



SEED ROUND · \$8M · 2026

The 20x Energy-Efficient Brain for Robots

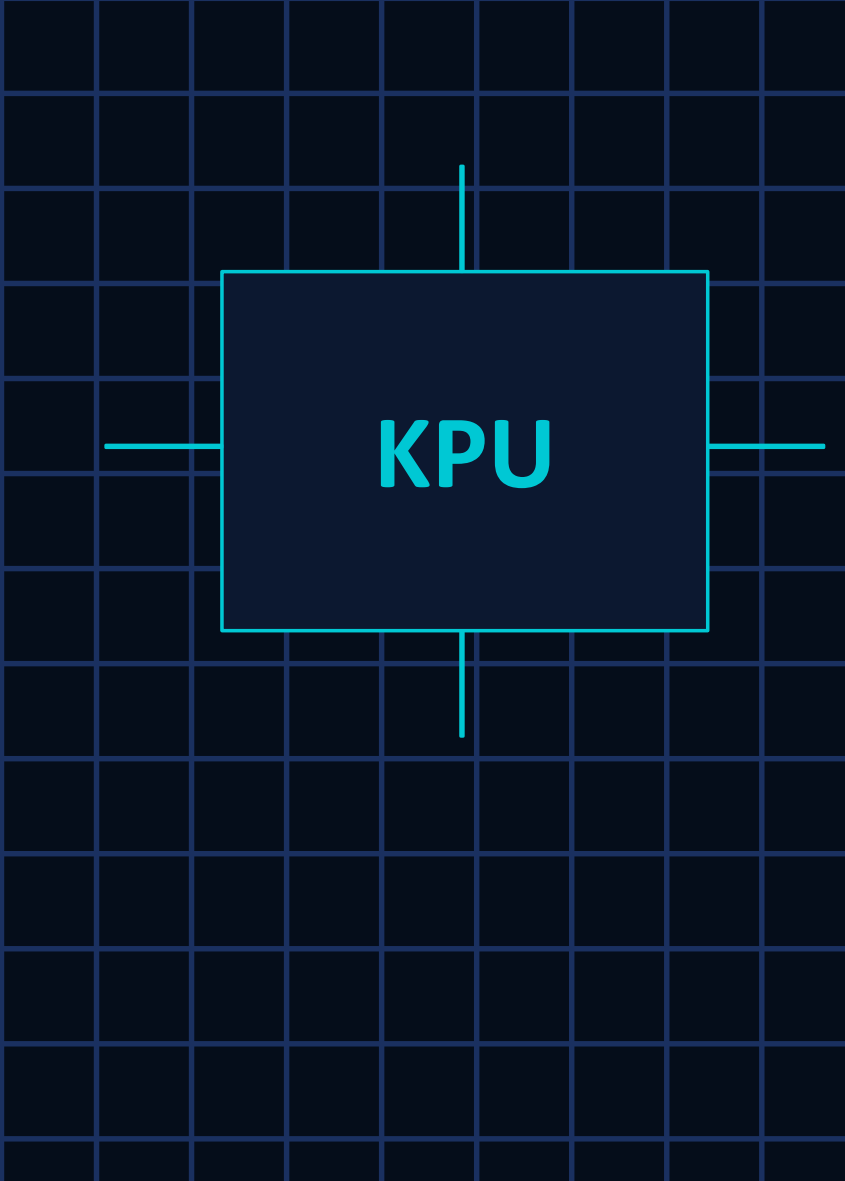
Purpose-built KPU silicon + agentic dev platform for drones, humanoids & autonomous systems — where every milliwatt is mission-critical.

Hardware IP

Agentic Platform

NRE Services

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THE PROBLEM



The Embodied AI Trilemma: No Chip Delivers All Three

Every robot needs compute power, perception intelligence, AND long battery life. Today's chips force engineers to sacrifice one for the other — always.

Compute Power

Deep AI decision-making

AI Perception

Vision & sensor fusion

Energy Efficiency

Hours of battery life

⚠ IMPOSSIBLE ZONE — No single chip satisfies all three today

27 min

Skydio X2D drone
mission flight time

50%

Energy wasted on
inefficient compute

\$460B

AI chip market
by 2034 (27.6% CAGR)

8–12

Specialists required
per SoC design team

*"A single failed tape-out at 7nm wastes \$25–50M.
There is no undo button for silicon."*

— Industry reality facing every robotics startup

The Window Is Open Now

Four converging forces make 2026 the defining year for purpose-built embodied AI silicon.

DEFENSE

Defense AI Mandate

DoD autonomous drone programs accelerating rapidly. NDAA 2024 mandates reduced foreign silicon dependence. SWaP-C (Size, Weight, Power & Cost) requirements map directly to KPU's profile — defense primes are actively seeking purpose-built edge AI silicon right now.

ROBOTICS

Humanoid Robot Inflection

Figure AI, Boston Dynamics, and Agility deploying commercial humanoids in 2025–26. Average run time under 2 hours — none have solved full-shift operation. KPU's 20x efficiency advantage is the missing ingredient to unlock all-day autonomous operation.

SILICON

GPU Architecture Failing at Edge

NVIDIA AGX Orin draws 25–60W — data-center architecture shoehorned into drones. As AI workloads grow, the power gap widens. Purpose-built silicon is no longer a 'nice to have' — it is the only viable path to mission-grade autonomous systems.

MARKET

First-Mover Window

Embodied AI chips are pre-commodity. The company that tapes out purpose-built silicon AND builds the design ecosystem first will define this category — exactly as ARM did for mobile a decade ago. That window closes when a large player enters. We move now.

Two Unfair Advantages, One Complete Platform

KPU SILICON

Knowledge Processing Unit

20x energy efficiency vs. GPUs on identical workloads

2.5D MCM 200mm² SoC + 2× HBM stacks on CoWoS interposer (7nm)

Tera→Peta scalable compute — edge drone to humanoid-class

PyTorch ✓ native deploy via patented transpilation — no lock-in

+

AGENTIC PLATFORM

Embodied AI Architect

1 engineer replaces a 10-person hardware design team

100+ pts design space explored in minutes vs. 3–5 in months

RTL output validated synthesizable Verilog — pre-silicon PPA proof

Full stack workload analysis → benchmarking → deployment, one tool

RESULT: Most efficient hardware × Most efficient dev process = Compound competitive moat that grows with every design

How We Achieve 20x Efficiency

Three purpose-built architectural innovations — not retrofitted GPU design

01

Programmable Domain Flow Array

Structured data (Domains) flows through a 2D/3D pipeline. Zero energy wasted on instruction fetch, decode, or scheduling. GPU's fetch-decode-execute loop burns 40–50% of power on overhead — the KPU eliminates this entirely.

40–50%

GPU overhead power
eliminated at the architecture level

02

Custom Compiler & Transpiler

Patented transpilation: develop in PyTorch / TensorFlow, deploy on KPU with zero vendor lock-in. Full-stack optimization from application to silicon. Functional, Energy, and Performance models validated to within 5% accuracy.

5%

accuracy of pre-silicon
performance models

03

2.5D MCM + HBM Architecture

200mm² 7nm SoC on a silicon interposer (CoWoS) with 2× HBM stacks. Data-center memory bandwidth at a drone's power envelope. One SoC die yields 2–3 module SKUs: Drone Edge, Quadruped, Humanoid — amortizing tape-out costs across the product line.

HBM BW

data-center bandwidth
in a battery-powered form factor

✓ Proven Technology — Functional, Energy & Performance models validated to within 5% accuracy across diverse workloads

MARKET OPPORTUNITY



\$460B Market. We Start Where the Pain is Greatest.



MARKET EXPANSION ROADMAP

2026–27	Defense Drones (beachhead)	\$2.0B
2027–28	AMRs + Quadruped Robots	\$0.9B
2028–30	Humanoid Robots	\$6.5B
2030+	Full Embodied AI Ecosystem	\$16.4B+

Positioned at the intersection of three mega-trends:

- Robotics
- AI
- Semiconductor Innovation

We Don't Compete — We Obsolete the Tradeoffs

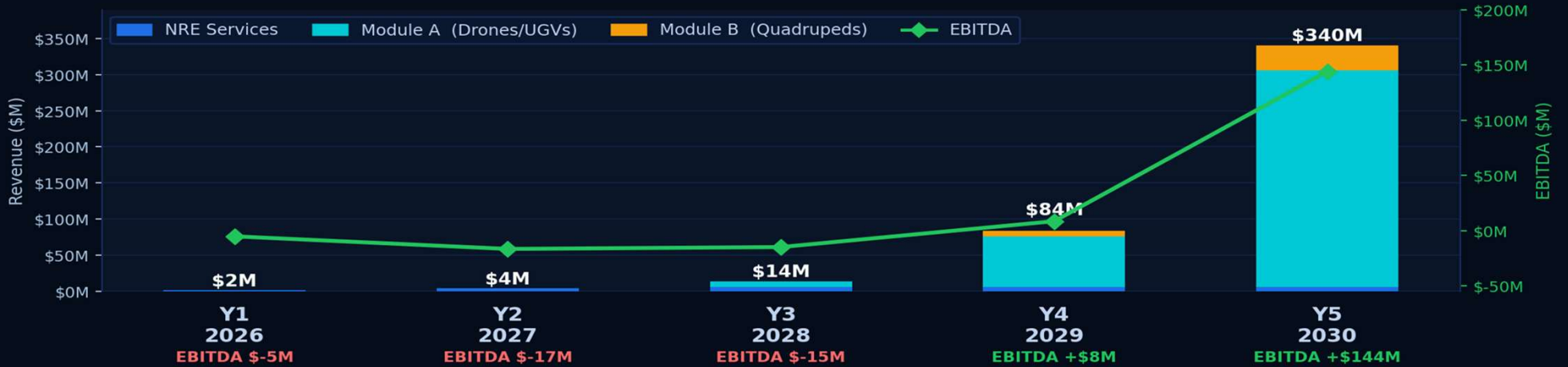
Competitor	Architecture	Compiler	Autonomy	Perception	Energy Eff.	Dev Platform	Embodied AI Fit
NVIDIA GPU (CUDA ecosystem)	Stored Program / SIMT	Complex / Expensive	✓	✓	✗ 40–50% waste	⚠ Generic	✗ Brute Forced
TPU (Google)	Fixed Function Spatial	Complex	✗	✗	⚠ Moderate	⚠ Limited	⚠ Limited
CV Engines (Hailo, Rockchip)	Fixed Function	Constrained	✗	⚠ Limited	✓	✗ None	⚠ Limited
CPU / DSP (Qualcomm, TI)	Stored Program (SPM)	Low Perf	✗	✗	⚠ Moderate	✓ Basic	⚠ Poor
EDA Vendors (Synopsys, Cadence)	Ad Hoc	Nonexistent	—	—	—	✗ \$1M+	✗ None
Branes.AI KPU	Spatial Data Flow Machine	SW-HW Combination	✓	✓	✓ 20x better	✓ Agentic AI-driven	PERFECT

Hardware Moat — 20x ops/watt vs. GPUs — the defining metric

Platform Moat — Every design enriches our hardware knowledge base

Integration Moat — Full stack — no integration tax between tools

Three Revenue Streams → \$340M by Year 5



P&L SUMMARY

	Y1 2026	Y2 2027	Y3 2028	Y4 2029	Y5 2030
NRE Revenue	\$1.5M	\$4.0M	\$6.0M	\$6.0M	\$6.0M
TOTAL REVENUE	\$1.5M	\$4.0M	\$14.0M	\$83.9M	\$340.5M
Gross Margin %	85%	85%	68%	60%	58%
Total OpEx	-\$6.5M	-\$20.0M	-\$24.4M	-\$41.8M	-\$53.5M
EBITDA	-\$5.2M	-\$16.6M	-\$14.9M	+\$8.5M	+\$144M

FUNDING ROUNDS & VALUATION

Round	Timing	Raise	Pre-\$	Post-\$	Dilution	Founder %
Seed	Q1 2026	\$8M	\$27M	\$35M	22.9%	67%
Series A	Q1 2027	\$40M	\$110M	\$150M	26.7%	45%
Series B	Q1 2029	\$80M	\$320M	\$400M	20.0%	34%

THE ASK

\$8M

SEED ROUND

\$27M pre-money · \$35M post-money · 22.9% dilution

USE OF FUNDS

Engineering Team (12 months)	\$3.2M
EDA Tools & IP Licensing (ARM / HBM)	\$2.4M
Customer Engagement & Demos	\$1.2M
Cloud, Facilities & G&A	\$0.8M
Reserve / Contingency	\$0.4M



18-MONTH MILESTONES TO SERIES A

Q3 2026

3 NRE Contracts

Revenue from defense primes

Q4 2026

Platform GA

SaaS live · 10 design partners

Q4 2026

First IP License

KPU IP deal · \$1–5M

Q1 2027

Series A Ready

\$1M+ ARR · 7nm tape-out commit

- ✓ Purpose-built silicon — not a repurposed GPU
- ✓ 20x efficiency empirically validated
- ✓ NRE revenue generating from Day 1

- ✓ Clear beachhead: defense drones → \$460B TAM
- ✓ Platform moat compounds with every design
- ✓ Series A trigger: \$1M ARR + First customer tape-out

TEAM: **Dr. Theodore Omtzigt** (YALE Ph.D, NVDA, Intel, PDFA Inventor, KPU Inventor); **Dr. Domjan Baric** (Ph.D. Zagreb, Biophysics/Interpretable AI); **Will June** (Accelerator Performance Engineering, Cisco, NanoVMs); **Will Ray** (Cambridge, Compiler Engineer); **Kishore Kondapi**- CSE, 20+ yrs Product management, Fidelity, State Street, Relisys, Intuily.;