



Thank you, Taiwan IoT ecosystem partners

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WINMATE

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WNC

Unlocking Growth with Industrial & Physical AI at the Edge

Nakul Duggal

EVP and Group GM, Automotive, Industrial and Embedded IoT, and Robotics

Qualcomm Technologies, Inc.

 /NakulDuggal

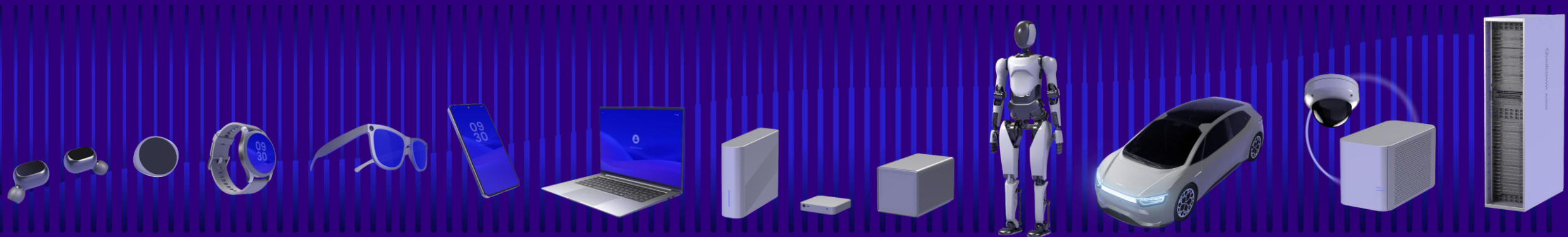
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We are rapidly evolving agentic AI across **the compute continuum**

2mW

200kW





AI is transforming the world



Personal AI

AI as the primary interface between humans and systems



Industrial AI

AI embedded in sensor network to decentralize intelligence



Physical AI

AI systems that act autonomously in the physical world

Human signals



Experiences / assistance

Sensor streams



Intelligent insights

Environment + goals



Automation + autonomy

EXAMPLES

Traditional cockpit



Smart cockpit

Handheld terminals



AI handheld assistants

Body cameras



AI multimodal cameras

EXAMPLES

CCTV cameras



AI video analytics

Industrial meters



Smart meters

Factory sensors



AI monitoring systems

EXAMPLES

Human drivers



Self-driving cars

Manual inspection rounds



Inspection robots

Human-operated machineries



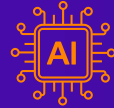
Robotics manipulation systems



Proliferating Intelligence to the OT Edge



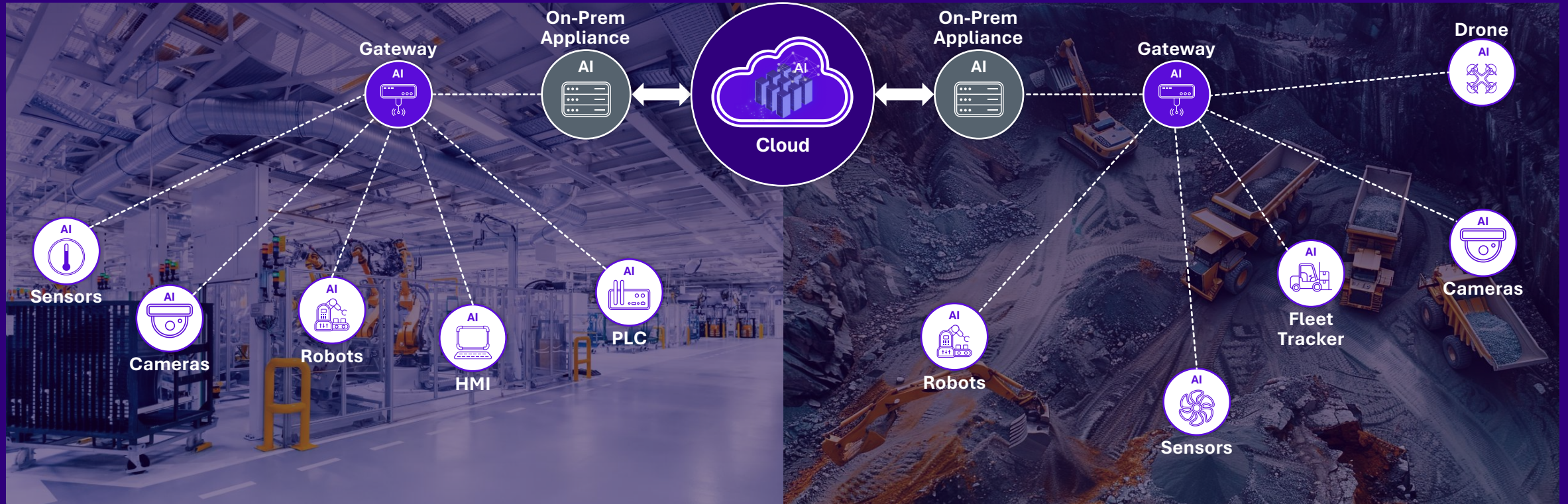
The Edge is **always connected**



The Edge is **AI enabled**



The workflow is **AI aware**



Connectivity is the foundation



To fuel new possibilities, intelligence is moving from the cloud to OT devices



AI at the OT edge enables new levels of automation, real-time decisions, and agentic AI workflows



Redefining what's possible in OT through connectivity and edge intelligence



New levels of **automation**



Real-time decisions



Agentic AI workflows

Manufacturing



High-fidelity digital twins
Intelligent industrial inspection
Real-time optimized 2.36
Production Predictive maintenance
...

SIEMENS COGNEX

Energy & Utilities



Proactive power shutoff
Autonomous drone inspection
Smart metering
Dynamic grid monitoring
...

Itron **Genus**
energizing lives

Oil & Gas



Drone pipeline surveillance
Remote site monitoring
Flow optimization and uptime
Workforce competency & safety
...

aramco  **slb**

Heavy Industries



Dynamic fleet optimization
Predictive safety alerts
Build schedule optimization
Real-time asset inspection
...

KOMATSU **EPEC**

Retail

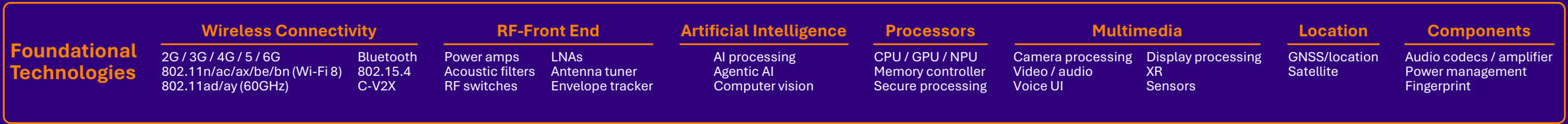
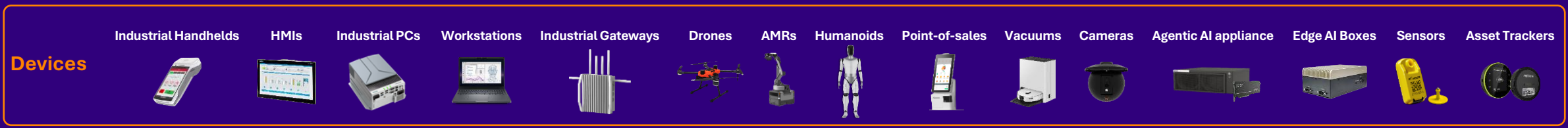
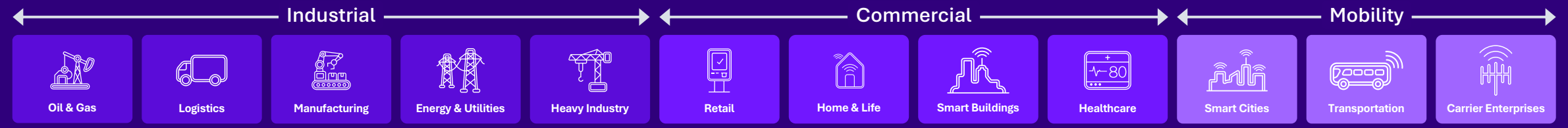


Shelf intelligence
Payment terminals & biometrics
Enterprise handheld tracking
In-store media attribution
...

DECATHLON  **ZEBRA**



Accelerating the proliferation of AI into OT





Vision intelligence: From silicon to applications

Qualcomm® Insight Platform

Built-in
GenAI engine,
Merlin



Full-stack Video Intelligence Solution

Use Cases



Virtual tripwire



Access control



Worker safety



Overhead loads



Unified command center



Perimeter intrusion



Unified ground + aerial intelligence



Cameras

(Augentix and others)



Edge AI Boxes



And more...

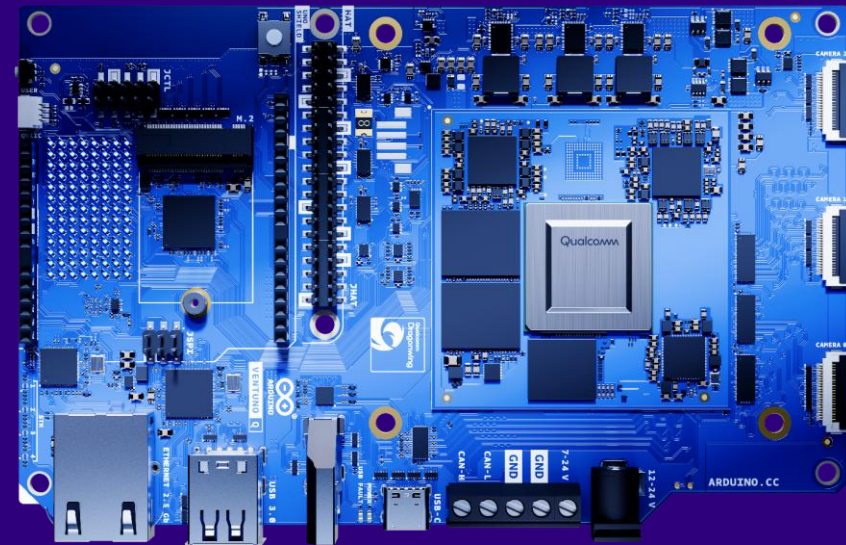
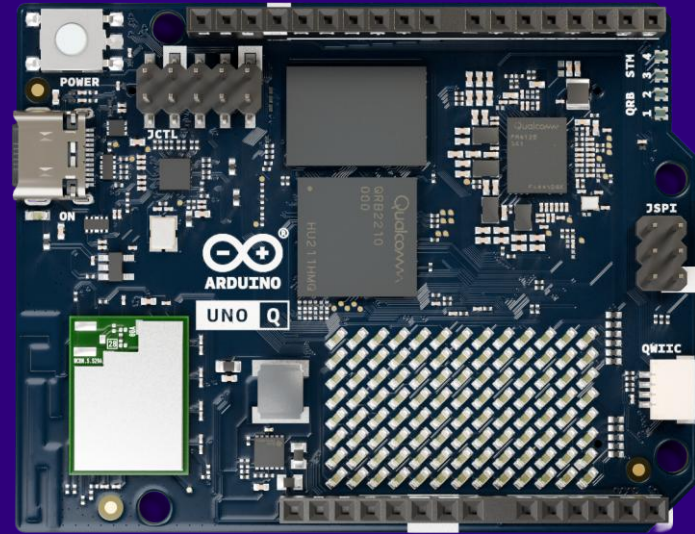
Chipsets





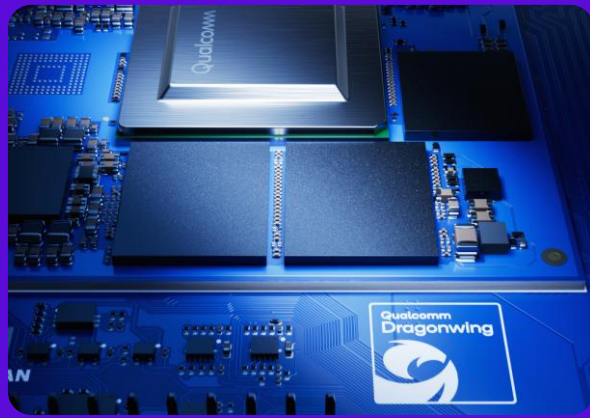
Developer mission

Empower anyone to innovate
by making complex technologies
simple to use





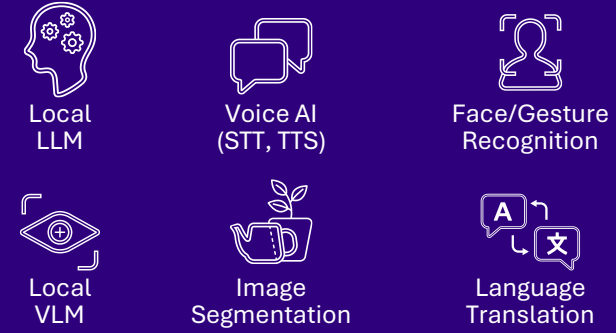
Arduino® VENTUNO™ Q: The definitive powerhouse for edge & physical AI



Supporting state-of-the-art AI models



VENTUNO Q

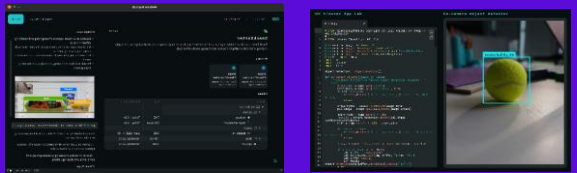


Powered by **Dragonwing™ IQ8**
Heterogeneous compute (CPU, GPU, NPU)
A **40-TOPS** NPU gives developers the AI muscle to power a wide range of use case, from home automation to industrial robotics

Industrial AMR Demo



Arduino® App Lab

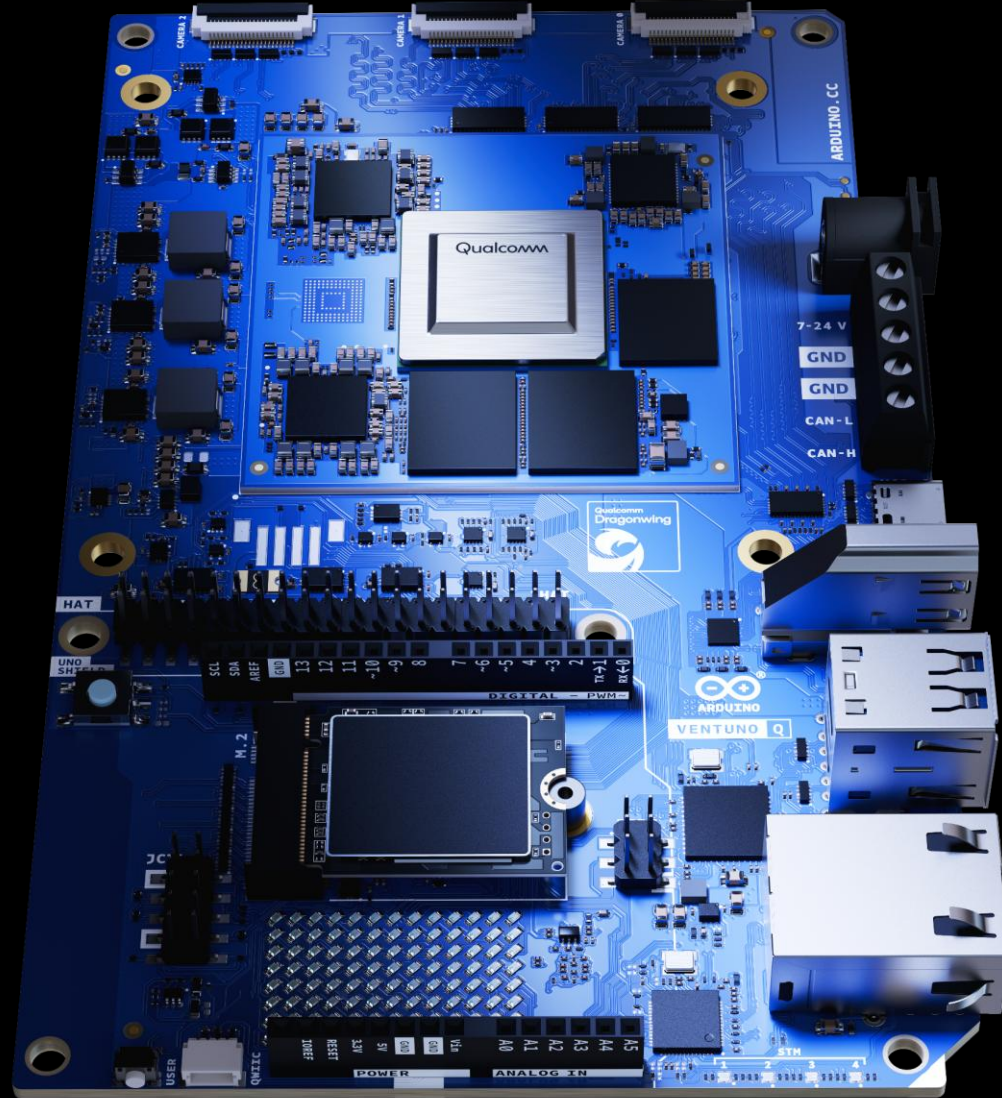


Arduino VENTUNO Q

Availability: **August 2026**
Price: **\$299**



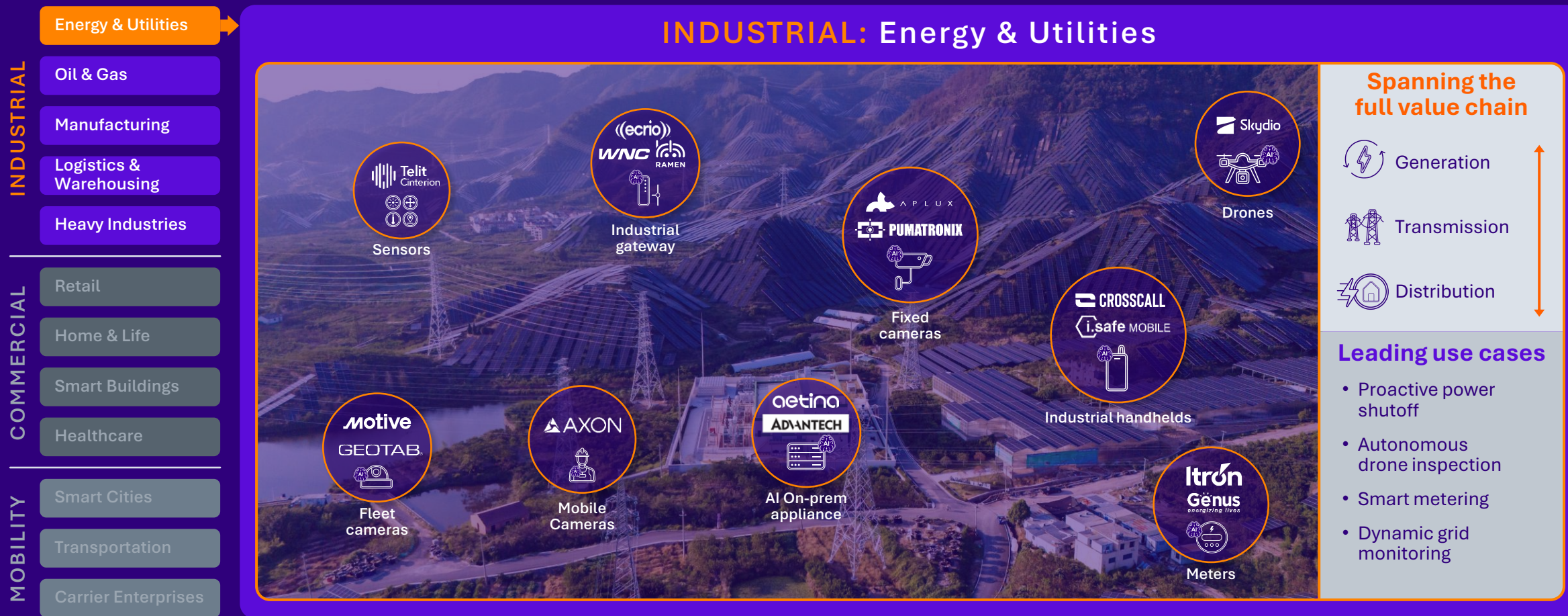
Sign up for
availability
updates





Our vertical blueprints accelerate time-to-value

Repeatable templates that enable faster AI deployments to address key use cases



Qualcomm
Technology and product foundation



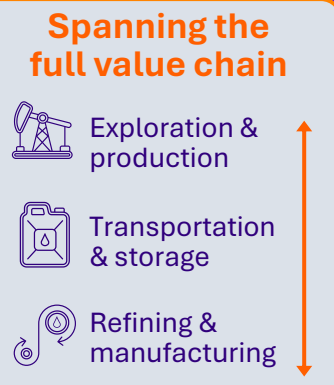


Our vertical blueprints accelerate time-to-value

Repeatable templates that enable faster AI deployments to address key use cases

- INDUSTRIAL**
 - Energy & Utilities
 - Oil & Gas**
 - Manufacturing
 - Logistics & Warehousing
 - Heavy Industries
- COMMERCIAL**
 - Retail
 - Home & Life
 - Smart Buildings
 - Healthcare
- MOBILITY**
 - Smart Cities
 - Transportation
 - Carrier Enterprises

INDUSTRIAL: Oil & Gas



- Leading use cases**
- Autonomous drone surveillance
 - Remote site monitoring
 - Flow optimization and uptime
 - Workforce competency & safety

Qualcomm
Technology and product foundation





Our vertical blueprints accelerate time-to-value

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 - Transportation
 - Carrier Enterprises

COMMERCIAL: Retail



Spanning the full value chain

- Merchandising & suppliers
- Logistics & storage
- Store operations

Leading use cases

- Shelf intelligence
- Payment terminals & biometrics
- Enterprise handheld tracking
- In-store media attribution

Qualcomm
Technology and product foundation

Industrial connectivity
Hardware

Industrial processors

Consumer processors

Camera Processors

Robotics processors

AI on-prem appliance

ARDUINO
Arduino Platform

Qualcomm
Insight platform

Foundries.io
Foundries factory

EDGE IMPULSE
Edge Impulse

Qualcomm
TPS

Qualcomm AI
inference suite
Software / Services



Physical AI is the next platform of innovation

Real-time, situationally-aware, latency sensitive



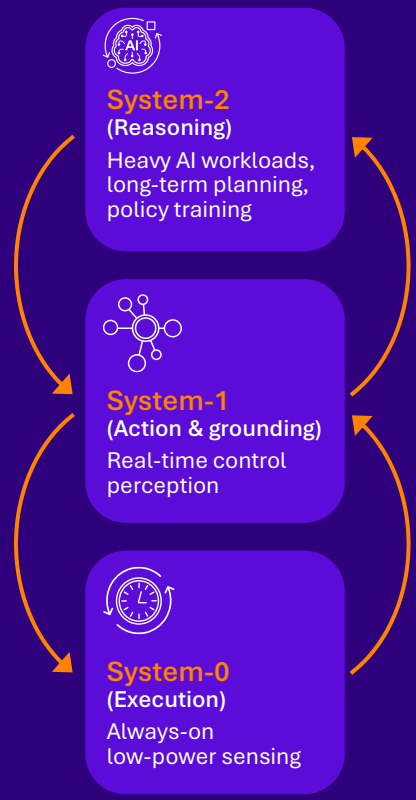
| System 1 | | System 2 |
|--------------------------------------------------|--|-------------------------------------------------------|
| Intuition & instinct | | Rational thinking |
| 95% | | 5% |
| Unconscious Fast Associative Auto pilot | | Takes effort Slow Logical Lazy Indecisive |

Physical AI

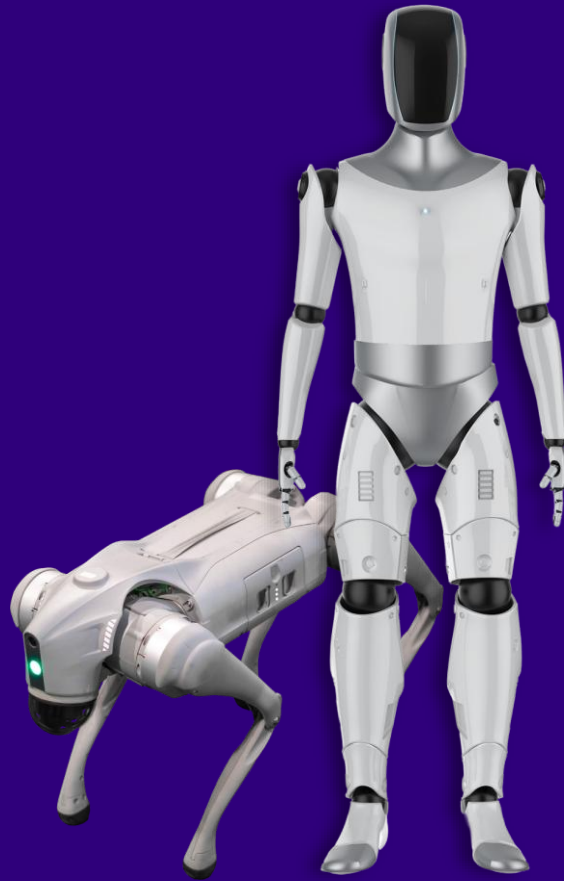
- Real world sensing and interaction
- Continuous learning and improvement
- Reasoning and proactive interpretation
- Increasingly humanlike interactions



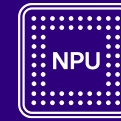
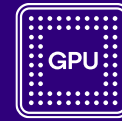
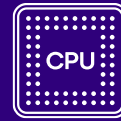
System-level expertise now making next-gen robotics a reality



Hierarchical Compute Architecture



Compute & Processing IPs



Broad AI models, diffusion transmission, hierarchical planning

Sensing & Perception IPs



Spectra ISP



Sensing Hub



Sensor Interfaces

Connectivity & Wireless



Actuation & Control IPs



PWM / Actuator Controllers



Mixed-Criticality Engine

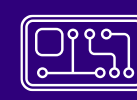


Crypto Engine & Secure TEE

Power & Efficiency IPs



Dynamic Power Management



PMICs

Software & Developer IPs



Qualcomm AI Stack / AI Hub



SDK

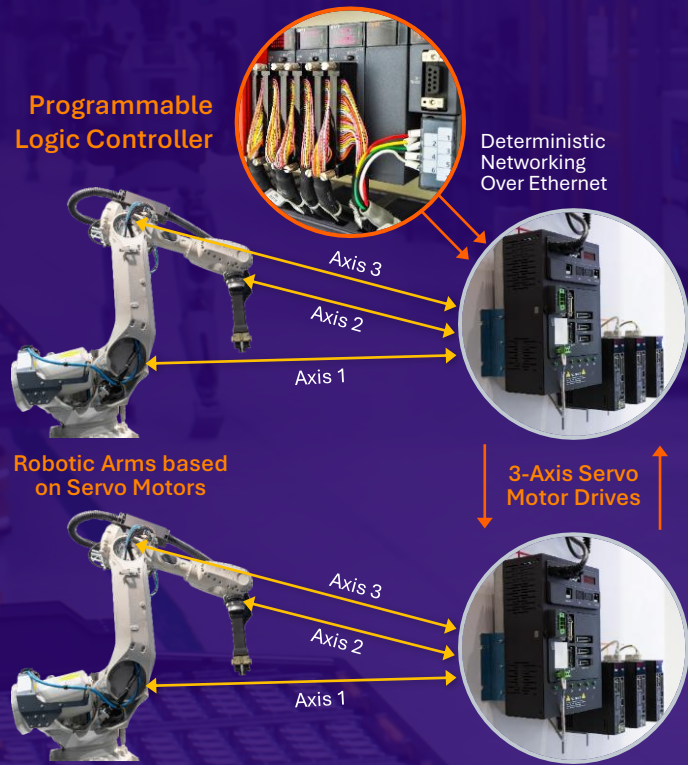


AI Data Flywheel

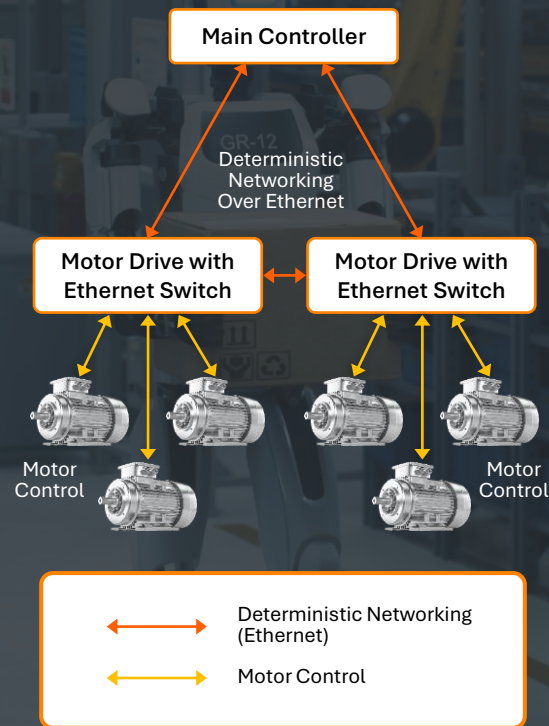


Industrial automation in robotics requires precise and intelligent motor control

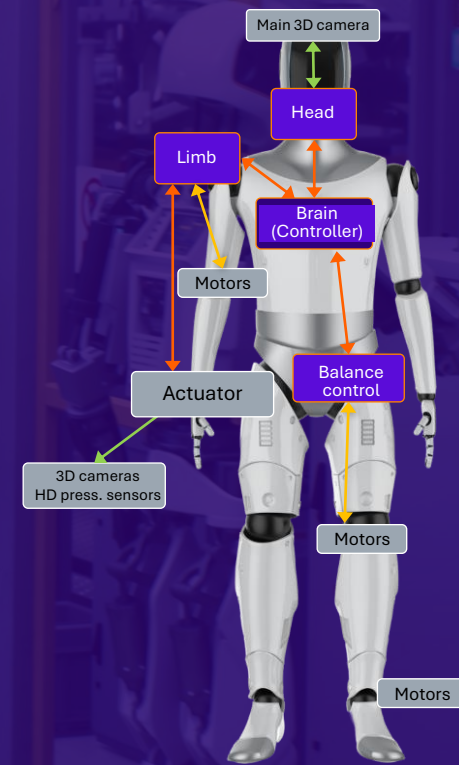
INDUSTRIAL AUTOMATION



COMMON REQUIREMENTS & SIMILAR ARCHITECTURE

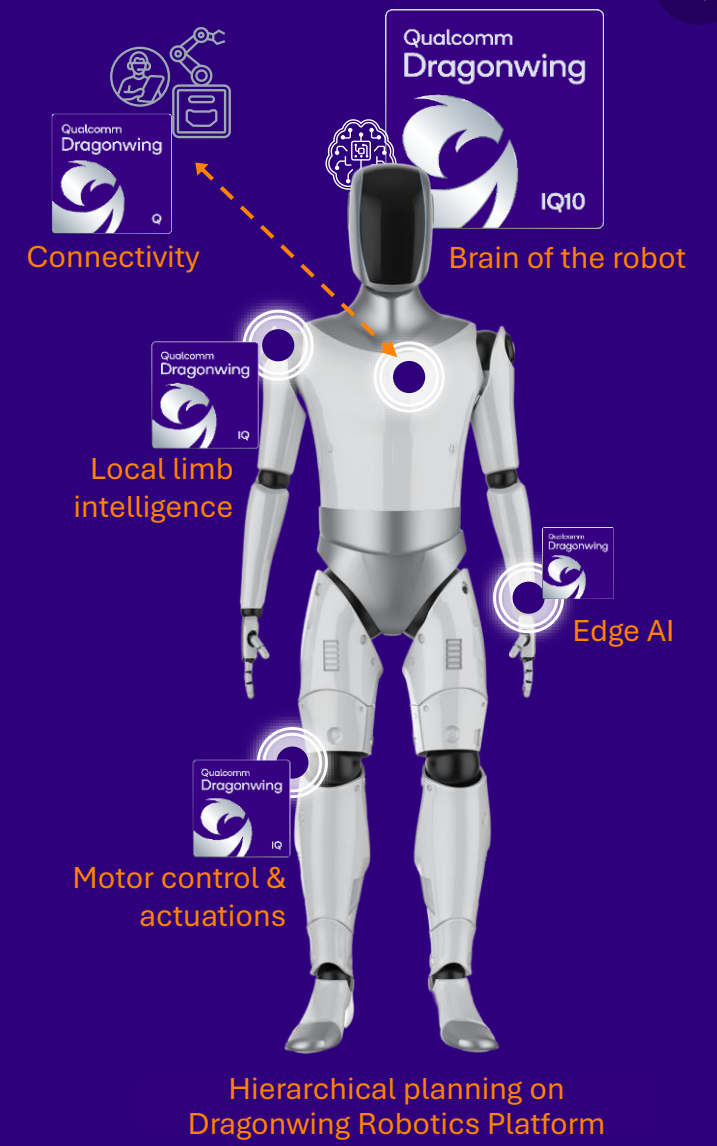
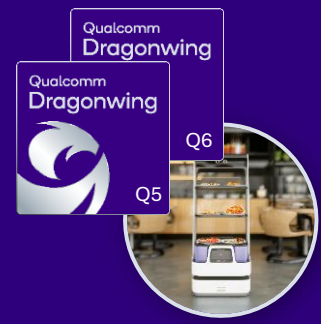
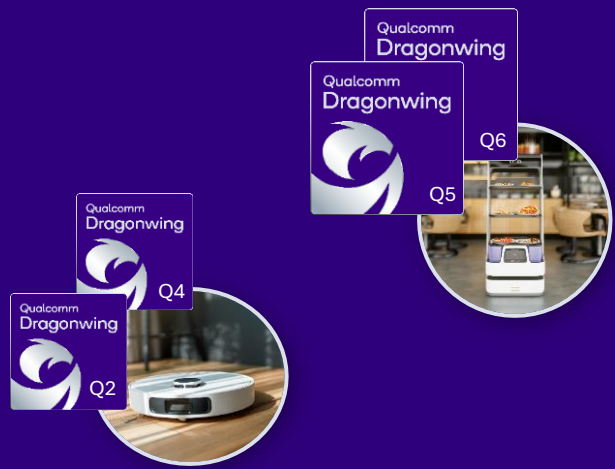


HUMANOID ROBOTICS





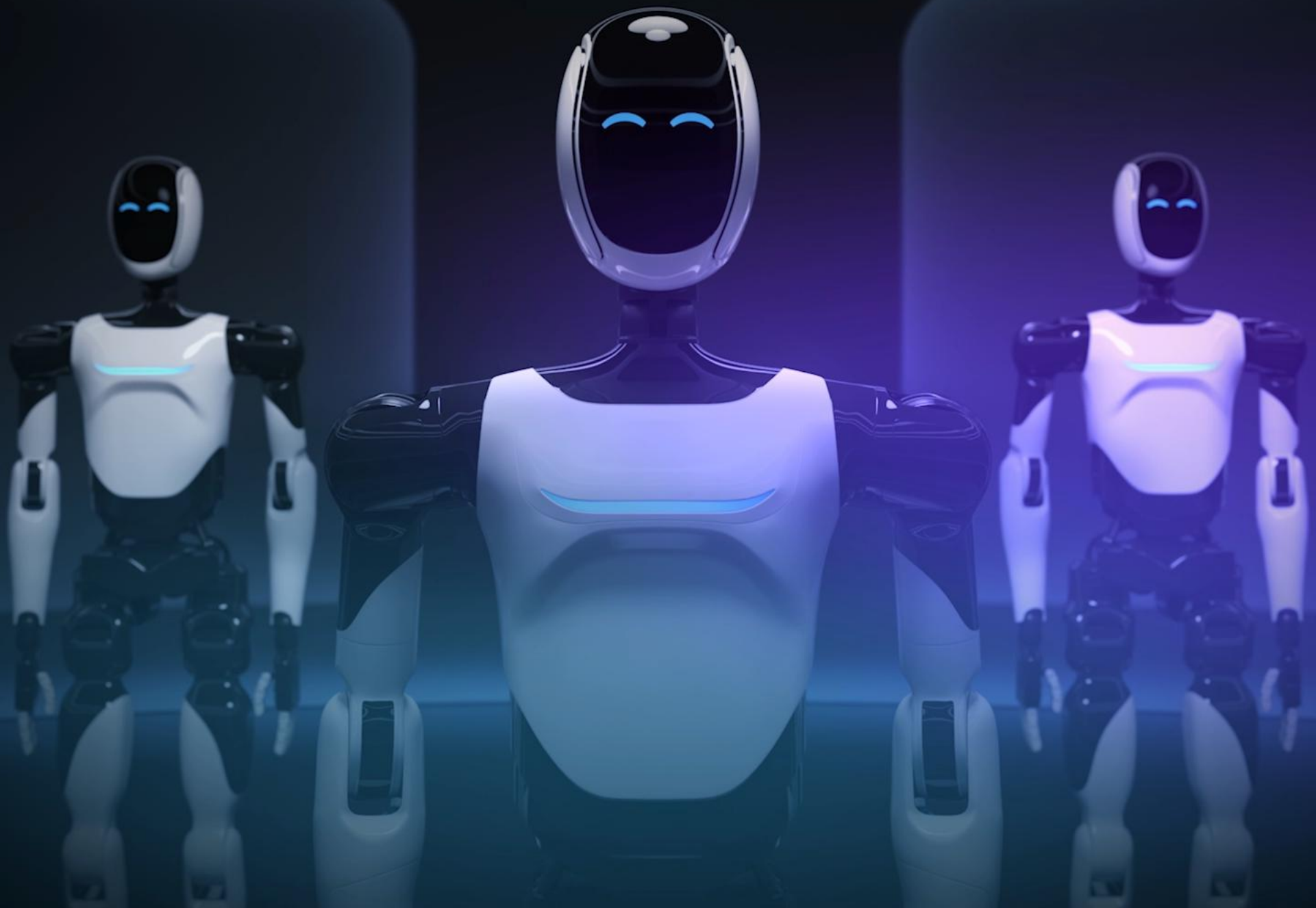
Dragonwing robotics platforms are designed to scale and service all industries



Common robotics SDK,
AI tool kit,
heterogeneous compute fabric



Linux and Ubuntu support; FUSA: available with safety software platform based on QNX and Safe Linux





Introducing Qualcomm Dragonwing IQ10 Robotics Reference Design

From SoC to a Validated Reference Design



Robotics needs tightly coupled systems ◀

Complexity

▶ Deployment-ready reference design for advanced robotics

Integration adds more complexity and slows time to market ◀

Integration

▶ Fully integrated stack

Hard to achieve reliability, safety, and maintainability at scale ◀

Scale

▶ Built for production: reliable, safe, maintainable

High upfront engineering costs and integration cycles ◀

Economics

▶ SW-driven scalability, lower marginal cost per new task



Dragonwing IQ10
Robotics Reference Design



Reasoning. Redefined.

Qualcomm | NEURA



Thank you

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Thank you!

Collaboration announcements this week



- ADLINK Unleashes Physical AI at COMPUTEX 2026

ADVANTECH

- Advantech Edge AI Conference Highlights Physical AI and Edge Computing, Signaling the Start of Scalable AI Deployment

HIWIN®

- HIWIN Integrates Qualcomm Dragonwing™ Q6 to Enhance Intelligent PLP Equipment Applications
- HIWIN Debuts at COMPUTEX 2026, Showcasing Dual-Arm Logistics and Humanoid Robotics Innovations

Lanner

- Lanner and Ecosystem Partners to Showcase End-to-End AI-on-RAN Solution for Private 5G Networks at COMPUTEX 2026



Formosa Plastics®

- Innodisk Showcases Its Five-Layer Edge AI Ecosystem at COMPUTEX 2026
- Innodisk Showcases Full Qualcomm Dragonwing Edge AI Lineup at Computex 2026, Spanning Dragonwing IQ8 Through IQ10
- Innodisk Works with Qualcomm and Formosa Plastics to Launch “AI Industrial Safety Vision Solution

MiTwell

- MiTwell Launches 3.5-inch Evaluation Carrier Board Powered by Qualcomm® IQ-9075M SOM, Empowering Edge AI and Robotics with up to 100 TOPS Performance

NEXCOM

- NEXCOM Forges Strategic Collaboration with Qualcomm to Accelerate Embodied AI Robotics Development at COMPUTEX