GF: Enabling AI in the Physical World

Investor Webinar

December 2025

Eric Chow

Investor Relations

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This presentation and the accompanying oral presentation also contain estimates and other statistical data made by independent parties and by us relating to market size and growth and other data about our industry and business. This data involves a number of assumptions and limitations, and you are cautioned not to give undue weight to such estimates. We have not independently verified the industry data generated by independent parties and contained in this presentation and, accordingly, we cannot guarantee their accuracy or completeness. In addition, projections, assumptions and estimates of our future performance and the future performance of the markets in which we compete are necessarily subject to a high degree of uncertainty and risk.

Mike Hogan

Chief Business Officer

Sameer Wasson

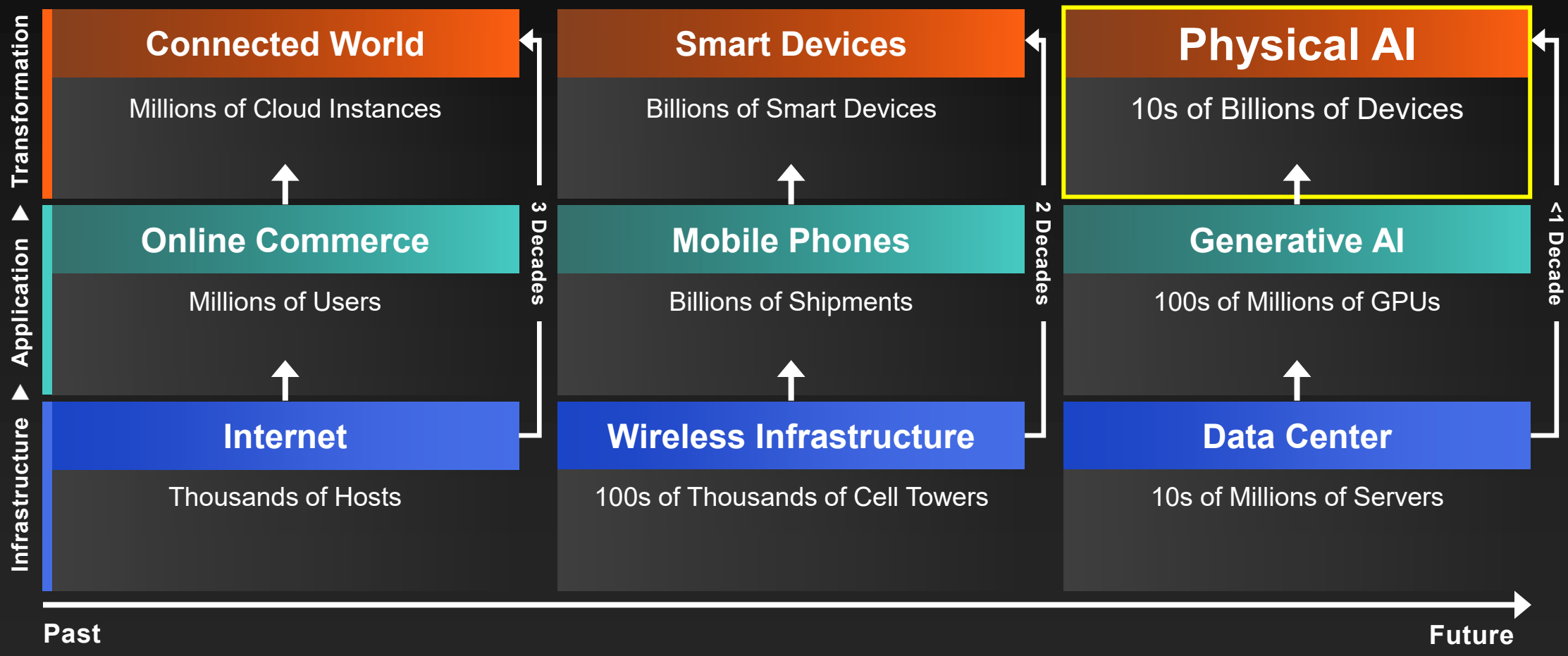
CEO – MIPS,
a GlobalFoundries Company

Ed Kaste

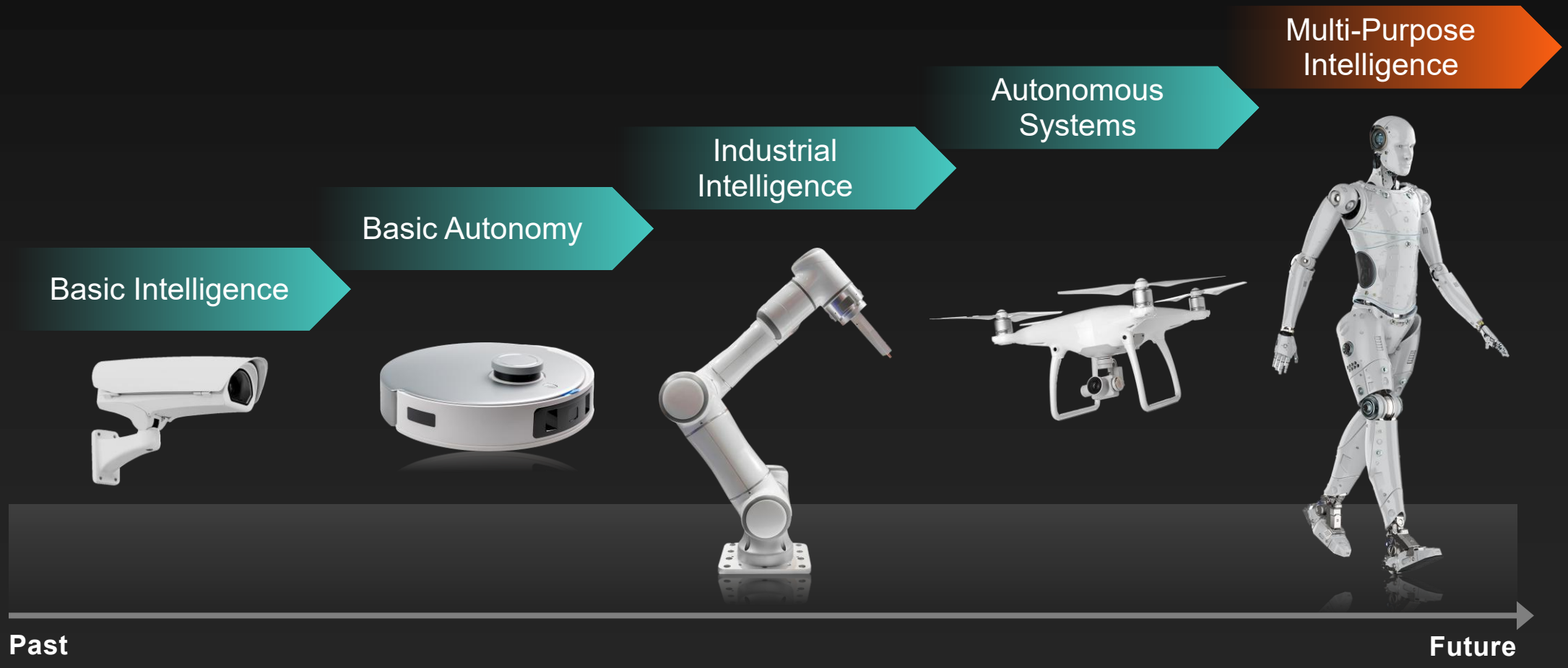
SVP – Ultra-Low Power
Product Line

Physical AI:
The Next Market Inflection

Physical AI: The Next Tectonic Shift



AI is Transforming the Physical World



Physical AI Drives Much Broader Workloads…

Sense, Think, Act and Communicate in Dynamic, Unpredictable Environments

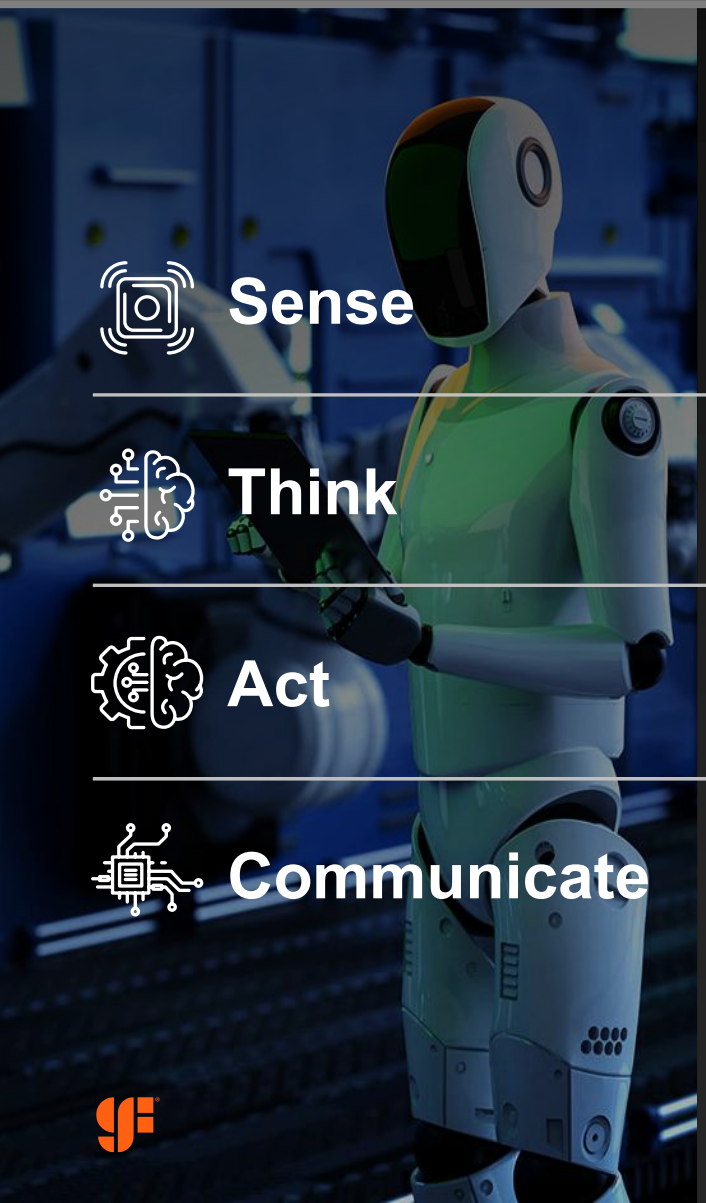
Gather data from environment

Process data and make decisions

Execute commands with motors, drives and actuators

Share data and status internally and externally

...Requiring a Broad Set of Semiconductors



	Customer Needs	Semiconductor Requirements	Physical AI impact on Semiconductor Market
Sense	Analog Precision Multimodal Integration	Advanced sensor circuitry, New materials | Integration	Exponential increase in number and type of sensors
Think	Ultra-Low Power Optimized Compute	Integrated memory, TinyML configurable workloads	Massively distributed intelligence
Act	Low Latency & Power	Dense I/O, IP algorithms, architectural innovation, SerDes | Actuators | IVR	Explosive growth of motor controllers and actuators
Communicate	Secure, Multi-standard RF Connectivity	Better analog, RF more bands, Secure IP blocks	Dramatic increase of low power connectivity

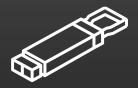
GF's Portfolio Well Positioned to Address Critical AI Needs

GF: Essential Enabler of the Physical AI Transition

GF's Portfolio Uniquely Positioned for AI Scaling

Leading platforms for Data Center AI Infrastructure

Silicon Photonics



Pluggables

Co-packaged optics

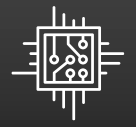
Advanced Packaging

Advanced packaging

Leading platforms for Physical AI applications

MIPS

RISC-V Processor IP



Custom silicon

Software

Ultra-Low Power CMOS

FinFET

FDX

Multi-purpose platforms powering, connecting and enabling applications from cloud to edge

Power

BCD

Power GaN

Power delivery

RF

SiGe

RF SOI

RF GaN

Feature-Rich CMOS

40nm and above

22UX/ 28nm

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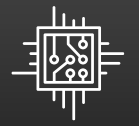

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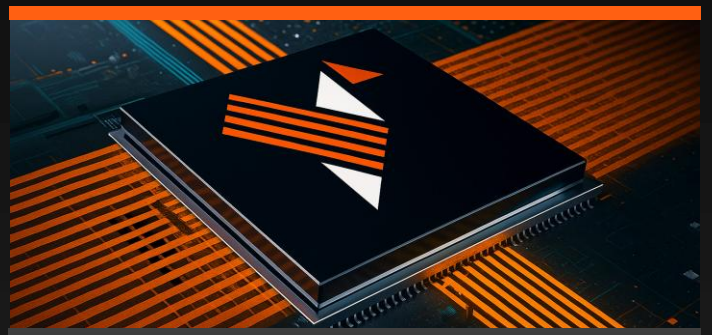
MIPS is Powering the Next Wave: Physical AI



Original RISC Pioneer; Early Leader In Multithreading

A Strong Heritage That Includes Sony PlayStation 2, Nintendo N64, etc.

Shipped 200M+ ADAS SoCs With MobileEye; Deployed in Leading Hyperscaler

RISC-V Processor IP | Software & Tools | Custom Silicon

Physical AI workload focus to enable real-time, event driven computing

Software-first approach to microarchitecture, processor cores, and silicon

Modern customer engagement model with virtual platforms to enable SW/HW co-design and shift-left optimizations

Based on modular & open RISC-V standard instruction set architecture

Silicon design expertise with software enablement for physical AI workloads

MIPS + GF Bring Physical AI to Life

MIPS Workload driven IP & Design

Software-First Processor IP Design	Modular Workload Extensions	Processor IP Optimized for Physical AI	Open Standard Instruction Set Architecture

Architecture Influences Technology

Technology Enables Architecture

Optimized Process Technologies

World's most feature-rich FinFET	FDX: Lowest power, highest integration	Advanced Packaging: Size, power, performance

Benefits of combined capabilities

Ultra-low power process technology (up to 50% benefit PPA)
Industry leading integrated RF & embedded memory (RRAM, MRAM)
Dedicated I/O devices enabling dense SoC integration
Software migration & application development
Data paths & pipelines to process; Key algorithm acceleration
Microarchitecture optimizations for efficiency in ultra-low power process technology

Physical AI Today: Software-Defined Vehicle

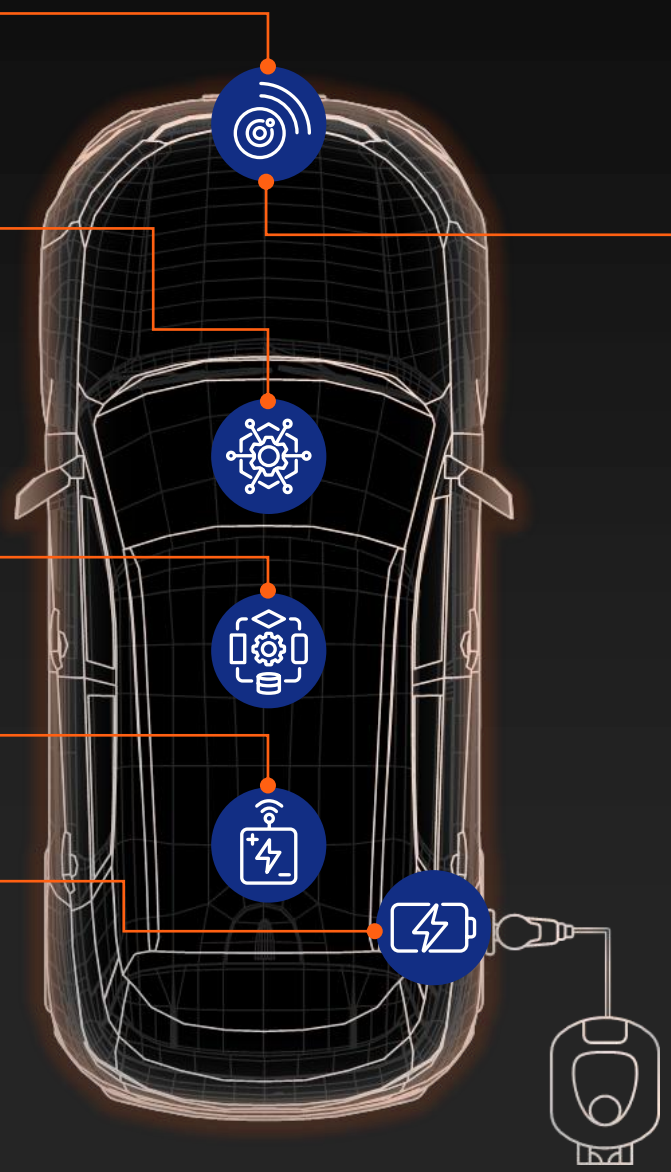
Assisted & Autonomous Driving
- Cameras
- Lidar, Radar

Infotainment & Telematics
- Intelligent Cockpit
- Vehicle to Everything Connectivity

SDV Architecture & Network
- Domain Controllers
- Zonal Aggregators

Power Train
- Voltage Regulators
- DC-DC Converters

Battery & Power
- Battery Management
- Power Management IC



High Performance Radar

- Single-chip solution requiring:
  - Range > 400m
  - Resolution < 0.1 deg
  - Power < 3W
- 24 – 120GHz
- Automotive Quality

FDX Advantages

- Industry leading RF output power / efficiency and low noise receiver
- Ultra low leakage with adaptive body bias
- 150C Qualification
- EU and US Sourcing

MIPS Advantages

- Deterministic real-time processing
- Multi-threaded architecture enabling parallel execution of sensor fusion & decision-making workloads

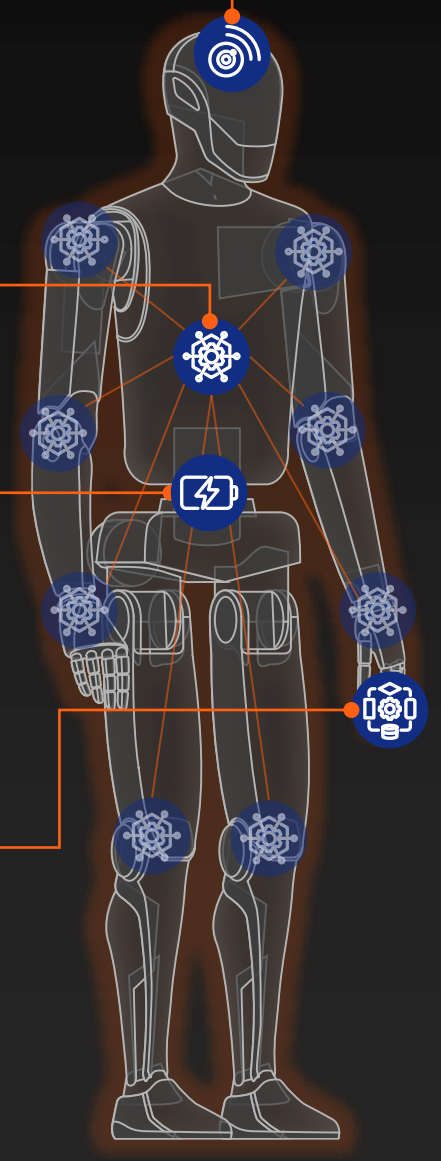
Physical AI for Tomorrow: Humanoid Robot

Sensors
- Vision, Sonics
- Lidar, Radar
- Movement, Position

Distributed Intelligence
- Multimodal AI for sensor fusion, world perception, and autonomy
- Low-latency event processing, rapid data movement

Battery & Power
- Battery Management
- Power Management IC

Actuators
- Intelligent, precise motions
- Efficient, accurate movement



Software-Defined System
- Humanoid robot can have 3-4x the semiconductor content of a car
- Extension of distributed intelligence and zonal architecture
- Full sensor suite and > 40 degrees of freedom for human-like dexterity

GF Advantages
- Full suite of advanced memories real time operation and over-the-air update
- World-class RF for sensing and seamless / secure communications
- Energy efficient, safety-certified platforms

MIPS Advantages
- Standard-setting control loops for real time motor control
- Distributed intelligence “nervous system”
- Low-power AI cores and real-time communication backplanes

Unique Value Proposition: Customers' Perspective

NORDIC SEMICONDUCTOR

"**GF's innovations with FDX technology** truly enable more compute and more real time decision making in an ultra-low power and secure environment.

— **Vegard Wollen, CEO**

NXP

"GF's 22FDX platform's power efficiency and enhanced performance effectively **enables our customers to build the next generation** of connected and secure solutions.

— **Andy Micallef, EVP/COO**

BOSCH

"**GF's technologies empower the performance, safety, and connectivity** essential for next-generation mobility.

— **Michael Budde, President**

mobileye

"**MIPS has been a key collaborator in our success** with the EyeQ™ systems-on-chip for ADAS and autonomous vehicles.

— **Elchanan Rushinek, EVP**

The Market Opportunity

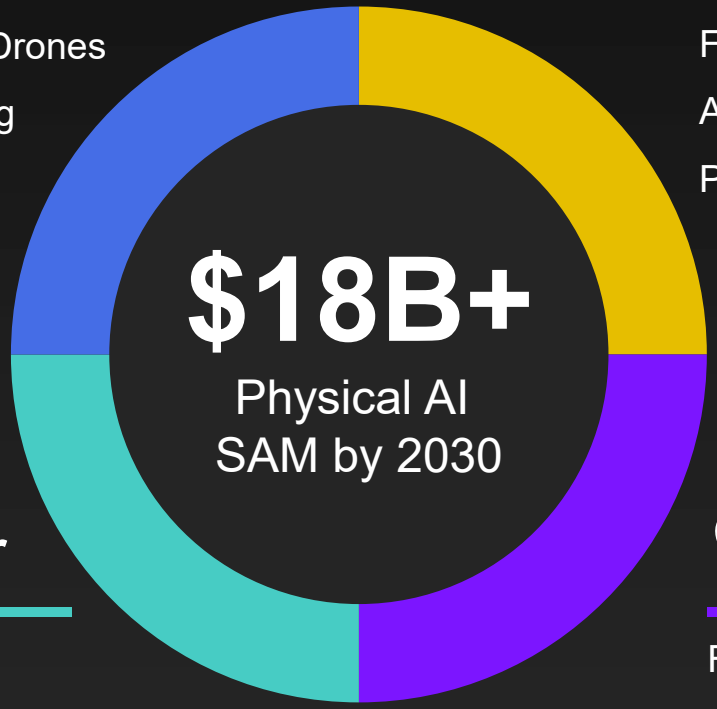
A Significant & Expanded Market Opportunity

Transportation

Personal Autonomous Vehicles
Logistics & Delivery Drones
Autonomous Shipping
Robotaxis

Industrial

Industrial Robots
Factory & Agricultural Cobots
Autonomous Defense Systems
Predictive Maintenance Systems



Consumer

Humanoid Robots
Smart Glasses
Smart Home Devices
AI-Enabled AR/VR

Medical

Robotic Surgeries
Diagnostic Wearables
Medical Smart Sensors
Smart Drug Delivery Systems

Enhanced Business Model

Differentiated Technology

+

Custom Silicon

+

IP Licensing & Royalties

+

Software

Accretive to GF's Long-Term Goals

SAM based on company estimates

Building Upon Our Strong Momentum Today

Accelerating Design Win Growth

2023* Design Wins ~150

Nearly 3x →

2025* Design Wins ~400

~95%

2025 YTD Design Wins Were Sole-Sourced

Engaged With Leading Industry Players

7 of the top 8
Industrial IDMs

3 of the top 4
Leading AI Fabless

All of the top 5
Automotive OEMs

All of the top 6
Mobile Device Fabless & OEMs

All of the top 4
US Hyperscalers

5 of the top 6
Automotive Tier 1s

4 of the top 5
US Aerospace & Defense Prime Contractors

* 2025 Year to Date (Q1-Q3) vs 2023 Q1-Q3

Q&A

Thank You

For further information, please contact:

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