

# Richardson Electronics FY23 Q2 Investor Presentation

January 4, 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.



# ENGINEERED SOLUTIONS



Richardson Electronics (NASDAQ: RELL) designs and manufactures more than 60% of the products it sells for power, microwave, and imaging solutions to industries worldwide.

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Technical expertise and “engineered solutions” based on our core engineering and manufacturing capabilities

Value added solutions through design-in support, system integration, prototype design and manufacturing, testing, logistics, and aftermarket technical service and repair

Global infrastructure and support to serve customers wherever they are located



# Key Facts & Figures

FY2023 YTD Sales:  
**\$133.5 million**  
 (up 23.9% YoY)

FY2023 YTD Net Income:  
**\$0.83 per diluted share**  
 (up 66.0% YoY)

FY2022 Sales:  
**\$224.6 million**  
 (up 26.9% YoY)

FY2022 Net Income:  
**\$1.31 per diluted share**  
 (vs. \$0.13 in FY2021)

Strong Balance Sheet:  
**Q2 FY2023 cash and  
 investments of  
 \$31.1 million and  
 no debt**

Certified Experts  
**ISO 9001:2015**  
**ISO 13485: 2016**  
**Certified**

480+ Employees  
**Over half in sales,  
 engineering and product  
 management**

Global Customers  
**Over 20,000 worldwide**  
**OEM and end-user  
 customers**

Headquarters:  
**LaFox, Illinois**

RELL is Global  
**60+ locations worldwide**  
**with legal entities in  
 24 countries**



# Our Business Units



## Power & Microwave Technology (PMT)

- YTD Revenue: \$85.9 million
- Power grid and microwave tubes (EDG)
- Power management for 5G (PMG; started in 2014)
- In-house manufacturing and partnering with leading technology suppliers
- Global engineering and design support
- Key supplier to semiconductor industry



## Green Energy Solutions (GES)

- YTD Revenue: \$20.8 million
- Designs and manufactures key products for the fast-growing energy storage market and power management applications
- Leverages existing global infrastructure and expertise
- Products for numerous green energy applications such as wind, solar, hydrogen, EVs, and synthetic diamonds



## Healthcare

- YTD Revenue: \$6.2 million
- CT and MRI replacement tubes
- Diagnostic imaging replacement parts
- CT service training and technical support
- P3 Service Contracts for managing maintenance and repair costs
- State of the art manufacturing facility



## Canvys

- YTD Revenue: \$20.5 million
- Custom display solutions for healthcare, industrial, retail and transportation applications
- All-in-one computer display solutions
- Engineering design and support

# A Legacy of Engineered Solutions

## A Future of Innovation

**Power Grid Tubes**



**CW Magnetrons**



**Ignitrons & Thyratrons**



**Microwave  
Generators**



**Pulse Magnetrons**



**Ultracapacitors**



**CT Replacement  
Tubes**



**Refurbished CT  
Systems**



**Custom OEM  
Displays**



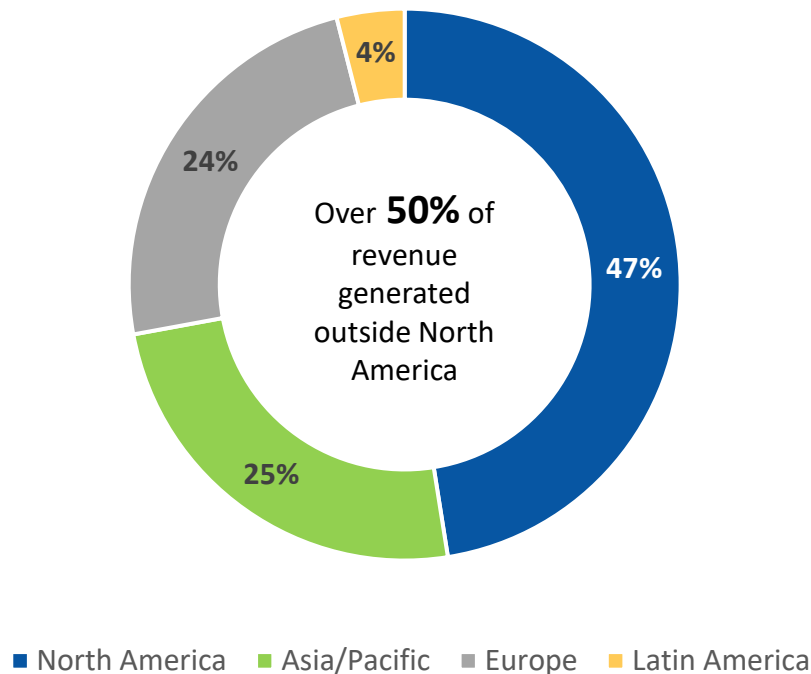
**All-In-One  
Computer Solutions**





# Local Service Supported Through Extensive Network of Over 60 Global Locations

## FY2023 YTD Sales by Geography



## Sophisticated Global Infrastructure

- More than 60 sales offices & stocking locations
- Global field engineering support including 80 RF and Microwave and CT engineers for leading technology suppliers
- Service and repair supported by local presence
- IT Infrastructure supports global visibility into real time inventory, quote and orders
- Information shared across organization to identify opportunities and facilitate design wins

## Global Logistics and Supply Chain Capabilities

- Importer of record in 24 countries with international distribution hubs in North America, Asia, and Europe
- Shipment to any location worldwide in one to three business days
- Transactions in local language, and local currency
- Maximum flexibility including small quantity orders
- ECCN items flagged for export control

# Strategy Supported by Strong Core Business, New Products and New Markets

*Management has created a strategic plan focused on driving growth and creating sustainable value for shareholders*



Growth supported by strong core business, 75 years of engineering capabilities, and global platform



Strategy focused on leveraging core engineering capabilities to expand product lines into large, fast growing global markets



Global footprint supports customers and maintains strong strategic partnerships with leading manufacturers

**New markets and applications support significant expansion to the Company's growth opportunities**



# Growth Opportunities and Focus:

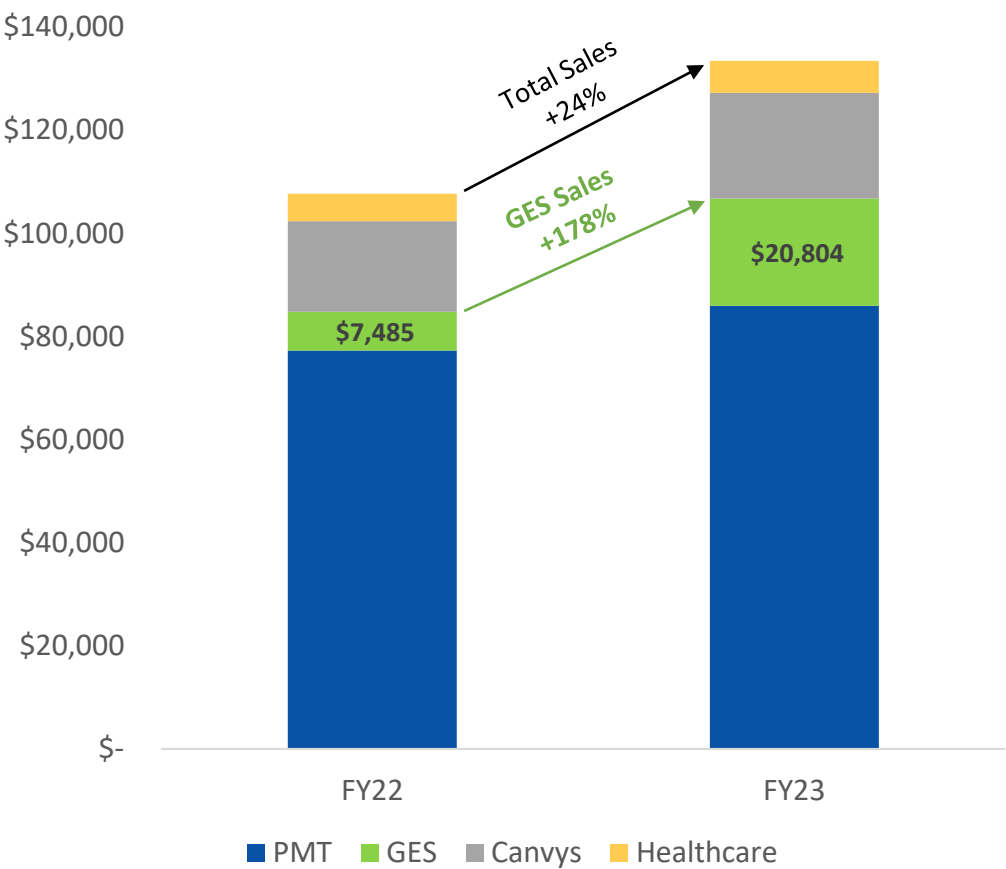
Richardson's Strategy Aligned with Compelling Market Dynamics



Market	Market Driver / Update	Richardson Opportunity
 Semiconductor	<ul style="list-style-type: none"><li>Semiconductor capex cycle expected to remain strong over the near-term</li><li>LAM Research, a RELL semiconductor customer, expects demand to drive another year of capex spending growth in 2023</li></ul>	<ul style="list-style-type: none"><li>Products support the global semiconductor wafer fab equipment market</li><li>+50% of sales relate to deposition which is used for replacement of tools and existing wafer fabs</li></ul>
 Manufacturing	<ul style="list-style-type: none"><li>New applications are supporting growth in microwave tubes and magnetrons</li><li>Examples include emerging markets such as synthetic diamonds, hydrogen, and building materials</li></ul>	<ul style="list-style-type: none"><li>RELL is one of the few remaining tube manufacturers and engineering companies</li><li>For example, RELL's 915 megahertz magnetrons up to 100 kilowatts are being used for producing hydrogen</li></ul>
 Power Management/ Alternative Energy	<ul style="list-style-type: none"><li>Growing opportunities to transition legacy lead acid battery applications to longer-lasting, more environmentally friendly, technologies</li></ul>	<ul style="list-style-type: none"><li>Wind turbine market with ultracapacitor battery modules</li><li>Battery modules for electric train engines</li><li>Wireless base station, and critical facility markets</li></ul>
 Healthcare	<ul style="list-style-type: none"><li>Very few replacement options for CT tubes</li><li>OEMs charge high prices for tubes and parts if hospital is not covered by expensive OEM service contract</li></ul>	<ul style="list-style-type: none"><li>Helping customers improve efficiency and deliver better clinical outcomes while lowering the cost of healthcare delivery</li><li>\$10 billion estimated global opportunity for aftermarket for diagnostic imaging parts and service</li></ul>

# Long-term Strategy Focused on Capturing Disruptive Market Opportunities

Components of 6-month Sales Growth (000s)



FY23 YTD Sales  
Driven by Rapid  
GES Growth



New End Markets  
Insulating RELL From  
Legacy Semiconductor  
Cyclicality



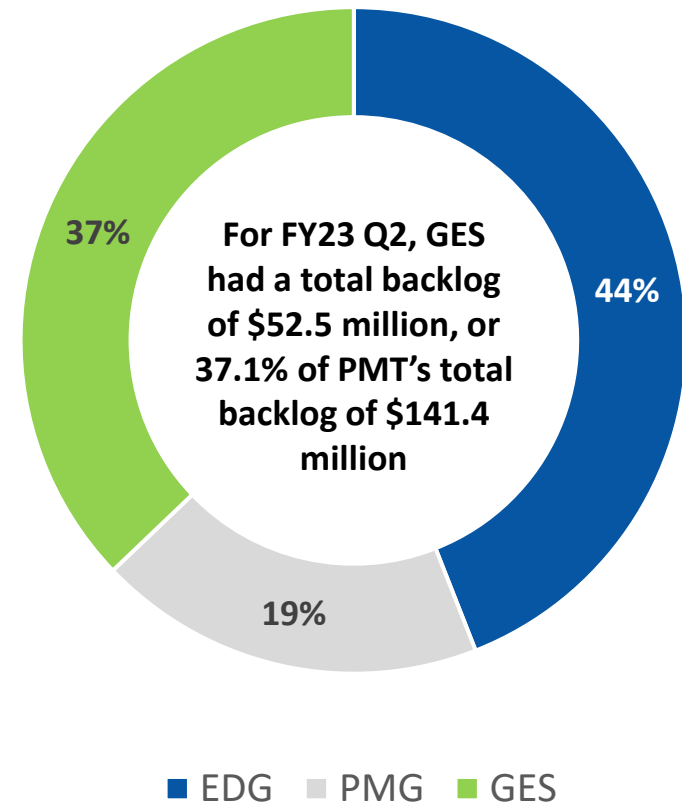
Higher Gross Profit  
Dollars Supports  
Operating Margin  
Expansion

# Green Energy Solutions (GES) Business Unit Supports Massive Growth Opportunity

## GES Overview

- Sales transferred from PMT:
  - Alternative energy, energy storage, EV, power generators
  - YJ1600—diamond manufacturing
  - Fusion research, sustainable goods manufacturing, hydrogen production
- **Estimated FY23 Sales: \$40+ million**
- Growth rate 15-20% per year
- Blue-chip customer base:
  - Large GE-turbine owner/operators
  - Progress Rail (Caterpillar)
  - T-Mobile
  - Northwestern Medical
  - Siemens

## Strong Total PMT Backlog

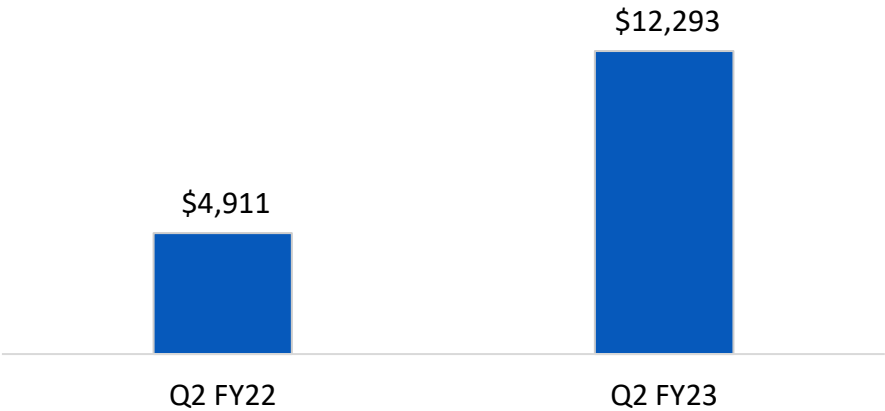


## GES Highlights

- Growth in ULTRA 3000 and other related product sales into the wind turbine industry
- New EV applications, power management, and energy storage
- Increase demand for YJ1600 as synthetic diamond manufacturers continue to experience high demand
- Growing partnership with Progress Rail, a Caterpillar Company, Siemens, and top wind turbine owner/operators in North America
- New product announcements scheduled for first half of calendar 2023

## GES Sales (\$ in 000s)

*Second Quarter Sales Up 150.3% YoY*



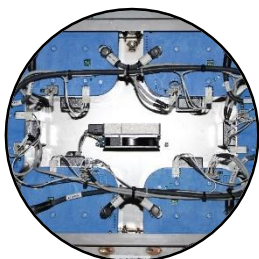


# ULTRA3000® Growth Opportunity



## Years of experience utilizing and distributing ultracapacitor technologies

- Created specifically for replacement market within wind turbine generators (WTG)
- Patented product with more than 20 protected embodiments



## Significant benefits to customers

- Estimated lifetime of 15+ years
- Direct replacement for acid/lead batteries and no hazardous chemicals
- Enhances reliability of PEM



## Massive opportunity

- Each turbine blade has power requirements
- Global TAM for GE WTG's is approximately \$370 million
- Currently working on PEM systems for other WTG

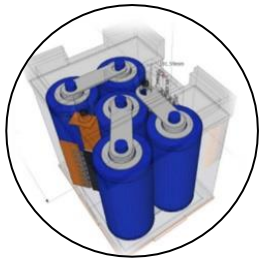


## Rapid adoption

- REL is the largest producer of Pitch Energy Modules in the world.

Auxiliary power is needed to control the pitch and rotation of wind turbine blades. Richardson Electronics ULTRA3000® Pitch Energy Module (PEM) is an ultracapacitor-based plug-and-play replacement for batteries within wind turbine pitch systems.

# BSE Gen-Start Growth Opportunity



**Leveraging ultracapacitor expertise to create replacement modules for lead acid batteries in generators**

- Patent-pending technology
- Product launched in CY22



**Initial application focused on wireless base stations**

- In 2019 there were 395,562 cell sites, approximately 59,000 or 15% have existing generators
- Major wireless carriers expect to add 25,000-30,000 base stations in North America between 2021-2025
- Target customers such as AT&T, T-Mobile, Verizon



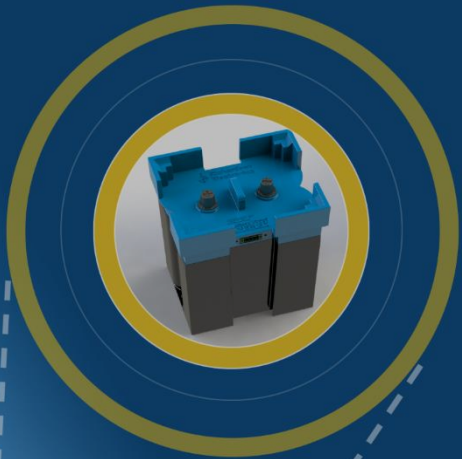
**Critical facilities support additional applications**

- U.S. Hospitals total 6,090
- U.S. Fire Stations/Municipalities total 58,150
- May use more than one per site



**Large opportunities**

- Starter modules for diesel and electric locomotives



# Power & Microwave Technology (PMT) Opportunity



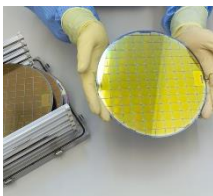
The leading distributor of power grid and microwave tubes and related consumable parts

- **Electron Device Group (EDG)** which includes legacy tube business and semiconductor wafer fab
- **Power and Microwave Group (PMG)** which includes discrete semiconductor components
- Global provider of Engineered Solutions focusing on industrial tube manufacturing, microwave generators, power supplies and customer specific parts and assemblies
- Highly specialized in demand creation for new technologies
- We partner with manufacturers of leading edge and disruptive technologies. These technologies drive the latest innovations for our customers.

Bringing key technologies and solutions to the world for power, microwave niche applications



**Power Conversion**



**Semiconductor**



**Defense**



**Communications**



**Marine**



**Avionics**



**Scientific & Medical**



**Industrial**

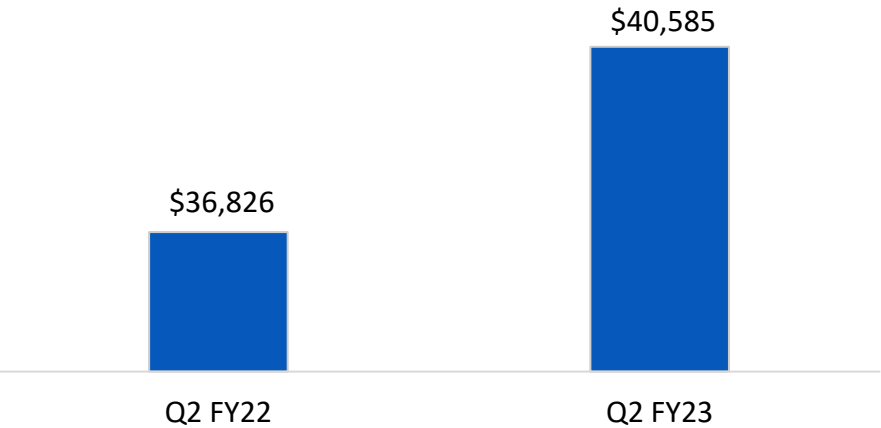


## PMT Highlights

- Continued growth in demand for Electron Device Group (EDG)
- Semiconductor wafer fab equipment benefitting from market growth; chip shortages create new wafer fabrication installations
- Power & Microwave Group (PMG) continues to have excellent sales growth related to the RF/wireless infrastructure business (5G)

## PMT Sales (\$ in 000s)

*Second Quarter Sales Up 10.2% YoY*





*Richardson Healthcare provides OEM quality replacement parts and training to support in-house clinical engineering and third-party equipment maintenance companies.*



Richardson Healthcare's CT Tube Programs provide exact form and function replacements for popular OEM CT scanners helping reduce healthcare costs by offering an alternative to higher cost OEM parts.



The Company has invested over \$35 million in its Healthcare SBU, creating a best-in-class, value-added CT Tube and CT refurbishment platform.



Richardson Healthcare first launched the ALTA750D in May 2018, followed by the ALTA750G in 2022, and expects to launch a Siemens repaired CT Tube Program in 2023.

**\$10 billion estimated global opportunity for aftermarket diagnostic imaging parts and service**

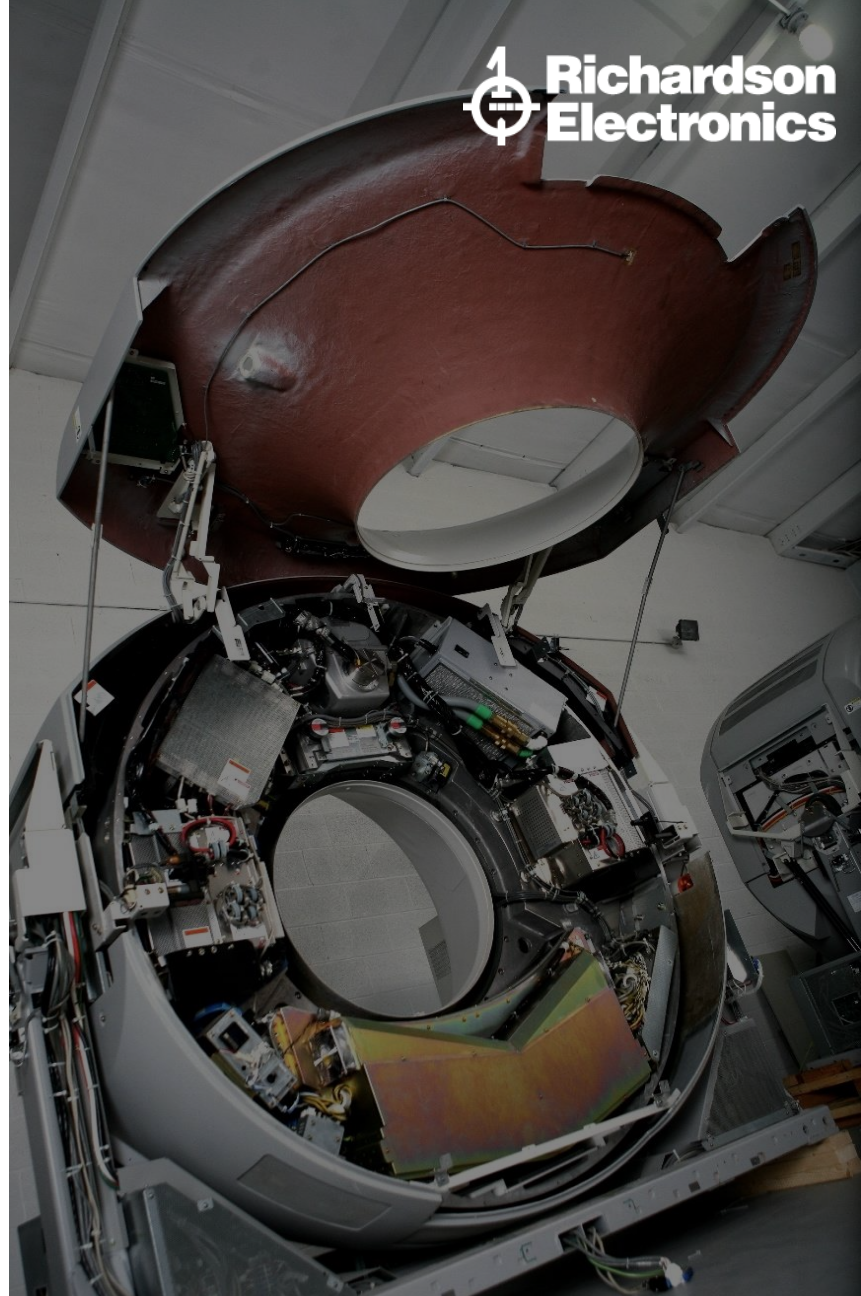
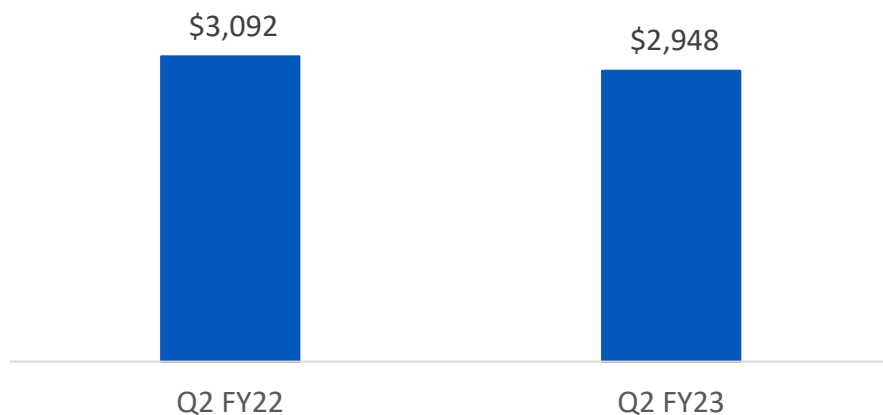
# Healthcare Update

## Healthcare Highlights

- Richardson Healthcare Q2FY23 sales were down slightly versus Q2FY22, due to a shipping delay that transferred the revenue of two ALTA tubes from Q2FY23 to Q3FY23.
- Additional tubes will drive revenue growth and margin improvement as factory utilization rate improves.
- The ALTA750D and G CT Tubes had strong demand in China.
- The Straton Z tubes began selling as betas in the Americas.
- The Siemens MX series will launch in the first half of CY 2023.

## Healthcare Sales (\$ in 000s)

*Second Quarter Sales Down 4.7% YoY*



*Canvys is a global value-added integrator and manufacturer that specializes in creating comprehensive visual technology solutions for OEMs.*



Canvys is focused on providing small run, smart displays for specialized applications - often for demanding environments.



Canvys brings together a deep understanding of visual technologies, wide-ranging capabilities and a worldwide network to create complete solutions for OEM customers.



Expertise manufacturing display sizes from 5" to 82", with custom enclosures, touchscreen integration, and all-in-one computer solutions.

**2,000+ global blue-chip customers rely on Canvys to supply leading display solutions for their unique needs**



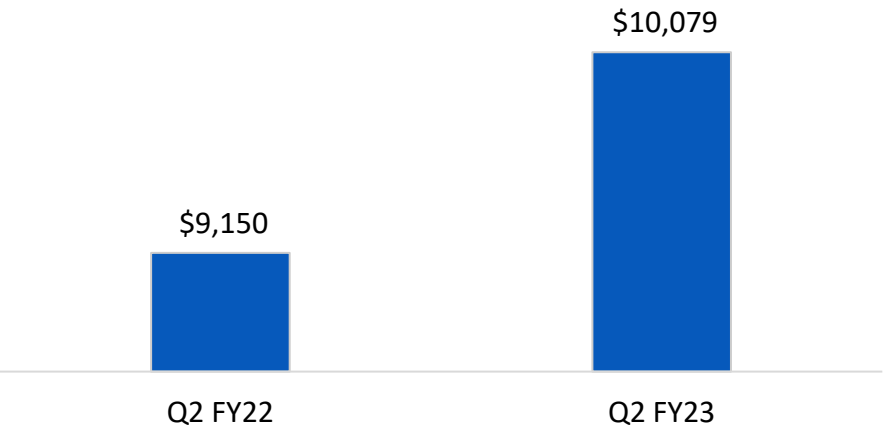
# Canvys Update

## Canvys Highlights

- Demand for blue-chip medical and industrial OEM systems driving growth
- The 10.2% Q2 FY23 YoY increase in sales was due to strong customer demand in North America
- Healthy backlog, which will support strong sales throughout fiscal 2023 and into fiscal 2024

## Canvys Sales (\$ in 000s)

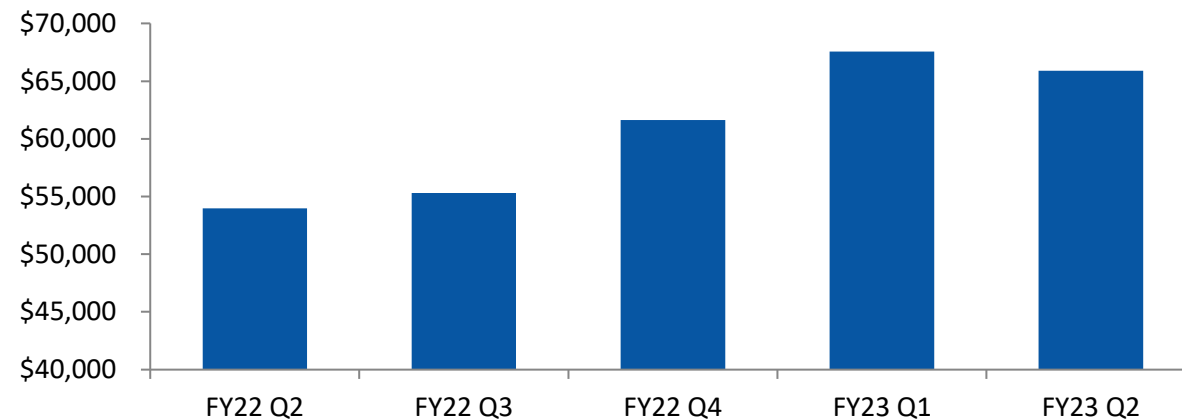
*Second Quarter Sales Up 10.2% YoY*





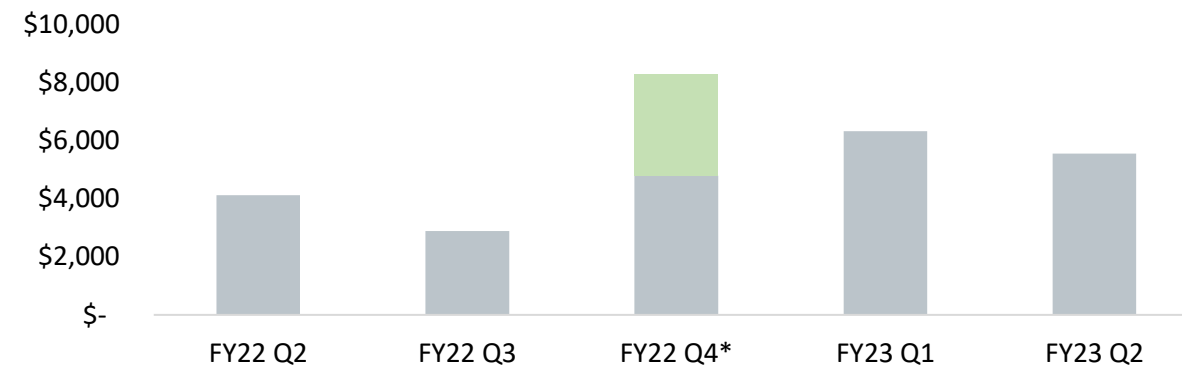
# Financial Results

**Total Sales**  
(\$ in thousands)



- Net sales for Q2 FY2023 increased to \$65.9 million, up 22.1% compared to net sales of \$54.0 million in the prior year's Q2 due to higher net sales in PMT, GES, and Canvys, partially offset by slightly lower sales in Healthcare

**GAAP Net Income**  
(\$ in thousands)



- Net income improved 34.6% on a YoY basis as a result of higher sales, improvement in gross margin, and controlled operating expenses
- Operating income was \$7.2 million, or 10.9% of net sales for Q2 FY2023 as compared to \$4.5 million or 8.4% of net sales in Q2 FY2022

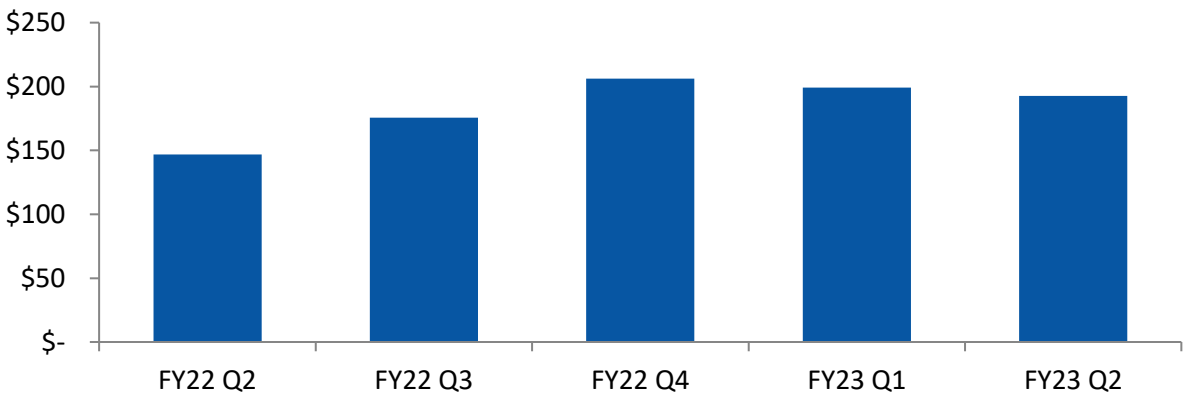
\* In FY22 Q4, RELL received an income tax benefit of \$3.5 million from a \$4.0 million partial reversal of the tax valuation allowance

# FY2023 Q2 Balance Sheet and Cash Flow

- Strong balance sheet with no debt, and \$31.1 million in cash and cash equivalents, and investments
- Allocated \$0.8 million of capital in Q2 FY2023 to support the company's regular cash dividend
- The company continues to invest in working capital to support its growth initiatives across its four business units
- Most of the inventory increase was to support the growth in GES and other key growth initiatives
- Capital expenditures were \$1.3 million in Q2 FY2023 primarily related to investments in the Company's manufacturing business, facilities, IT System, and Healthcare business

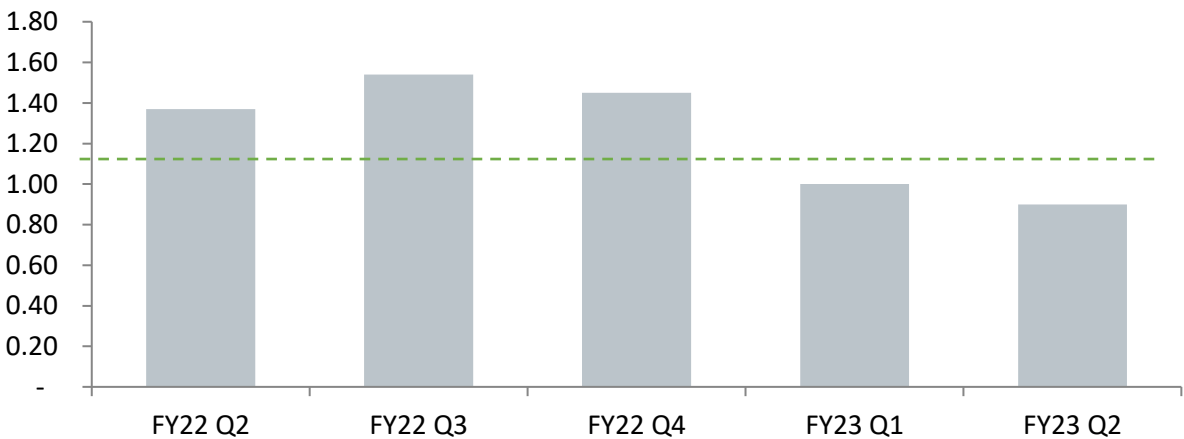
(\$s in 000s)	November 26, 2022	May 28, 2022
Cash and Cash Equivalents and Investments	\$31,106	\$40,495
Accounts Receivable	\$34,880	\$29,878
Inventories, net	\$97,434	\$80,390
Total Assets	\$193,101	\$179,819
Total Debt	\$0	\$0
Total Liabilities	\$45,013	\$43,972
Shareholders' Equity	\$148,088	\$135,847

**Total Company Backlog**  
(\$ in millions)



- Backlog at the end of Q2 FY2023 was \$192.6 million up 31.1% YoY

**Total Company Book-to-Bill**



- Current book-to-bill primarily impacted by timing of new GES orders and current semiconductor market demand



A Legacy of Engineered Solutions.  
A Future of Innovation.

## Appendix

Detailed Company Overview



## Strategic Business Unit Overview: GES

- Newest strategic business unit formed because of our exceptional growth in demand for green energy applications (sales previously including in PMT segment)
- Green solutions is key to our long-term growth strategy
- Rapidly expanding line of energy storage products for various green energy applications, and we plan to announce several new products in the second half of FY23
- Capitalizing on emerging markets trends through the combination of key technology partners and our engineered solutions capabilities, while leveraging our existing global infrastructure

## Product and Future Iterations

### Battery Modules and Superstructures for Various Applications



UltraMultibrand



UltraESS



New Battery Technologies  
Sodium Ion/LiC lithium Capacitor or Hybrid



UltraStart

### Applications & Markets

- Electric Vehicles
- Hydrogen
- Solar
- Sustainable building materials
- Synthetic diamond
- Wind

### Select Customers

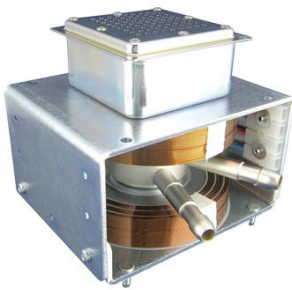


**Progress Rail**  
*A Caterpillar Company*



**CARBON<sup>®</sup>  
CRAFT**

### YJ1600



### ULTRA3000<sup>®</sup>



## Strategic Business Unit Overview: PMT

- The leading distributor of power grid and microwave tubes and related consumable parts (EDG Group)
- Power and Microwave Group (PMG) brings key semiconductor and passive technologies for power and microwave niche applications
- Partnering with manufacturers of leading edge and disruptive technologies to drive the latest innovations for customers
- Organic growth focused on product line expansion, leveraging 20,000+ global customer relationships, and manufacturing growing resources and capabilities
- Additional growth opportunities supported by partnerships and potential acquisitions

### Applications

- Broadcast transmission
- CO2 laser cutting
- Diagnostic imaging
- Dielectric/induction heating
- High energy transfer
- High voltage switching
- Plasma
- Power conversion
- Radar
- Radiation oncology
- Microwave

### Markets

- 5G
- Aviation
- Broadcast
- Communications
- Industrial
- Marine
- Medical
- Military
- Semiconductor

## Product and Services Highlights

### EDG Products



### RF & Microwave Products



### Power Management Products



## Strategic Business Unit Overview: Healthcare

- Richardson Healthcare helps lower the cost of healthcare delivery with high value parts, upgrades and training solutions for hospitals and third-party service providers
- Healthcare manufactures, repairs, refurbishes and distributes high value replacement parts and equipment for the healthcare market
- Customers include hospitals, medical centers, asset management companies, independent service organizations and multi-vendor service providers

### Supported Brands

- Canon (Toshiba)
- Siemens
- Hologic
- Richardson Healthcare
- GE
- Philips

### Select Customers



## Product and Services Highlights

### CT Tubes



### Parts



### Refurbished CT Systems



### Training and Service



Strategic Business Unit Overview: Canvys

- Canvys develops custom display and All-In-One computer solutions for Original Equipment Manufacturers (OEMs). We evaluate each customer's unique needs and craft the right solution
- Key capabilities supported by local collaborative approach with customers, compliance with medical device regulation, and global logistics capabilities
- ISO certification provides products that comply with the most demanding quality standards throughout the entire delivery process
- Manufacturing fully customized displays that pair revolutionary technologies with solutions for individual customer needs

Applications

- Air Traffic Control
- Broadcast
- Dental Care Units
- Endoscopy Systems
- Food Industry
- Manufacturing
- Marine
- Medical Monitoring
- Ophthalmology
- Transportation
- Vending Machines / Kiosks

Select Customers



Product Highlights

5" to 82" Custom Displays



All-in-One Computer Solutions

