECTS US.

INNOVATION  
DRIVES US.

TOGETHER  
WE BUILD  
TOMORROW.”

# Stronger TOGETHER

*One Team. One Purpose. Endless Impact.*



**DIFFERENT**  
*Strengths.*

**SHARED**  
*Vision.*

**STRONGER**  
*Together.*



**BEHIND EVERY SUCCESS IS**  
*an amazing team.*

Every day, they show up, collaborate, problem-solve, support one another, and go the extra mile. It's the dedication, passion, and teamwork that make our company a place we're proud to be.

**Thank you to our team for being the heart  
of everything we do.**

*We are lucky to have you.* 

*Here's to our team, our journey, and all that's ahead!*

## **ONE TEAM**

We support  
and uplift each other.

## **ONE PURPOSE**

We work with intention  
and pride.

## **ENDLESS IMPACT**

Together, we make  
a difference.

# Up Close *and* Personal

## EMPLOYEE SPOTLIGHT

..... MY FAMILY .....



**Kimberly McNeill**  
RECEPTIONIST

Started at STI  
July 6th



### A LITTLE ABOUT MY FAMILY

I have two children: Grace 27 and Liam 25 who live in Colorado. My 85 year old father lives with me and my 82 year old mother lives with my older brother Tim here in Madison. We all moved to Alabama in 2025. And we are 100% Irish so St. Patrick's Day is a festive day!



**FAVORITE PLACE TO VISIT**  
NY City and Estes Park, Colorado



**FAVORITE MUSIC**  
I love the 80's and known to kitchen dance quite often!



### FAVORITE MOVIE / TV SHOW

Favorite movie is To Kill A Mockingbird and currently enjoying period shows like The Gilded Age and Bridgerton. Every Memorial Day, I watch Band of Brothers which is timeless!



### FAVORITE MEAL / FOOD

Chicken Parmesan



### HOBBIES

I enjoy meeting new people, exploring Alabama, concerts, football, baseball games, having drinks with friends and do admit to binge watching shows on a lazy weekend!



“

### FAVORITE QUOTE

“If you don't go out on a limb, you'll never get the fruit.”



### FUN FACT

I moved here to Alabama from Colorado in June 2025 after scoping out the area one Sunday in Jan 2025. My two best friends died within a year of each other a few years ago and in January for a long weekend, scoped out Madison and decided it was time to reinvent myself! I lived in the same house in Colorado for 26 years and raised my kids in that house. My father from Wyoming followed in Oct and so did my mother and older brother from Colorado! I apparently started a family movement! I absolutely LOVE Alabama and learning everything southern! I want a southern accent so bad! 😊 I just need to have my kids move south!

### FAVORITE NON-PROFIT

St. Jude because of how giving they are to families with providing housing, food, transportation and not receiving a bill when their child is sick. Their gift of giving is truly amazing!



### ONE FUN THING TO KNOW ABOUT ME

I was also once in the Macy's Thanksgiving Day Parade and was on tv for a nano second!



### FAVORITE THING ABOUT WORKING AT STI

### THE PEOPLE!



They are so warm, inviting, and generous with their time! Everyone has been helpful and sees me as a person! All the hospitality has been a blessing and I am grateful.



**THANK YOU!**

I would like to express my gratitude for y'all making me feel like I am part of the STI family! Everyone has been kind towards me and have made a point to genuinely ask if I am doing okay. I know that y'all have lost a family member in Donna and I know that I have big shoes to fill. Your kindness and respect for her have poured over to me and I thank you so very much for making me feel as though I matter here at STI!!! Y'all truly are a phenomenal company!



# CORE VALUES

*STI Electronics, Inc., a full-service organization providing training services, training materials, analytical/failure analysis, prototyping, and contract electronic manufacturing.*

## **Mission Statement**

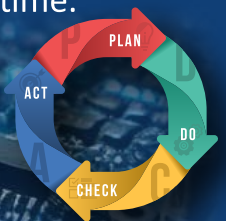
STI's mission is to provide electronic contract manufacturing, solution-based engineering, analytical services and training resources to the electronics industry.

## **Quality Policy**

STI will consistently provide products and services that meet or exceed the requirements and expectations of our customers as well as industry standards.

## **Continuous Improvement**

STI relentlessly pursues continuous improvement and excellence in projects, products, processes, and services, and defines success as getting it right the first time.



***Committed to Excellence in Electronics Manufacturing & Services***

# Celebrating Our Team!

## ★ EMPLOYEE ANNIVERSARIES ★

At STI Electronics, our people are the foundation of everything we do. Throughout July and August we are proud to recognize team members celebrating their work anniversaries. Their dedication, expertise, and commitment to excellence have helped shape our success and strengthen the relationships we have built with our customers, partners, and students. Thank you for your years of service and the positive impact you make every day. Congratulations on this important milestone!



*Mark*  
**26 YEARS**



*Katrena*  
**16 YEARS**



*Sharon*  
**9 YEARS**



*Joel*  
**9 YEARS**



*Caroline*  
**7 YEARS**



*Yolanda*  
**7 YEARS**



*Daniel*  
**1 YEAR**



*Maria*  
**1 YEAR**

## THANK YOU!



TO OUR

## TEAM MEMBERS



Do you have a question?  
Do you need information?

**CHAT**  
with us online!



We are dedicated to enhancing customer satisfaction and building strong customer relationships for both external as well as internal customers regardless of divisional or department lines.



## Certifications/Capabilities

AS9100D/ISO 9001:2015 • ISO 13485:2016 • ITAR REGISTERED  
Cage Code 1JX07 • System for Award Management (SAM) Registration  
NIST 800-171 Compliant • Joint Certification Program (JCP) Registration (DD 2345)  
IPC J-STD-001/IPC-A-610 • Qualified Manufacturers Listing (QML)  
IPC J-STD-001 Space and Military Addendum Qualified Manufacturers Listing (QML)  
IPC 1791 Qualified Manufacturers Listing (QML)  
Approved on DOE (Department of Energy) MASL  
IPC Authorized Training Center • IPC Distributor

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## Printed Circuit Board Baking Conditions and Board Solderability Analysis for OSP Surface Finish



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Analytical Lab Manager

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Baking of bare boards can be done prior to assembly if moisture removal is needed. But baking bare boards can lead to other issues, such as increased cost and cycle time, or degradation in solderability (IPC-1601A 3.4.1) especially for OSP finished PCBs. In this brief exploratory study, three baking conditions were used and the solderability of the bare boards was examined to determine if changing the baking conditions would impact the solderability. The baking conditions for the board samples were 105 °C for 24 hours, 125 °C for 24 hours, and 125 °C for 72 hours. Following the bake, solder paste was applied and the boards were run through the reflow oven. Once cleaned, the boards were visually inspected

105 °C for 24 hours

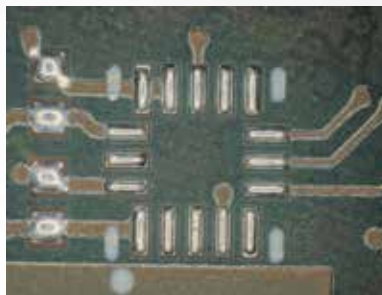


Figure 1. 105 °C for 24 Hours Visual Inspection

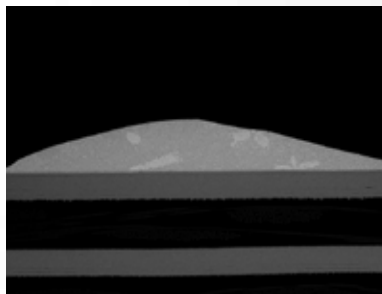


Figure 2. Solder Evaluation

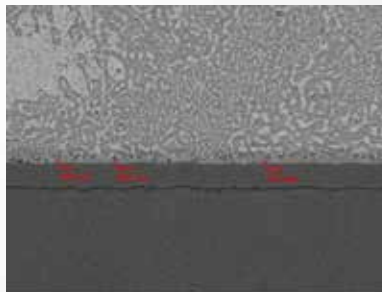


Figure 3. IMC Measurements

and then cross sectioned at a selected location to evaluate the solderability of the solder paste to the board. The solderability was evaluated by inspecting and measuring the intermetallic compound (IMC) formation between the solder and the pad.

IPC-1601A has recommendations for printed board baking profiles (IPC-1601A Table 3-1) based on the final finish, with the standard recommended baking profile of 105-125 °C for 4-6 hours. For this

exploratory study, the bake temperature was set to either 105 °C or 125 °C, but the bake time was increased to 24 and 72 hours. The samples were visually inspected for solderability defects such as dewetting or non-wetting of the pads. Visual inspection of all samples did not reveal any

### 125 °C for 24 Hours

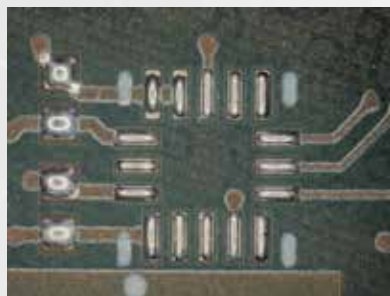


Figure 4. 125 °C for 24 Hours Visual Inspection

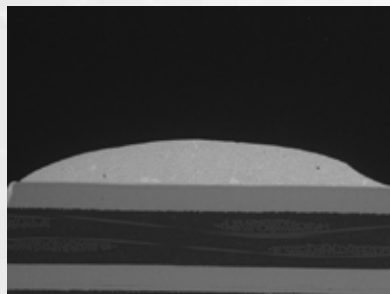


Figure 5. Solder Evaluation

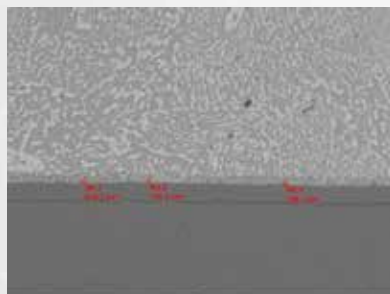


Figure 6. IMC Measurements

obvious defects or anomalies in the solder following reflow. The samples were then cross sectioned at the selected location to evaluate the IMC. The IMC evaluation revealed sufficient IMC formation at the board for each baking condition. The IMC thickness was measured for each sample, and it was found that the average IMC thickness was slightly less for the 105 °C for 24 hours bake (484.4 nm) compared to the 125 °C for 24 hours bake (660.6

nm) and 125 °C for 72 hours bake (643.3 nm). However, acceptable IMC thickness and wetting of the solder to the board was observed for all conditions evaluated in this study. No concerning observations were made in the board solderability when comparing the three different baking conditions of the bare boards.

STI Electronics, Inc. Analytical Lab has the capability to perform various research studies to meet your needs.

### 125 °C for 72 Hours

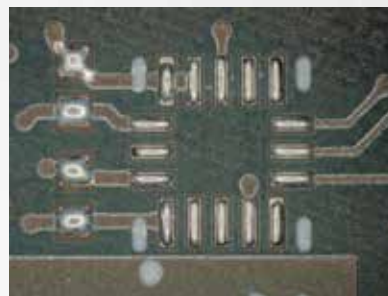


Figure 7. 125 °C for 72 Hours Visual Inspection

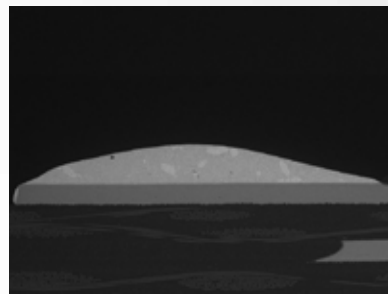


Figure 8. Solder Evaluation

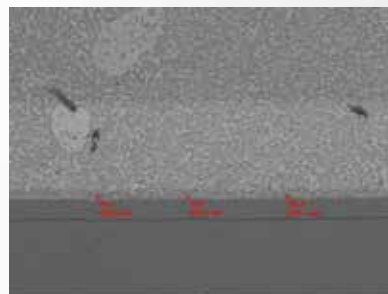


Figure 9. IMC Measurements

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or

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STAYING AHEAD.  
DELIVERING EXCELLENCE.

# TRAINING UPDATES

COLLABORATE.  
EVALUATE.  
ELEVATE.



To stay ahead of the curriculum updates coming later this year, our team spent the past two weeks partnering with GEA (IPC) to **beta test the upcoming 620 Evaluator Exam.**

This early access allowed us to review the test structure, evaluate the cable/harness builds, and identify several technical and procedural improvements needed before the final release.



BETTER  
TESTS.  
BETTER  
TRAINING.  
BETTER  
RESULTS.



BETA TESTING  
THE FUTURE OF  
EXCELLENCE

Special thanks to **Gary and Wendel (NASA)** and **Billy (Wildwood)** for joining us onsite and contributing their expertise.

Their feedback helped surface key refinements that will strengthen the final kit.



STI supported the effort by **providing sample assemblies** that will be included in the instructor version of the exam.

Additionally, Michelle and I completed on camera demonstrations of multiple tasks, which GEA will publish as part of their official how to training content.



This beta cycle gave us a clear preview of the evaluation workflow and will help us **prepare our instructors and students** for the **transition** once the new model goes live.



THANK YOU TO OUR  
AMAZING PARTNERS!

WORKING TOGETHER TODAY  
FOR A STRONGER TOMORROW.



# ONLINE TRAINING

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Designed with flexibility and real-world application in mind, our courses combine expert instruction with practical, job-ready content. Whether you're onboarding new employees, refreshing core competencies, or advancing specialized expertise, STI's Online Training delivers learning that fits your schedule and your pace.



Because when training is accessible, consistent, and engaging, excellence becomes the standard—not the exception.

EMPOWERING  
SKILLS  
DRIVING  
SUCCESS



IN ADDITION TO OUR CLASSROOM AND ON-SITE TRAINING COURSES, STI OFFERS ON-LINE TRAINING AND REMOTE TESTING FOR THE FOLLOWING IPC LECTURE BASED CERTIFICATION/RE-CERTIFICATION COURSES:

- IPC-A-610 Certified IPC Trainer (CIT) and Certified IPC Specialist (CIS) - Standard required for class
- IPC/WHMA-A-620 CIT and CIS - Standard required for class
- IPC-A-600 CIT and CIS - Standard required for class

**NOTE:** Currently hands-on courses are not available for on-line training or remote testing for CIT's or CIS's.



THE CERTIFIED SUBJECT MATTER EXPERT (CSE) ON-LINE COURSES ARE ALSO AVAILABLE FOR

- IPC-A-610, IPC/WHMA-A-620, IPC-A-600, IPC-7711/7721 and J-STD-001 - Standard required for class



Exams that are required for these courses can now be proctored remotely using **IPC EDGE**.



REGISTER NOW!



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Leading the Way In  
**Electronics**

# Through-Hole SOLDER TRAINING KIT

**Consistent. Complete. Classroom & Certification Ready.**

Through-Hole Solder Training Kits are an economical and reliable way to ensure that each student and each class receives the same project materials.

The kits contain a variety of common through-hole component types and wire terminal attachments that are encountered in production. Two variations in component quantities are commonly available. The recertification version of this kit has a reduced number of practice components.

These kits are updated versions of the industry standard certification kits created for the Military Certification Programs.

There are several additional versions of this PCB available such as Multilayer, without solder mask, without ground plane, etc. As with all of the STI Electronics Training Kits, customized versions of the kits and individual components are available.



#### Complete Project Materials

Everything needed for consistent training



#### Real-World Components

Variety of through-hole parts and terminals



#### Certification Proven

Based on Military Certification Program standards



#### Recertification Option

Reduced component quantities available



#### Multiple PCB Versions

Multilayer, no solder mask, no ground plane and more



#### Customizable

Tailored kits and individual components available

**The Essential Tool  
for Building Soldering  
Skills and Quality**

## MIXED TECHNOLOGY TRAINING KIT

**Real-World Training. Real Results.**



- ▶ Now available in both Lead Free and Tin Lead versions the Mixed Technology Solder Training Kit offers a realistic mixture of Through-Hole and SMT technology. It contains many of the common components found in mature technology applications for both through-hole and surface mount production.
- ▶ It is our most popular training kit due to its tremendous flexibility for production training.
- ▶ The Solder Training Kits provide a cost effective and consistent approach to solder training. Instructors no longer have to spend their valuable time keeping track of inventory and sorting through production scrap.
- ▶ The parts are packaged in static shield bags to promote ESD practices. The kits are a reliable and economical way to ensure that each student and each class receive the same training materials.
- ▶ All parts and boards are guaranteed solderable.
- ▶ Custom boards, kits, and individual parts are also available.
- ▶ The Combination Kit has increased focus on SMT as reflected in additional component count.



**LEAD FREE & TIN LEAD  
VERSIONS AVAILABLE**

# ENGINEERING SERVICES

Electronic Contract Manufacturing

Analytical Lab

Material Failure Analysis

Microelectronics Lab

Cleanroom

Engineering



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# TRAINING RESOURCES

IPC Training Center

Custom Technical Training

Curriculum Development

Cable/Harness

Rework/Repair

Training Kits & Aids

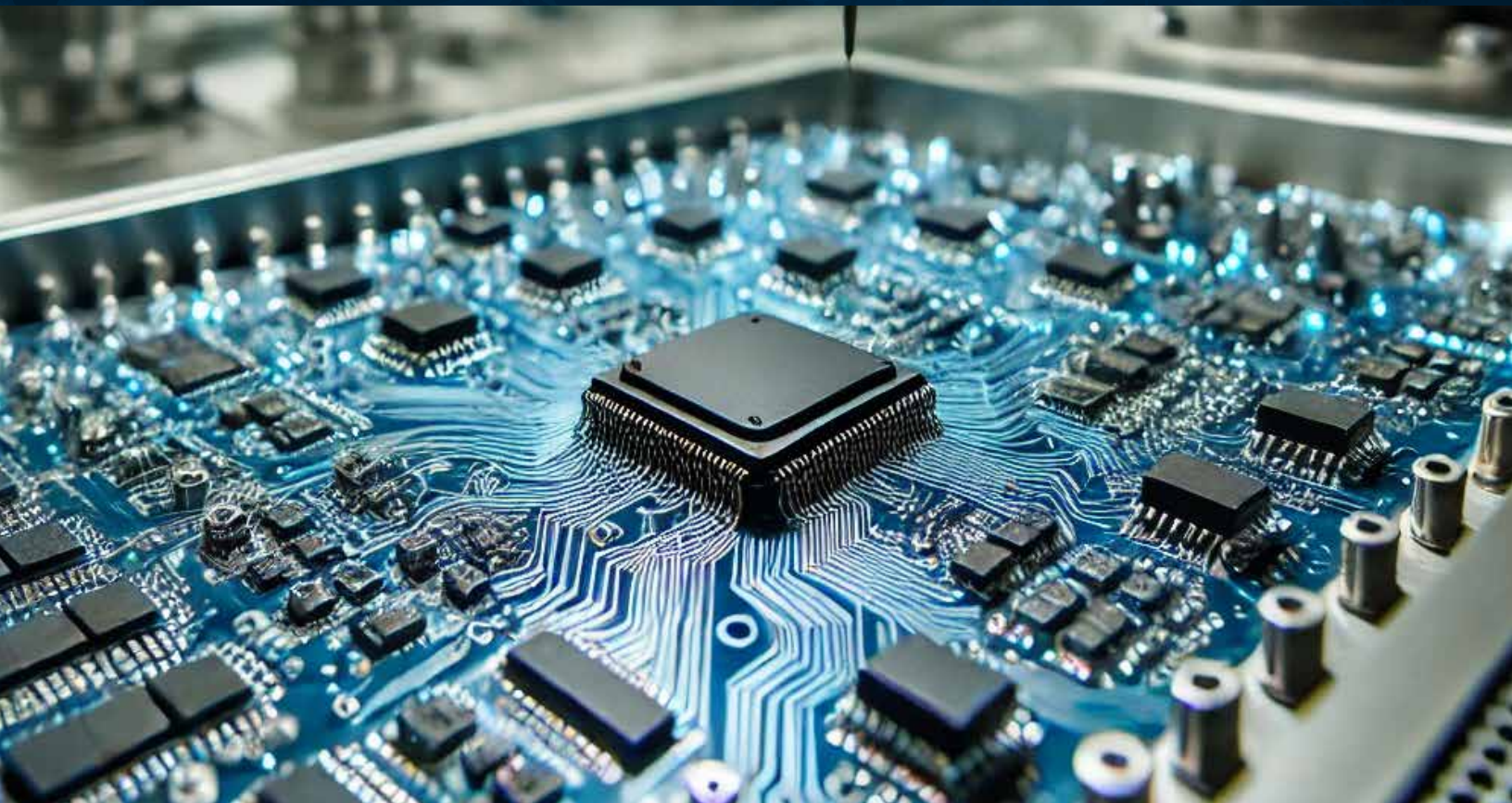


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INNOVATING TECHNOLOGY. POWERING TOMORROW.



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