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### **Power Integrations, Inc.**

NASDAQ: POWI December 2023

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# **Forward-Looking Statements/Non-GAAP Metrics**

These slides may accompany an oral presentation by Power Integrations, Inc., which contains forward-looking statements. Each statement relating to events that will or may occur in the future is a forward-looking statement. The Company's actual results may differ materially from those suggested in the presentation. Information concerning factors that could cause such a difference is contained in the Company's most recent report on Form 10-K.

This presentation may also contain certain non-GAAP financial information. Reconciliations of non-GAAP financial metrics to GAAP results are available on the investor page of the Power Integrations website, <u>http://investors.power.com</u>.

### **ICs for Energy Production, Transmission & Consumption**



POWER MANAGEMENT



Technology leader in ICs for energyefficient AC-DC power supplies



DRIVERS



High-efficiency driver ICs energizing the LED lighting revolution



GATE DRIVERS



Gate drivers for renewable energy, DC transmission, electric locomotives and more



MOTOR DRIVERS



Highly-efficient, reliable and integrated motor drivers



AUTOMOTIVE SOLUTIONS



Automotive solutions for efficient, compact high-voltage power conversion and control

### What Are Power Converters?



### **Key Takeaways**

High voltage (HV) is a Unique Specialty, and PI is the Only HV Pure Play

Our Addressable Market is Expanding and Diversifying

GaN is the Future of HV Power Conversion, and PI is the Leader in GaN

High-voltage Semiconductors are Crucial to a Lower-carbon Future

### **System-level Solutions for High Voltage Power Conversion**



### **Track Record of Innovation**



# InnoSwitch: A Revolution in HV Power Conversion

### Safety-isolated FluxLink Allows Integration of HV and LV sides\_

 Drastically reducing component count/sourcing and complexity

Choice of Power Switch: Si, GaN, SiC<sup>-</sup>

### Proprietary Control Dramatically Increases Energy Efficiency



### **Power Supply Using a PI Competitor**



### The Power of Integration - InnoSwitch

|                     | Competition | InnoSwitch |
|---------------------|-------------|------------|
| GaN, Driver + Sense | Integrated  | Integrated |
| GaN Sense Interface | External    | Integrated |
| EMI Mitigation      | External    | Integrated |
| Primary Controller  | External    | Integrated |
| Primary Discretes   | External    | Integrated |
| Isolated Feedback   | External    | Integrated |
| SR Gate Driver      | External    | Integrated |
| SR Gate Supply      | External    | Integrated |
| Feedback Loop Comp  | External    | Integrated |
| USB-PD Controller   | External    | Integrated |
| Component Count     | 101 🗕       | → 45       |



### **InnoSwitch: A Runaway Success**



Revolutionary Architecture – Nothing Comparable in the Industry

- Synergy of process, control, package
- Choice of Si, GaN, SiC switch

Fastest Revenue Ramp in Company's History

**Multi-billion-dollar SAM** 

#### Years of Growth Still Ahead

### **Bringing Efficiency & Integration Benefits to Gate Drivers**

#### Leveraging Our HV Expertise and IP Portfolio in Gate Drivers

Improves efficiency and reduces component count by 50%



### **Products Serve Broad Range of End Applications**

#### **Power Integrations Model**



Focused R&D Handful of Products





#### **Addressing Power Converters**

Moderate R&D intensity, high differentiation, premium margins

#### **Typical Analog Model**



1,000s

## Annuity Revenue Streams from Long-lived Products

### 48% of 2021 Sales

from product families introduced 2001 and prior

#### **Revenue by Product Family 1997-2021**



### **Unique Manufacturing Model: "Fabless IDM"**

Best-in-class Assurance of Supply, Quality, and Cost

- PI Develops, Owns, and Controls the Process Technologies, Device and IC Designs
  - Own specific equipment as needed
  - Replicate each process technology to multiple (2-5) partner fabs

Geographically Dispersed, Both Inter- and Intra-continental

Long-term Strategic Supply Alliances with IDMs

### **Key Takeaways**

High voltage (HV) is a Unique Specialty, and PI is the Only HV Pure Play

# Our Addressable Market is Expanding and Diversifying

GaN is the Future of HV Power Conversion, and PI is the Leader in GaN

High-voltage Semiconductors are Crucial to a Lower-carbon Future

# **Addressable Market of \$4B**



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## Our SAM Will Double by 2027 and Continue to Diversify



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### SAM to Double by 2027



### **Big-Picture, Secular Trends**

#### **Driving Need for Advanced High-voltage Semiconductors**



### **Investing and Innovating to Expand SAM**



### **New Innovations Serving Expanding Markets**



### **BridgeSwitch™ Motor-Driver ICs for BLDC Motors**

### Pumps, Fans, Compressors

- Residential & commercial appliances
- Industrial applications

### Washer/Dryer Drum Motors

Window Shades/Shutters & Garage Openers

### Wide Range of High-Voltage Single or Multi-Phase PM or ACIM Motors









### **Robust High-Voltage Semiconductor Content in EVs**



#### Up to 20 power supplies per car addressable with current products

- Auxiliary Power Supplies
- Inverter Emergency Power Supplies
- µDC-DC Converters

#### GaN products in pipeline to address onboard charging, highpower DC-DC converters

Integration crucial to reliability in automotive applications

InnoSwitch with GaN or SiC to suit battery voltage

**Tens of dollars of content** available with current products

**Products in pipeline** to expand content to >\$100

### **Key Takeaways**

High voltage (HV) is a Unique Specialty, and PI is the Only HV Pure Play

Our Addressable Market is Expanding and Diversifying

#### GaN is the Future of HV Power Conversion, and PI is the Leader in GaN

High-voltage Semiconductors are Crucial to a Lower-carbon Future

## GaN is the Future of HV Power Conversion, and PI is the Leader in GaN

#### **Proprietary GaN technology**

We control the roadmap

#### **Purpose-built for our products**

We can tailor the GaN for each product

#### **Highly cost-effective**

Approaching parity with silicon

#### Higher-voltage capability

900 V and 1250 V products introduced in 2023

1005 Mitch

### Compact 60W Charger with InnoSwitch4-CZ & ClampZero

Uses GaN-based MinE-CAP IC to reduce size of bulk capacitors





# **PowiGaN Winning in Advanced Chargers**



33W USB PD



65 W USB PD



33 W USB PD



20W Slim Charger



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### **GaN Creates Opportunities in Data Center, Comms Equipment**

**12M servers** per year Approx. **2.5 power supplies** per server

### Standby power

Existing business, high share

#### Main power

SAM for high-value GaN-based ICs



### **Key Takeaways**

High voltage (HV) is a Unique Specialty, and PI is the Only HV Pure Play

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GaN is the Future of HV Power Conversion, and PI is the Leader in GaN

# High-voltage Semiconductors are Crucial to a Lower-carbon Future

### High-Voltage Semiconductors are Critical to a Lower-Carbon Future

Efficiency and renewables hold the key to achieving carbon-reduction targets



### High-Voltage Semiconductors are Critical to a Lower-Carbon Future



### **Recognized Leader in Energy Efficiency**

**Pioneer in Eliminating Standby Waste** 

**Hundreds of Efficiency-related Patents** 

First to Market with GaN Power ICs

Inclusion in Numerous Sustainability Indices



#### **Awards and Certifications**



2022 Revenues 94% EU Taxonomy-Eligible\*



\*Estimate based on information currently known to Power Integrations about taxonomy eligibility

### **EcoSmart Technology Slashes Standby Waste**

### >20 Billion

#### **EcoSmart Chips Sold since 1998**

### **Estimated 16 TWh**

#### of Standby Energy Saved in 2022

- Equivalent to annual electricity usage of 2.3M homes\*
- Saved ~7M tons of CO<sub>2</sub> emissions\*\*





\* Source: U.S. EPA Greenhouse Gas Equivalencies Calculator

\*\*Based on 2021 U.S. average of 0.855 lbs./kWh, per U.S. Energy Information Administration

# **Energy Vampire vs. LinkZero**<sup>™</sup>



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### System Solution with PowiGaN Delivers Superior Efficiency

PowiGaN with 94% proprietary control 92% delivers highest efficiency in standby & full load 90%



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Efficiency Comparison Over Load at 5V Output

### **Enabler of Clean-Energy Technologies**



### **Reducing Materials, Energy Use Through Integration**

#### Up to 100 Components...

#### Are Replaced with Two Hiper ICs



### **Technology Leadership Makes PI a Policy Influencer**

Regular Consultation with Energy Policy Makers and Leading Researchers







Active Participation on Technical Committees for International Standards

- IEC TC47/SC47E for semiconductor devices
- JEDEC JC-70 wide bandgap semiconductors committee
- USB Implementers Forum



Power Sources Manufacturers Association (PSMA)

• Chairing energy management committee last 3+ years



### **Manufacturing Partners**

| Fab       | Certifications                                                                     | Carbon Reduction Plans                                                                                                                                                                                                                                   |
|-----------|------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Partner 1 | ISO 14001:2015 EMS<br>Sony Green                                                   | <ul> <li>Reduce GHG emissions 70% by FY2030 vs. 2019 level</li> <li>Parent has goal of carbon neutrality throughout corporate value chain by 2050</li> </ul>                                                                                             |
| Partner 2 | ISO 14001:2015 EMS<br>ISO 45001:2018 Occupational<br>Health & Safety<br>Sony Green | <ul> <li>Targeting CO2 30% reduction by 2030 in two facilities</li> <li>Third facility targeting "zero environmental footprint" by 2050; 2025 goals include increasing use of renewable energy to &gt;15% and 5% reduction in energy per unit</li> </ul> |
| Partner 3 | ISO 14001:2015 EMS<br>Sony Green                                                   | <ul> <li>By 2030, reduce GHG emissions in line with 1.5°C</li> <li>Carbon negative &amp; underground resource free by 2050</li> </ul>                                                                                                                    |
| Partner 4 | ISO 14001:2015 EMS<br>Sony Green                                                   | <ul> <li>Reported ~25t CO2 reduction in 2020</li> </ul>                                                                                                                                                                                                  |

All assembly & test partners certified Sony Green, ISO14001 (EMS) and ISO 45001:2018 (Occupational Health & Safety).

### **Lowering Our Internal Carbon Footprint**

#### **Extensive Use of Solar Energy in Our Operations**







#### 600 kW System at San José HQ Major Expansion in 2023-2024

#### 25 kW at New Switzerland Facility

43 kW at New Germany Facility Our Contribution to a Lower-Carbon Future **Pioneer in Cutting Standby Power Waste** 

**Driving Higher Efficiency with GaN** 

**Enabling Clean Technologies** 

Saving Energy & Materials Through Integration

**Recognized Efficiency Expert & Policy Influencer** 

**Lowering Carbon Footprint of Our Operations** 

## **Financials**



#### Best Financially Managed Semiconductor Company Achieving up to \$1 Billion in Annual Sales

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### **Consistent, Disciplined Approach to Management**



### Focused Strategy and System-Level Innovation Drive Above-Market Growth



Note: Analog industry data is per World Semiconductor Trade Statistics; PI revenues prior to 2017 do not reflect ASC 606 recast.

### **Drivers of Financial Model**

#### **Revenue Growth**

Substantial Share Gains 2021-22 Capitalized on product availability/capacity to accelerate gains

SAM to Double by 2027

Share of Long-served Markets Demonstrates Potential

**Rising Dollar Content** Driven by integration, higher power, GaN



**ASP Trend** 



### **Drivers of Financial Model**

#### **Revenue Mix by End-Market Category**



#### Industrial/Auto/Consumer to be >70% of mix

Appliances accounted for ~90% of consumer category in 2021

#### **Profitability/Cash Flow**

Fabless IDM model Premium GM, modest CAPEX

**R&D Leverage** Focused product portfolio

**Richer Mix** More industrial/auto/appliance

### **Target Financial Model**

#### **3-5 Year Target Model Profitability/Cash Flow Revenue Growth** Substantial Share Gains 2021-22 Revenue Low-double-digit Fabless IDM model Capitalized on product Premium GM, modest CAPEX Growth CAGR availability/capacity to accelerate gains **R&D** Leverage Non-GAAP 50-55% Focused product portfolio SAM to Double by 2027 **Gross Margin** Share of Long-served Markets **Richer Mix** Non-GAAP More industrial/auto/appliance **Demonstrates Potential** 25-30% **Operating Margin Rising Dollar Content** Driven by integration, higher Capital 5-7% of sales power, GaN **Expenditures**

### **Gross Margin Stability Over Time and Cycles**



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### **Consistent Performance to the Model over Time**

9% Revenue CAGR vs. 6% OPEX CAGR



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## FCF Growth Enables Healthy Cash Returns

**14%** FCF CAGR 2008-2022

**27%** FCF Margin in 2022

**\$25** Average Price on Buybacks since 2004



# **Strong Balance Sheet**

At September 30, 2023

- \$357M cash and investments
- No debt
- Dividend payer since 2008
  - Quarterly dividend increased to \$0.20 in Q4 2023

#### Share count down 12% since 2008

- \$311M used for repurchases in 2022
- \$73M remaining on authorization at 9/30/2023



### **Summary**

Focused Strategy – The Only HV Pure Play

**Committed to Disruptive Innovation** 

**Defensible, System-level Integration** 

Capitalizing on Big-Picture, Secular Trends

**Track Record of Growth & Profitability** 

Making a Difference to the Environment

