

SENTINEL

Modular Humanoid Robotics Platform

CΦRPACOM × QUBITPAGE®

NVIDIA Jetson Platform

lablab.ai Winner

The Problem

1.1M

Unfilled logistics
positions globally

57 years

Average farmer age
worldwide

90M

Elderly care gap
by 2030

- ▶ Current robotics solutions cost \$100K-\$250K per unit
- ▶ Single-purpose designs — one robot per task, no flexibility
- ▶ Not waterproof — cannot operate outdoors in rain, mud, or wet conditions
- ▶ No avatar mode — no remote human control for complex or dangerous tasks

SENTINEL: One Core, Five Variants

IP67/IP68 Waterproof

Sealed aluminium core, operates in rain, mud, and submersion up to 2m

Modular Architecture

One production line produces 5 specialized robots from a shared chassis

Avatar Mode

Remote human control via VR headset for complex or dangerous tasks

SENTINEL-LINK

Hot-swap tool system — change the robot's role in seconds

Aggressive Pricing

40-70% below competitors through modular manufacturing efficiency

SENTINEL-WH

Warehouse & Logistics

Specifications

Height: 1.75m | Weight: 68kg

Runtime: 6 hours | IP67

Price: €42,000 | BOM: €17,555 | Margin: 58%

SENTINEL-LINK Tools

Vacuum Suction (€1,984)

Magnetic Gripper (€1,400)

RFID Writer (€600)

Thermal Camera (€740)

Pallet Lifter (€1,944)

Label Applicator (€277)

Use Cases

Warehouse picking · Inventory scanning · Pallet moving · 24/7 operation

SENTINEL-AG

Agriculture & Farming

Specifications

Height: 1.72m | Weight: 72kg

Runtime: 8 hours | IP67

RTK GPS 1cm precision | NDVI multispectral imaging

Price: €40,500 | BOM: €17,434 | Margin: 57%

SENTINEL-LINK Tools

Soil Sampler (€390)

Greenhouse Wheels (€720)

Seeder Drill (€1,400)

Pruning Head (€340)

Tractor Body attachment for plowing/seeding

Use Cases

Crop monitoring · Soil analysis · Precision seeding · Harvesting · Greenhouse work

SENTINEL-MK

Military & Defense

Specifications

Height: 1.82m | Weight: 95kg

Runtime: 8 hours | IP68 (2m submersion)

MIL-STD-810H | 6mm titanium armor

Dual 960Wh hot-swap batteries

Price: €109,000 | BOM: €49,953 | Margin: 54%

Weapons & Equipment

M4 rifle mount · 40mm grenade launcher

Thermal/laser sniper · Night vision

Climbing grapple · EMP pulse gun

Laser dazzler · Electroshock

Camouflage solar panel recharging

Use Cases

Reconnaissance · Combat support · Bomb disposal · Zero-casualty missions

SENTINEL-HM

Home & Care

Specifications

Height: 1.40m | Weight: 32kg

Runtime: 10 hours | IP67

OLED face 48 emoji expressions | Voice AI

Matter smart home | ISO 13482 child-safe

Price: €18,900 | BOM: €5,782 | Margin: 69%

SENTINEL-LINK Tools

Serving Tray (€120)

Vacuum Module (€340)

Kitchen Prep Kit (€580)

Garden Tool Set (€290)

Use Cases

Elderly care · Home assistance · Child companion · Smart home control

SENTINEL-D

Aerial Drone Module

Specifications

Flight time: 35 min | 4K + thermal cameras | Autonomous waypoints

Folds into dock on any ground SENTINEL unit

Price: €9,800 | BOM: €5,517 | Margin: 44%

Use Cases

Aerial surveillance · Crop mapping · Search & rescue · Perimeter security

Technology Stack

NVIDIA Jetson AGX Orin

275 TOPS AI compute

LiDAR + Depth Cameras

360° environmental awareness

LiFePO4 Batteries

6-10 hours runtime, hot-swap capable

Solar Skin Integration

Advanced solar cells for outdoor recharging

Avatar Control

VR headset remote operation, haptic feedback

SENTINEL-LINK

16-pin quick-release tool connector

Competitive Advantage

Feature	SENTINEL	Boston Dynamics	Tesla Optimus	Figure AI
Price	€18.9-109K	\$150K+	~\$25K (est.)	\$100K+
Waterproof	IP67/IP68	No	No	No
Modular	5 variants	Single	Single	Single
Avatar Mode	Yes	No	No	No
Tool System	SENTINEL-LINK	No	No	No

Only waterproof, modular, avatar-capable humanoid robot on the market

Manufacturing

Facility

2,400 m² production center
Comuna Ciurila, Cluj County, Romania

Solar Power

200 kWp rooftop solar array

Capacity

450 units/year at full scale

Assembly

One universal line for all variants
12-stage production process

Investment

Total facility: €1,766,000

Unit Economics

Model	BOM	Sale Price	Margin
SENTINEL-WH	€17,555	€42,000	58%
SENTINEL-AG	€17,434	€40,500	57%
SENTINEL-MK	€49,953	€109,000	54%
SENTINEL-HM	€5,782	€18,900	69%
SENTINEL-D	€5,517	€9,800	44%

Blended COGS: €22,000/unit

Market Opportunity

Global humanoid robotics market: \$2.1B (2025) → \$38B (2035)

\$38B

Total Addressable Market
(TAM) by 2035

\$7.6B

Serviceable Addressable
Market (SAM)

\$760M

Serviceable Obtainable
Market (SOM)

Target: 2% market share by 2030

Financial Projections

Year	Units	Revenue	Costs	Net	Cumulative
2026	5	€0.2M	€5.5M	-5.3M	-5.3M
2027	80	€4.2M	€2.8M	+1.4M	-3.9M
2028	150	€8.5M	€3.1M	+5.4M	+1.5M
2029	280	€16M	€4.8M	+11.2M	+15.6M
2030	450	€29M	€7.2M	+21.8M	+37.4M

Total Year 1 investment: €5,500,300

Roadmap

2026 R&D

AI brain development, simulators, facility setup, first WH model ready by end of year

2027 FULL LAUNCH

All 4 models + accessories released, first deliveries, 80 units

2028 GROWTH

150 units, avatar v2, VR headset, international expansion

2029 SCALE

280 units, facility expansion to 5,000 m², hydrogen fuel cell prototype

2030 GLOBAL

450 units, global distribution, 2% market share, €380M trajectory

SENTINEL

The Future of Modular Robotics

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