

# **Richardson Electronics**

## Investor Site Visit

August 22, 2023

NASDAQ: RELL



# Forward Looking Statement

This overview includes certain “forward-looking” statements as defined by the Securities and Exchange Commission. Statements regarding the Company’s business which are not historical facts represent “forward-looking” statements that involve risks and uncertainties. For a discussion of such risks and uncertainties, which could cause actual results to differ from those contained in the forward-looking statements, see Item 1A, “Risk Factors” in the Company’s Annual Report on Form 10-K. The Company assumes no responsibility to update the “forward-looking” statements in this overview as a result of new information, future events, or otherwise.



# Agenda



9:30 – 10:30 a.m.

Welcome—Wendy Diddell

FY23 at a Glance—Ed Richardson

SBU FY23/FY24—Wendy Diddell  
and Greg Peloquin



10:30 a.m. – Noon

Tour



Noon – 1:30 p.m.

Lunch with Q&A

Wrap Up

# Management Introductions

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Edward Richardson, CEO

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Wendy Diddell, COO

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Robert (Bob) Ben, CFO

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Greg Peloquin, EVP and GM, PMT

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Greg Kinney, SVP, LaFox Operations

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Dan Erickson, Director, Richardson Healthcare

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Brian Gumino, New Product Design Engineering Manager

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John Curran, New Product Design Engineering Manager

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Jeremy Wilks, Senior Business Unit Manager

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Jeffrey Kerner, Senior Business Unit Manager

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Angela Churchill, Executive Administrator

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Andrew Berger, SM Berger & Company

## VISION

To make our world a better, more sustainable place by providing innovative technology solutions.

## VALUES

- We are a diverse family; we take care of our people.
- We focus on long term viability for our company, our community and our world.
- Every interaction is important and deserving of respect.
- We believe in hard work, reward, and the determination to succeed.

## MISSION

We provide solutions that improve our world through innovative engineering and manufacturing in collaboration with our employees, customers and technology partners.



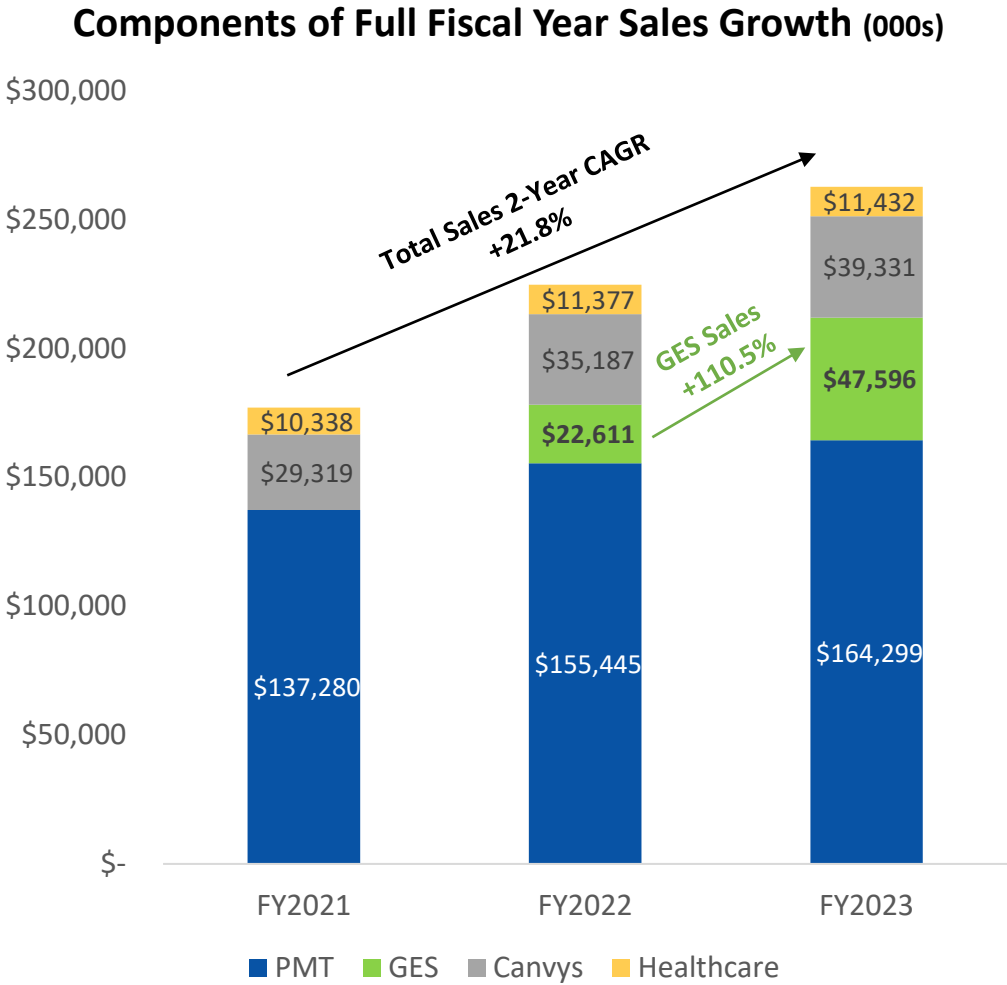


## Key Facts & Figures

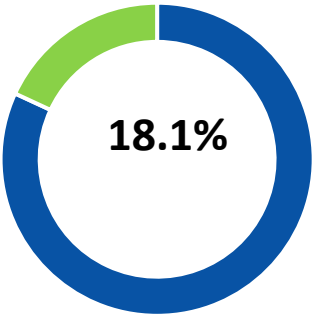
FY2023 Sales: <b>\$262.7 million</b> (+16.9% YoY)	FY2023 Net Income: <b>\$1.55 per diluted share</b> (vs. \$1.31 in FY2022)
Strong Balance Sheet: <b>FY2023 Q4 cash and cash equivalents of \$25.0 million and no debt</b>	Certified Experts <b>ISO 9001:2015</b> <b>ISO 13485: 2016</b> <b>Certified</b>
480+ Employees <b>Over half in sales, engineering and product management</b>	Global Customers <b>Over 20,000 worldwide</b> <b>OEM and end-user customers</b>
Headquarters: <b>LaFox, Illinois</b>	RELL is Global <b>60+ locations worldwide</b> <b>with legal entities in 24 countries</b>



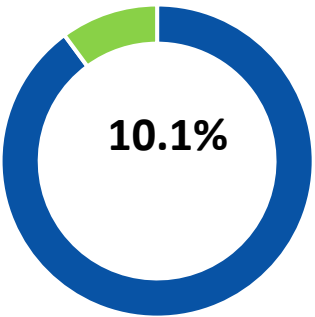
# Successful GES Strategy has Accelerated Sales Growth



FY2023 GES Sales Mix as a % of Total Sales



FY2022 GES Sales Mix as a % of Total Sales



# Health of the Business-FY24

- Following long-term strategy focused on diversifying sales to high-growth, high-margin opportunities supported by large, fast growing niche markets and applications
  - Growing diversity of sales by product, application, and geography since the pandemic will help offset the impacts of challenging semiconductor wafer fab market
- We expect softer sales in the first half of fiscal 2024 due to timing of project-based orders and fluid economic environment
- Near-term strategies are focused on supporting gross margin, controlling expenses, managing inventory, and conserving cash, while continuing to support long-term growth opportunities
- We remain optimistic about the back half of fiscal year 2024 based on customer demand for recently launched products, new technology partners, and new engineered solutions
  - Green Energy Solutions—existing programs + new projects and products
  - ULTRA3000® and ULTRAPEM Multi-Brand Pitch Energy Module
  - ULTRAUPS3000
  - Battery Start Modules, Battery Management Systems, and Superstructures for EV locomotives
  - YJ1600 for Diamond Manufacturing
- We expect Healthcare profitability to improve with the launch of repaired Siemens tubes
- Ongoing strength in Canvys, our display market with more than 80% of sales from blue-chip medical OEMs
- We continue to believe that we are well positioned to capitalize on significant long-term opportunities associated with demand for our GES solutions to deliver sustainable annual sales growth



# Strategic Business Unit Update

## FY23 Highlights and FY24 Initiatives



**Power & Microwave  
Technology (PMT)**



**Green Energy Solutions  
(GES)**



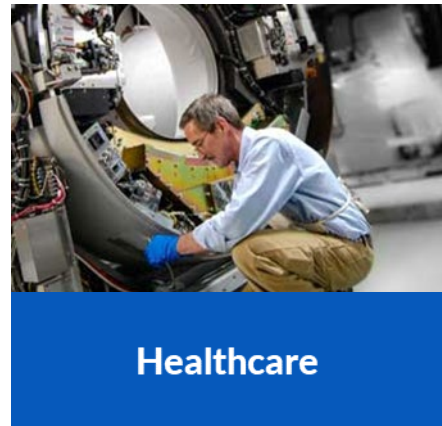
**Healthcare**



**Canvys**

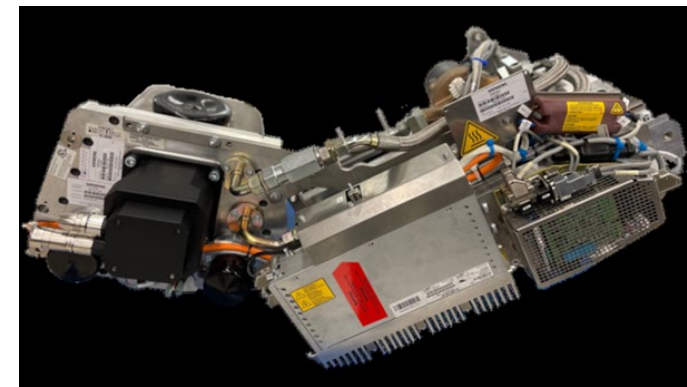
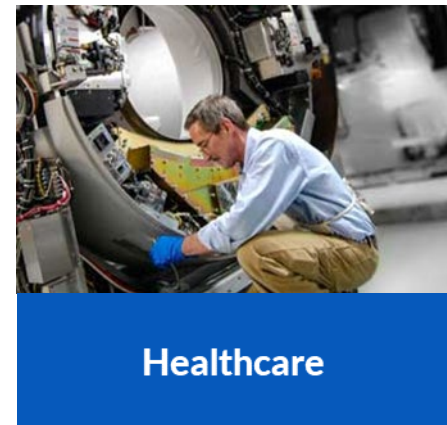
# Healthcare FY23 Highlights

- Sales are flat compared to prior year, but net loss reduced to \$3 million versus \$5.5 million in FY22
- Ongoing sales of CT parts, tubes and systems—primarily Canon
- Margin improved
- SG&A below prior year
- Launched the Straton Z, the first in the Siemens repaired tube program



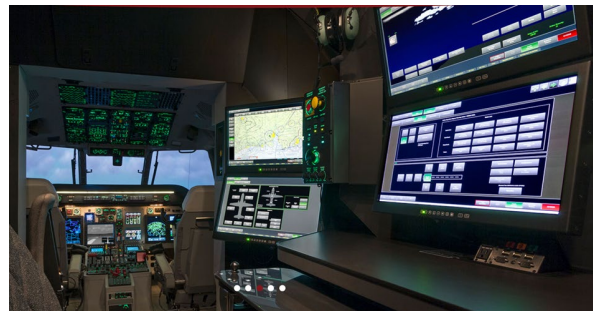
# Healthcare FY24 Initiatives

- Achieve break-even point by Q4, FY24
- Increase sales of Canon parts, tubes and systems
  - P3 Programs
  - Capped Spend Programs
- Generate Sales of Straton Z
- Launch of repaired Siemens MX, MXP and MXP 46 end of CY2023
- Maintain full production with reduced scrap to improve gross margin
- Continuous improvement to reduce cost to manufacture
- Maintain SG&A
- Convert inventory to cash



# Canvys FY23 Highlights

- Canvys Q4 revenue grew by 11.8% in FY23
- SG&A lower than budgeted
- Very solid Backlog of almost \$47 million!
- Many new blue chip customer wins

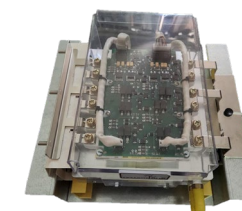
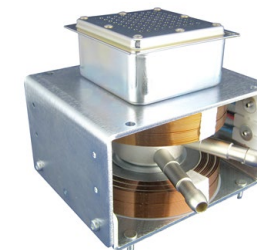
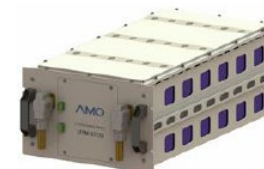
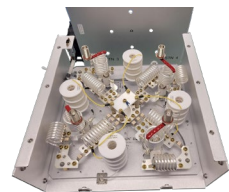


# Canvys FY24 Initiatives



- Promote brand through Newsletters, Press Releases, Social Media Posts, and tweaking Google-Ads to efficiently build Online Awareness
- Increase travel activities / trade show participation
- Focus on targeting new customers and projects to lay the groundwork for future business opportunities
- Reduce Inventory







# Launch of Green Energy Solutions (GES)



- In Q1 FY23, we launched **GES** to give both **PMT** and **GES** more focus to make key decisions on investments and opportunities.
- This created two new SBUs with more focus on key opportunities for growth.
- **PMT** – focuses on RF & Microwave applications, products, customers, and markets.
- **GES** – focuses on Green Energy & Power Management applications, products, customers, and markets.


# Power & Microwave Technologies (PMT)

- RF & Microwave

- Applications

- Industrial RF
    - Broadcast
    - Cellular
    - Satcom
    - Radar
    - Communications

- Products

- SiRF Matching Networks 
    - RF / Microwave Transistors, ICs and amplifiers
    - RF & Microwave Tubes
    - Microwave Components
    - Microwave Generators



# Power & Microwave Technologies (PMT)

- RF & Microwave (continued)

- Technology

- Electron Devices
    - Semiconductor technologies
      - GaN
      - SiC
      - SiGe
      - CMOS
      - GaAs

- Technology Partners

- Thales
    - CPI
    - Qorvo
    - MACOM
    - Anokiwave

THALES

CPI  
Communications  
& Power Industries

QORVO  
MACOM  
Partners from RF to Light

anokiwave  
mmW solutions. Enabling a new world



# PMT FY23 Highlights

- PMT sales grew 5.7% in FY23 to \$164.3M
- Improved profitability with topline growth
- Continued to add new technology partners
- Continued to grow market share by adding new customers and increasing market share with existing customers and new applications



# PMT FY24 Initiatives



- Continue to focus on niche **RF & Microwave** applications
- Continue to develop portfolio of key technology partners with disruptive technology
- Continue to increase market share at key customers and key markets such as Semi-Wafer Fab, SATCOM, and 5G infrastructure
- Continue development of new products and technologies
  - SiC (Silicon Carbide)
  - GaN (Gallium Nitride)
  - **Microwave** Generators
    - 915MHz & 2.4 GHz

# Green Energy Solutions (GES)

- Green Energy Solutions

- Power Management Applications
- Green Energy Customers/Applications
- Applications
  - Wind Turbines
  - Solar
  - EV Locomotives
  - Electric Vehicles
  - EV Chargers
  - Inverters
- Products
  - ULTRA3000®
  - ULTRAUPS
  - ULTRAPEM Multi-Brand
  - ULTRAGEN3000 - Starter Modules
  - Power semiconductors and modules including IGBTs, MOSFETs





# Green Energy Solutions (GES)

- Green Energy Solutions (continued)

- Technology

- Ultracapacitors & modules
    - LiFePO4 batteries and systems
    - IGBTs
    - SiC
    - GaN

- Technology Partners

- LS Materials
    - AMOGREENTECH
    - VINATech
    - Navitas
    - Fuji Semiconductor

**LS** Materials

**AMO**  
AMOGREENTECH

**VINA**Tech

Navitas

**GeneSiC**

**F**uji Electric  
Innovating Energy Technology



# GES FY23 Highlights



- **GES** sales grew 110% in FY23 to \$47.6M
- Improved profitability with topline growth each quarter
- Continued to add new technology partners
- Continued designing and developing new products and developed very successful new product introduction (NPI) program
  - Used unique model of technology partner agreements, engineered solutions, and global reach

# GES FY23 Highlights—Press Releases

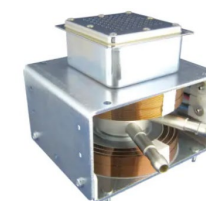
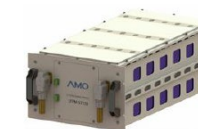
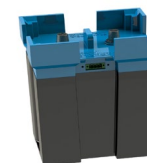
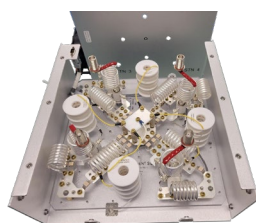


- **Richardson Electronics, Ltd. Announces New Patent Pending Shunt Resistor Accessory For ULTRA3000® Pitch Energy Module**
- Richardson Electronics, Ltd. Participating In WindEnergy Hamburg 2022
- Richardson Electronics, Ltd. Announces New Patent Pending ULTRAVOLTAGE3000 - A Voltage Discharge Device For Ultracapacitors
- **Richardson Electronics Ltd. Receives Third Patent for a Pitch Energy System for Wind Turbines**
- **Richardson Electronics, Ltd. Strengthens Power Management Portfolio in the Americas with Navitas Semiconductor**
- VINATech Joins Richardson Electronics, Ltd. Portfolio of Technology Partners
- **Richardson Electronics, Ltd. Announces New ULTRAPEM™ Series of Pitch Energy Modules for Wind Turbines**
- **Richardson Electronics, Ltd. Introduces New Patent Pending Hybrid Ultracapacitor UPS System for Wind Turbines and Other Power Management Systems**
- **Richardson Electronics' Patented ULTRA3000® Selected by GE Vernova as the Exclusive Pitch Energy Module Available on their Expanded Product Marketplace**

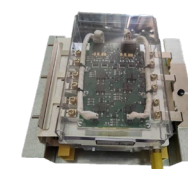
# GES FY24 Initiatives



- Continue to gain ULTRA3000® market share with over 40,000 units in the field
- Expedite the launch of new products
- Continue to increase market share at current customers and in key markets
- Continue to identify key markets and niche applications with new products
- Improve profitability with topline growth



# PMT/GES Product Showcase








# ULTRA3000®



## Features

- **Multiple Patents**
- Form, fit, and function installation
- Over 2M hours in proven field installation
- Designed, manufactured, and supported in USA

## Key Customers

- Invenergy 
- Siemens 
- GE 
- Enel 
- RWE 
- Network of Tier 2 customers

## Benefits

- Improved turbine reliability
- Reduced operation & maintenance cost
- Eliminates hazardous lead acid batteries
- Lifetime of 15 years

## Market Applications

- Wind Turbine Pitch Energy Storage



# ULTRAPEM - Multi-Brand Pitch Energy Module



## Features

- Drop-in replacement for high voltage pitch systems
- Compatible with:
  - Suzlon
  - Senvion
  - SSB
  - Nordex Pitch Systems

## Benefits

- Improved turbine reliability
- Reduced operation & maintenance cost
- Eliminates hazardous lead acid batteries
- Lifetime of 15 years

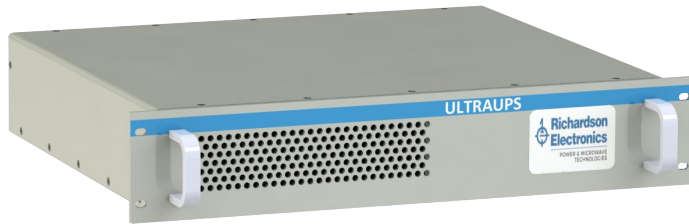
## Key Customers

- Siemens **SIEMENS**
- Suzlon **SUZLON**
- Senvion **SIEMENS Gamesa**
- Nordex **NORDEX** RENEWABLE ENERGY
- Network of Tier 2 customers

## Market Applications

- Wind Turbine Pitch Energy Storage

# ULTRAUPS3000



## Features

- **Patent-Pending**
- Ultracapacitor based UPS for industrial and IT applications
- Form, fit, and function installation
- 1 million charge/discharge cycles vs lead-acid with only 20k charge/discharge cycles

## Benefits

- 100% power conversion – no switching time
- True low voltage ride through so turbine will not have to be shut down
- Lifetime of 15 years
- Future scalability

## Key Customers

- Siemens
- Invenergy
- Enel
- RWE
- GE Wind Turbine Owner Operators



## Market Applications

- Wind Turbine Generators (WTG)
- Servers
- Hospitals
- Critical Facilities



# Voltage Reduction Tool (VRT)



## Features

- **Patent-Pending**
- Fast Discharge of Ultracapacitor modules
- Measures ESR/Life of ultracapacitors
- Needed to comply with NFPA 70E Section 360

## Benefits

- Designed for working safely in cabinets containing stored energy using ultracapacitors
- Resolved NextEra's issues with Maxwell product

## Key Customers

- Invenergy
- Enel
- RWE
- Network of Tier 2 customers
- Any customer using ultracapacitors for PEMs & any customer using ultracapacitors up to 18V operation



## Market Applications

- Compatible with all manufacturers' ultracapacitor energy storage modules up to 18V

# Pitch Energy Module Shunt



## Features

- **Patent-Pending**
- Robust Drop-In Replacement for GE Style Shunts
- Greater thermal Mass for increased current and heat dissipation
- Reduced failures in short circuited pitch motor scenarios

## Key Customers

- Invenergy
- Enel
- RWE
- Network of Tier 2 customers
- All GE wind turbines worldwide



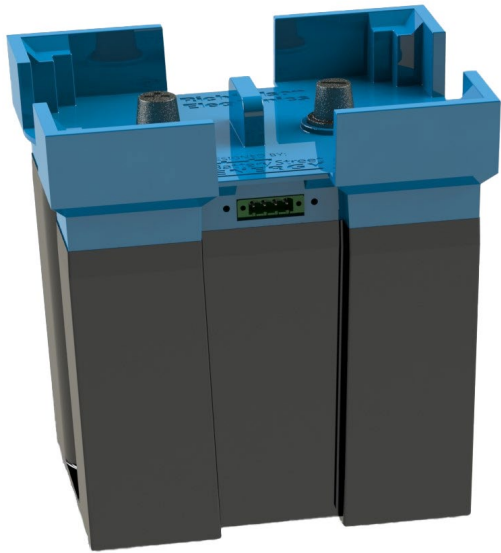
## Benefits

- Increases market share at current customers.
- Solves long term issues
- Works with batteries or ultracapacitor systems
- Design patent filed

## Market Applications

- Wind Turbine Pitch Energy Storage
- Used in all GE wind turbines

# ULTRAGEN3000



## Features

- **Patent-Pending**
- Drop-in replacement for lead acid batteries
- Remote monitoring capabilities
- No hazardous chemicals

## Benefits

- Eliminates hazardous lead acid batteries
- Jump start compatible
- Lifetime of 15 years

## Key Customers

- Verizon
- T-Mobile
- Northwestern Medical
- Carrier
- Data Centers

**verizon**✓



**M Northwestern  
Medicine**



Turn to the experts

## Market Applications

- Wireless Infrastructure
- Critical Facilities
- Data Centers
- Wind Farms

# Hybrid Starter Modules



## Features

- Ultracapacitor technology
- Replaces lead-acid batteries

## Benefits

- Can be used in electric & diesel locomotives

## Key Customers

- Large diesel and electric locomotive manufacturers

## Market Applications

- Electric & diesel locomotives



# Electric Locomotives

## Features

- Replaces Diesel Electric Engine by purely electric
- Dynamic Braking (Regenerative)
- 2.4MWh & 14MWh energy

## Benefits

- 100% power conversion
- 100% zero emissions
- Saving fuel and reducing emissions (decarbonization efforts)
- Silent and less maintenance

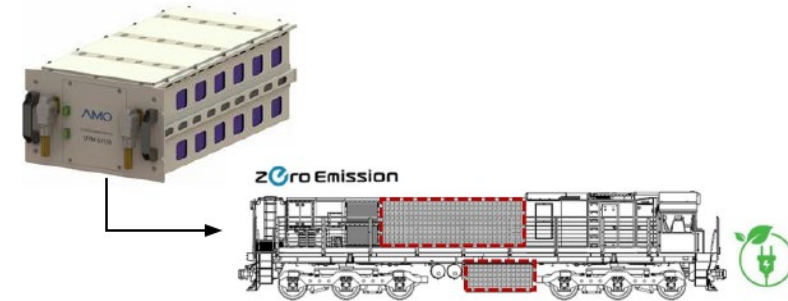
## Key Customers

- Long Island Railway
- Union Pacific
- Burlington Northern & Santa Fe Railway (BNSF)
- Rio Tinto (Australia)
- All Cargo Rail customers

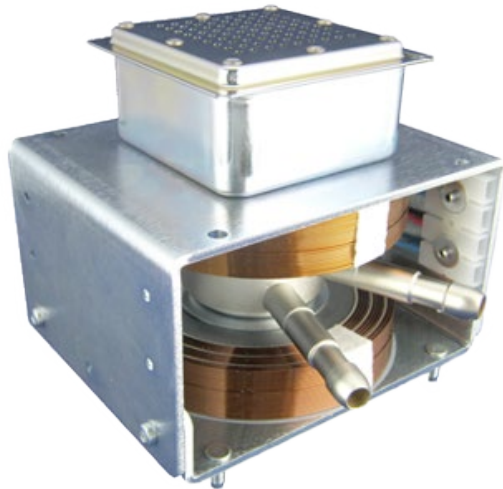


## Market Applications

- Electric Rail
- Mining
- Construction
- Mainline or long-haul service
- Diesel Locomotive Starting replacing lead-acid batteries



# YJ1600



## Features

- High Efficiency
- Compact size and light weight
- Quick start
- Easy power controlling

## Benefits

- Long operating life
- Accurate output power control & stabilization
- Integrated magnet structure eliminating costly additional components

## Key Customers

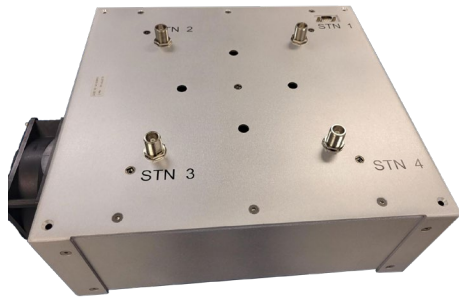
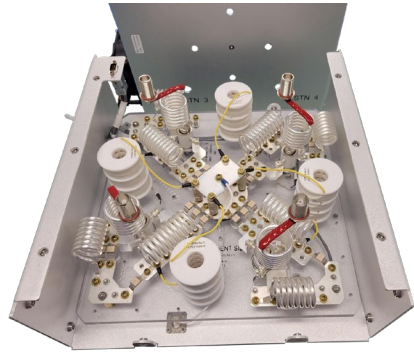
- Carbon Craft
- Bhathwari Technologies
- Sairem
- Network of Tier 2 customers



## Market Applications

- Industrial Heating
- PECVD (lab grown diamond)
- Plasma

# SiRF (Single-Ended RF Matching Network)



## Features

- Mixes 13.56 MHz and 400 kHz
- Both static and dynamic operation
- Allows the customer to strike a constant plasma on their tool to clean out the etch or deposition chamber

## Benefits

- Configurable Designs for different power levels
- Starting to build motorized dynamic systems
- We work with the customer to increase power levels and improve components

## Key Customer

- LAM Research
- MKS
- Talus Manufacturing



## Market Applications

- RF Power Conditioning
- RF Matching

# Group Tours



# Lunch and Q&A

# Final Thoughts

- We continue to gain market share with new customers, exclusive supplier agreements, new products and our growing list of patents.
- We are more optimistic than ever about the future of Richardson Electronics, as a result of the success of our product and geographic growth strategies, strong balance sheet, and deep customer and supplier relationships.
- The first half will be softer than anticipated.
- There are certain macro and timing related variables that make it difficult to forecast beyond the next couple of quarters, but we expect our long-term growth strategies to produce sustainable annual growth.
- We continue to invest and position the business for tomorrow.
- It's not a matter of IF, but WHEN!





# Thank You for Your Investment



A Legacy of Engineered Solutions.  
A Future of Innovation.