











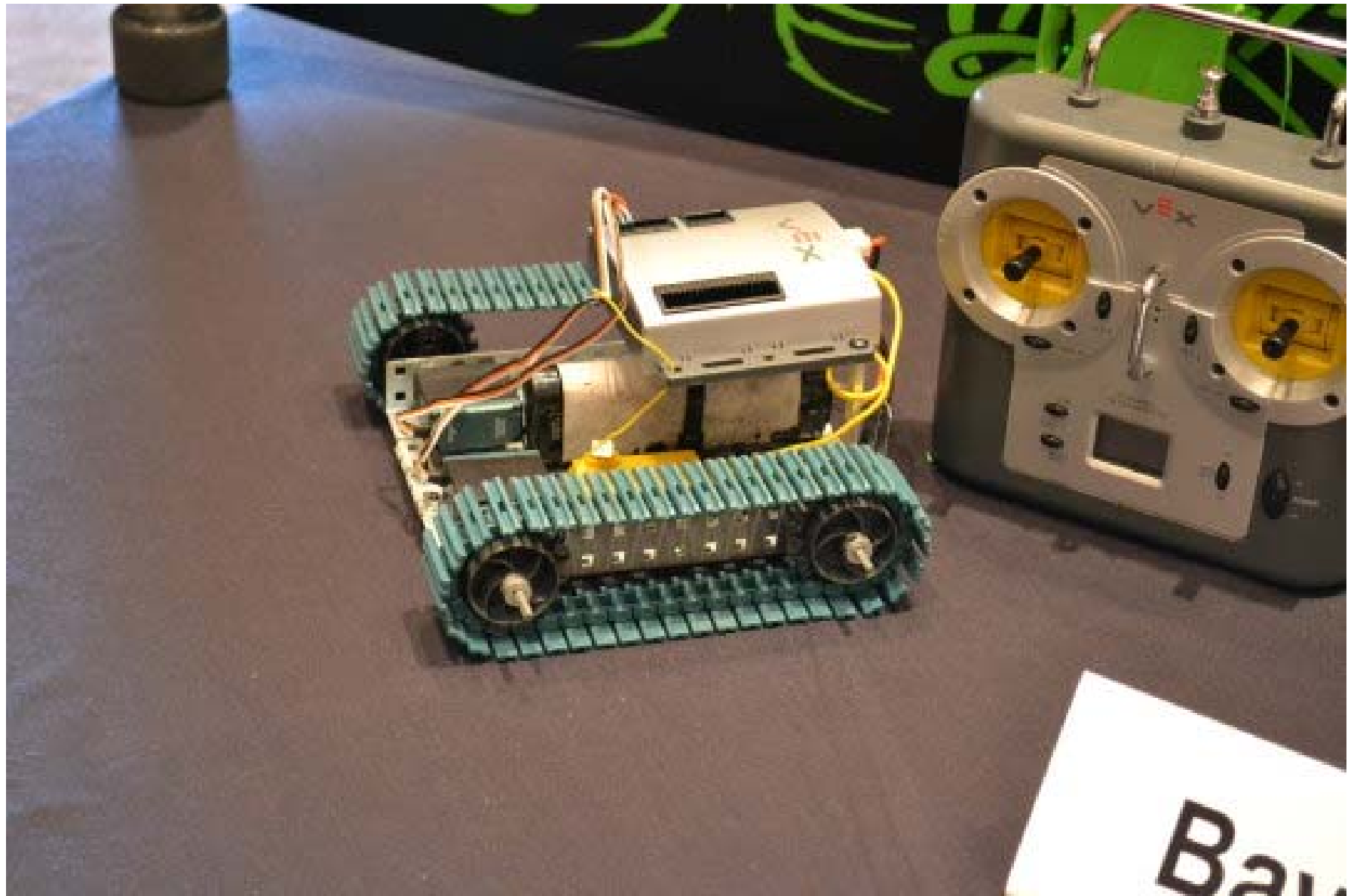








Bayside HS





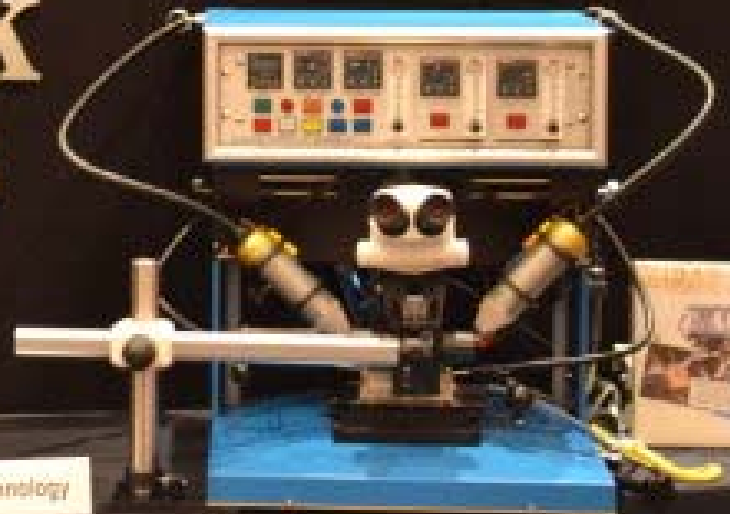
# MIDAS

TECHNOLOGY, INC

Rework  
Starts  
Here!



Midas Technology





# SST International

"World Leader in Package Assembly"

## KEY MARKETS

- Telecommunications
- Opto-Electronics
- Semiconductor
- Hybrid Microelectronics
- Defense & Space
- Automotive Electronics
- Medical Electronics
- Microelectronic Sensors



## 3130 SYSTEM



### TYPICAL APPLICATIONS

- High-Cost Package Assembly
- MCM-D Packaging
- Die, Component & Substrate Mounting
- Thermal Package Finishing

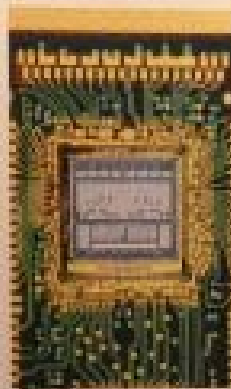
# Tektronix

Component Solutions



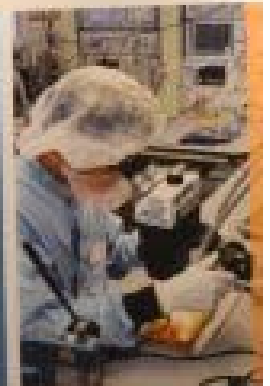
## Component Test

- Component Sourcing & Management Services
- Complex Semiconductor & Integrated Circuit Testing
  - Includes mixed-signal & RF devices
- Component Screening
  - Device Characterization
  - Burn-in & Life Testing
  - In-Circuit Physical Analysis (ICPA)



## Comprehensive Solutions

- ASIC Design
- IC Packaging
  - Design, Assembly & Test
- RF & Microwave Modules
  - Design, Assembly & Test
- Comparison Test
- Data Conversion
- IAT&I registered



## Certifications & Compliance

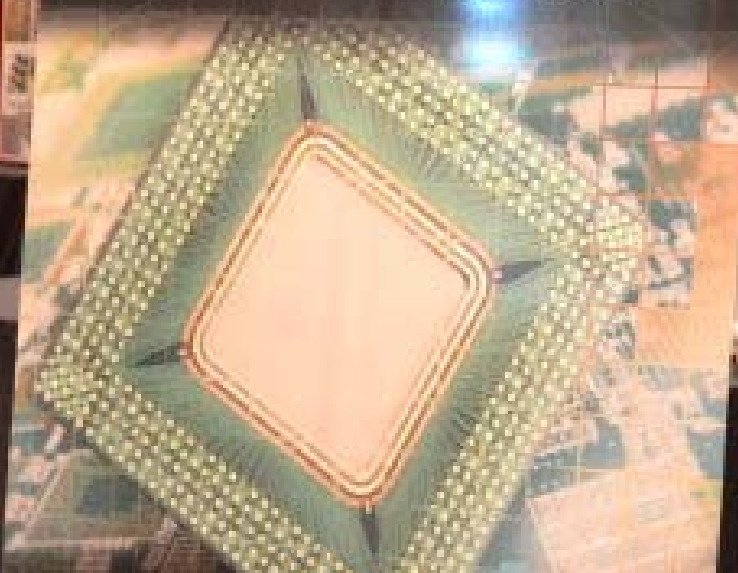
- ISO 9001:2008
- D500 (DLA) Lab Suitability
- MIL-STD
  - 110
  - 883
  - 1055
  - 202
- MIL-PRF
  - 10500
  - 38534

PRECISION PRINTED CIRCUIT BOARDS

**compunetics**

*excellence, measured in microns.*

*Compunetics is one of the few printed circuit board manufacturers in the world to make versatile boards for specialized applications and unusual physical constraints.*



# Advanced Materials Engineering Research Institute

Presented by  
 Dr. W. Gary Jones, Director of AMERI  
 Professor of Mechanical and Materials Engineering  
 Florida International University

Premier open access facility in South Florida supporting research in the areas of Nanotechnology, Materials Science, and Bio Systems including fabrication, analysis, test, and characterization of materials and devices  
 Recently established with equipment donations from Motorola Corp. and the co-locating of new and existing equipment from FIU Faculty labs.

## Nanofabrication Facility

- 150 sq. ft. class 100 clean room
- 1200 sq. ft. class 1000 clean room
- 12 4x8 four pocket 4-beam evaporator
- 1 Sputtering system (3 targets) used
- 2 Beamline Ion-Film systems
- Polymer Coating
- Mask Aligner with Nanoscribe Lithography
- Transfer-Resist Alignment capability
- Direct-write UV exposure mask making
- Direct-write E-beam lithography system
- DCL 7000 with fully beam blanker control
- Rapid Thermal Anneal
- 40 Co. XR-900 focused ion beam with 8" stage



Sensor Packaging Lab  
 that uses robot  
 Test and use (TC)  
 Processing equipment

Thermal Processing  
 high temp furnace

3-Ray Diffraction &  
 X-ray Scattering/Mechanics  
 Testing Lab

Sensors, Sensor Lab  
 Post-Characterization



Electron Microscopy Suite  
 Two 20 Focused Ion Beams  
 Two 20,000, Two 10,000  
 20 kV, 10 kV

Multi-Mode Atomic Force  
 Microscopy (MFM)

Materials Nanostructure  
 Research Facility  
 Two 20 and 10-Column  
 Nanolithography  
 Direct-write Laser & electron  
 lithography patterning  
 the film processing

Nanomechanical and Dynamic  
 Lab that uses high speed  
 Dynamic Mechanical  
 Analysis (DMA) system  
 Dynamic Mechanical Analysis  
 Dynamic Mechanical Analysis  
 Dynamic Mechanical Analysis

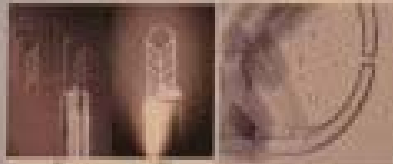
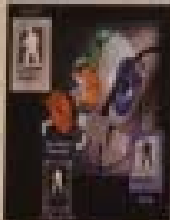


Fig. 2. Overview of nanoscale. Scanning composite of a single  
 20000 Volt adding a flow rate into structure

## Analytical Labs

- 3-Ray Diffraction Suite
- Fast Diffusion
- Differential Scanning Calorimetry (DSC)
- Thermogravimetric Analysis (TGA)
- FEI Philips Toluene electron microscope
- Philips CM 200 200 kV Transmission Electron Microscope (TEM)
- JEOL 4330 Field Emission Scanning Electron Microscope (FE-SEM) with Energy Dispersive Spectroscopy (EDS)
- JEOL 4000 Multi-Beam Field Emission SEM (FE-SEM) with micro probe extraction and EDS (Inchukin variable)
- FEI Philips Toluene electron microscope
- Veeco Nanoscope III Multi-Mode Atomic Force Microscope
- TA Instruments Q200 Simultaneous high-temperature DSC and TGA
- Nanomechanical, Fatigue testing and Friction



## Electronics and Sensor Packaging

- Super Mini-40 development
- Robot Station
- PCB Comp. via FR system
- Screen Printing
- Kytlec & Sofpa model 4823 Wafer burner
- Universal Laser M-200 Programmable Laser



**FIU** FLORIDA  
 INTERNATIONAL  
 UNIVERSITY

10555 W. Flagler St.  
 FIU Engineering Ctr., Room 3442  
 Miami, FL 33174  
 ameri@fiu.edu

for more information visit us at: <http://ameri.fiu.edu>

FIU



# Innovations in leak testing

*Fast and Green Leak Testing  
Simultaneously*

*Automated Inspection*

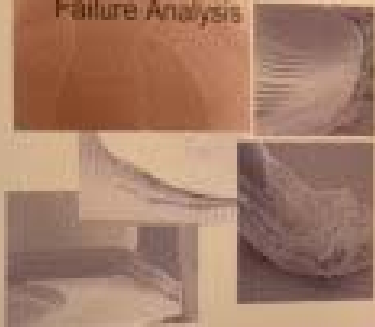
*No Helium Bombing*

*Small Footprint Format*

*MIL-STD Approved*



### Failure Analysis



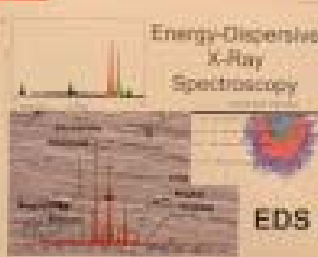
### Design Of Experiments

- Taguchi
- Factorial
- Optimal
- Yield Improvement
- New Process Development



# Process Solutions Consulting

### Energy-Dispersive X-Ray Spectroscopy



EDS

### Ribbon Bonds



Courtesy of Intel & Micron

### Metallography



### Wire Bond Analysis



# BAYSIDE HIGH SCHOOL

## 3D Printing



STEAM INITIATIVE



How to print an electronic gear



Use AutoCAD to draw PCB



Use Autodesk Inventor to create 3D model



Print with Dimension 3DT 700

Thanks to our Sponsors









PRECISION PRINTED CIRCUIT BOARDS

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Newport





2011  
**IMAPS FLORIDA  
TECHNICAL  
SYMPOSIUM**

**We welcome our Exhibitors!**

Please visit each of them in the Exhibition  
Hall and show your support!

Compunetics	Process Solutions Consulting
ES Components	nScript, Inc.
Hesse & Knipps	RIV, Inc. Thick-Film Screens
Micros-Chip Supply	ScanCAD
Midas Technology	SEFAR Printing Solutions
NAMICS Corporation	SST International
Newport Corporation	Tektronix Component Solutions
NorCom Systems	Utz Technologies

DuPont

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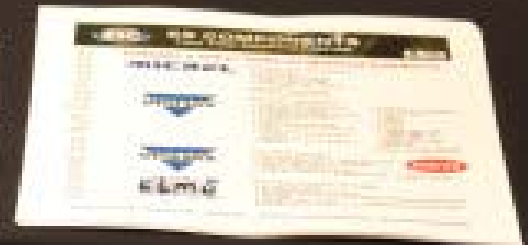
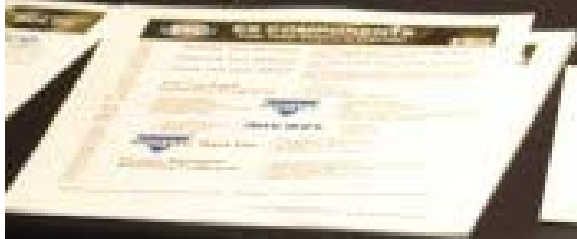


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NAMARK PROCESS  
DESIGN



# ESComponents







## THICK-FILM SCREENS

Riv, Inc. Merrimack, NH  
A Women Owned, Family Operated Business Since 1998

### Consistent Quality Thick Film Screens

**Five Key Durable Emulsions**

- 2mil lines and spaces achievable
- Quick to exposure and develop for templated customers



**We're Quick Too!**

- 24 hr. delivery when requested (NO Premiums)
- 3-5 days standard delivery

**Trust and Commitment**

- You can trust our quality and service



A table covered with a white cloth, displaying several brochures and a name tag. The name tag reads "RIV". The brochures feature the RIV logo and text. The table is positioned in front of the main display board.

NAMARK PROCESS

**CHIP SUPPLY™**  
Thinking Beyond Silicon™

Thinking Beyond Silicon™  
by providing:

- Bare die covering all critical technologies
- AND —
- Advanced packaging and interconnect design, manufacturing and test\*
- Comprehensive life-cycle planning and obsolescence management
- Full complement of in-house test and engineering support services

\*Not all are available in all regions

**AUTHORIZED**  
by the leading  
semiconductor manufacturers

# ONE-STOP SOURCE

## Semiconductor Die & Packaging Solutions

[www.chipsupply.com](http://www.chipsupply.com)

Chip Supply Capabilities:

- Complete Wafer Processing
- Known Good Die (KGD)
- Wafer Level Chip Scale Packaging (WLCSIP)
- Hermetic Assembly (QML Certified)
- Chip Scale Packaging
- Multi-Chip Module (MCM)
- Electrical Test / Environmental Screening
- Die Storage
- Product Continuation

Chip Supply



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*Simplifying Complex Technology*

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- Proven system-based system
- High resolution color or B&W imaging
- 3000 certified certified systems
- Many applications in one system
- Office & office configurations
- PC-based

#### MULTIPLE APPLICATION AREAS

- Layout or engineering
- Process control and setup
- End article inspection
- Optical inspection
- Flying probe test

#### MULTIPLANDS/2D/3D

- 2D Design, Fabrication, Assembly & Test
- 3D Tool Movements
- Mechanical Packaging
- Photochemical Machining
- Photo-etch Etch/Location
- Tool Cut Fabrication

#### LOW COST & EASY TO USE

- Golden Source or CAD programming
- Excellent price/performance

#### GLOBAL INSTALLED BASE

- Over 2000 systems installed in 40 countries



FLOOR SYSTEM



CONSOLE  
SYSTEM



DESKTOP SYSTEM

*Simplifying process control, optical inspection, layout re-engineering,  
programming, designing and testing products globally since 1980.*

[www.scancad.com](http://www.scancad.com)









# SST International

"World Leader in Assembly"

## KEY MARKETS

- Telecommunications
- Manufacturing
- Transportation
- Medical Instruments
- Defense & Space
- Automotive Electronics
- Medical Electronics
- Household Goods Services

## 3130 SYSTEM







































