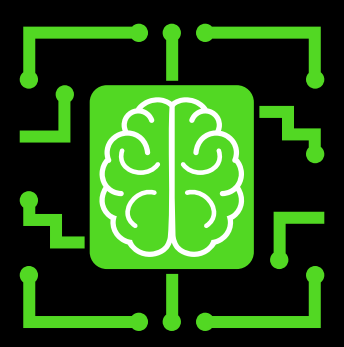




ambient
scientific

DIMENSION
NXG

GPX10 Pro Powers Continuous Safety Intelligence In The MAI Women's Wearable

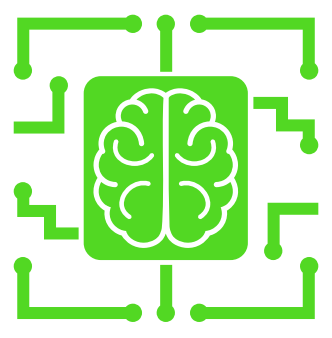
Always-ready fall and **Assault Recognition** with up to 14 days of battery life

DimensionNXG is an India-based deep-tech company building smart wearables, AI glasses and next-generation healthcare products. With MAI, the team set out to create a discreet women's health companion with a built-in safety layer.

MAI tracks everyday health signals such as heart rate and SpO2, builds personalized trends and surfaces early risk insights associated with PCOS and PCOD. In a critical moment, it can recognize a fall or assault pattern locally and initiate an alert without depending on continuous smartphone connectivity.

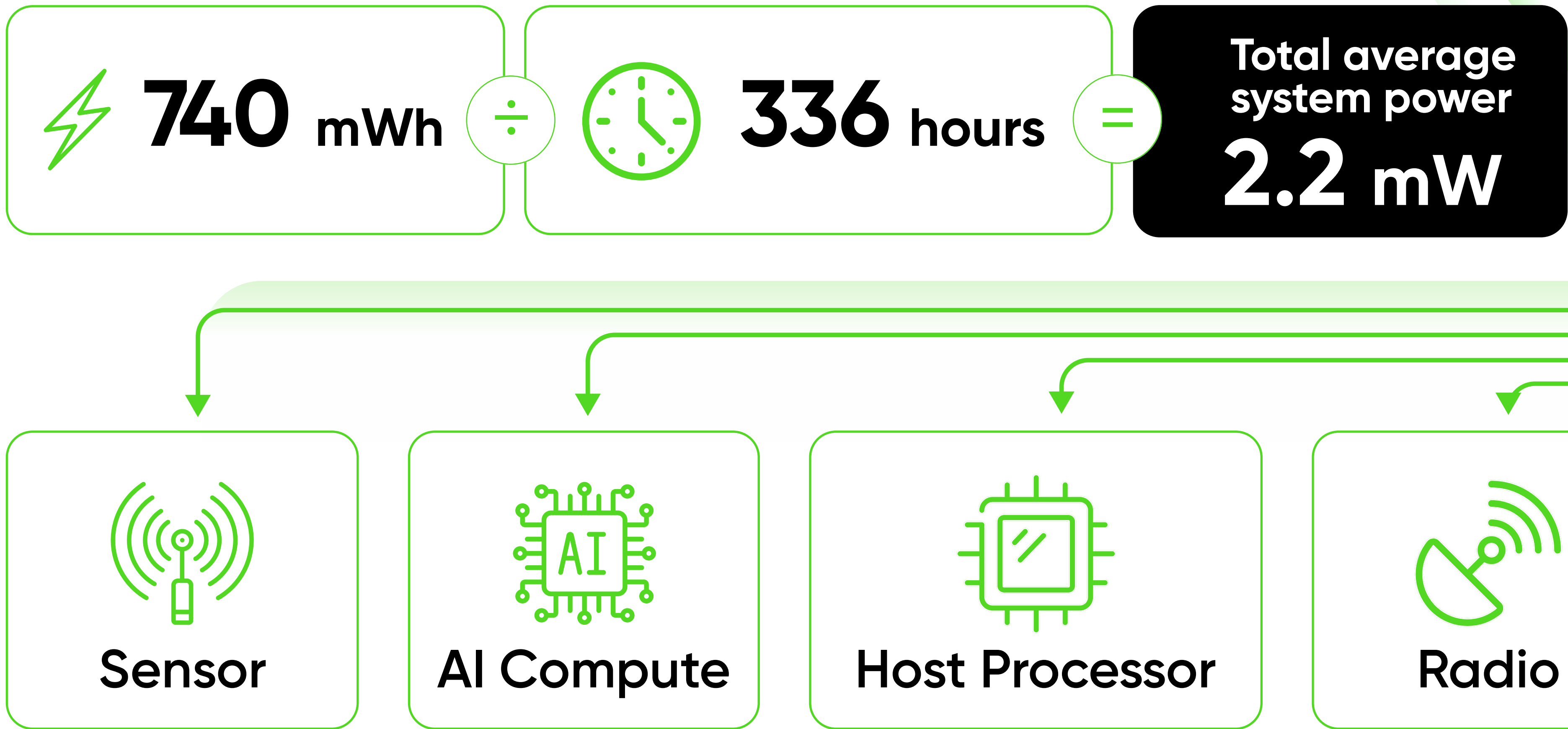
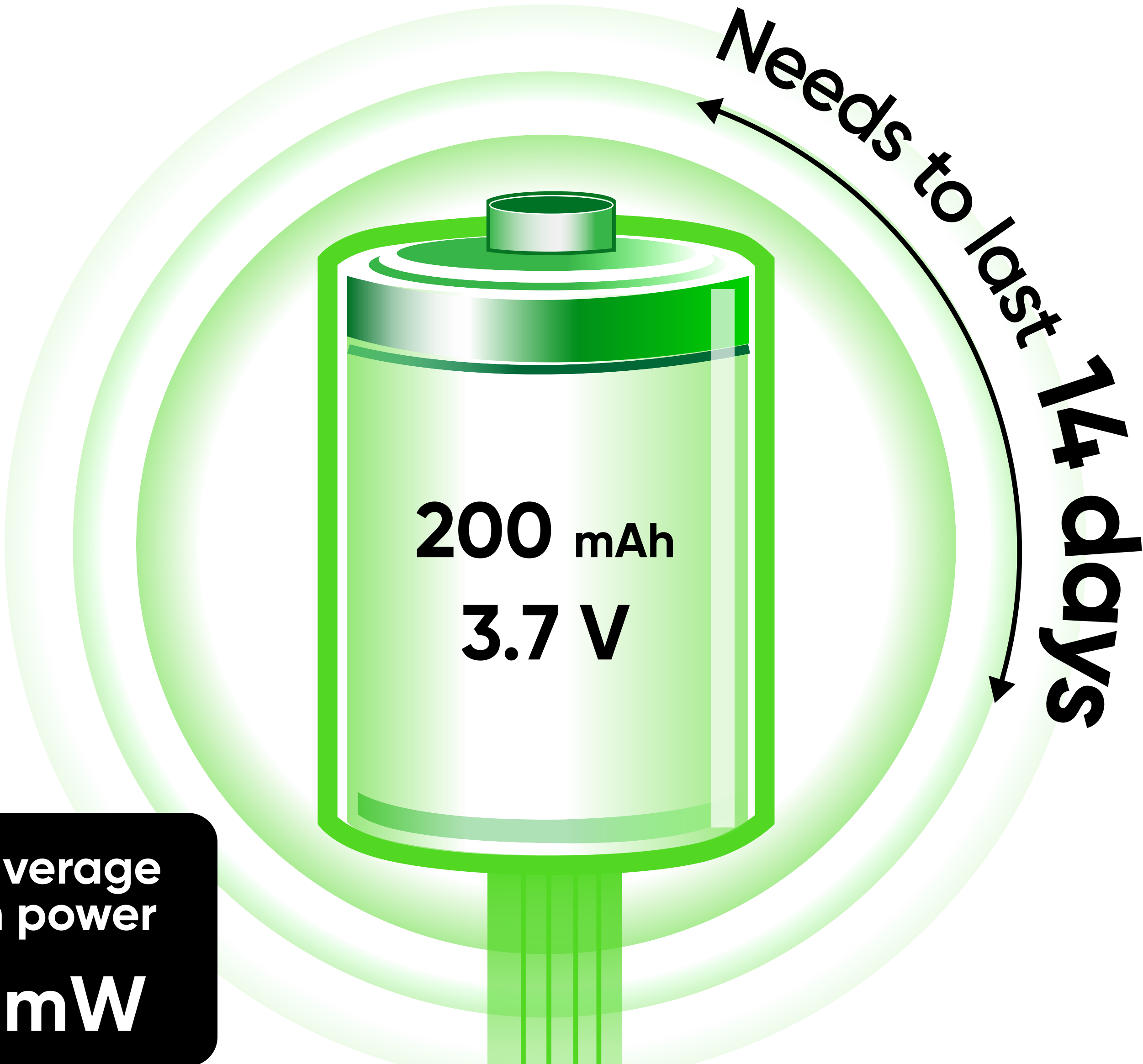


GPX10 Pro made that combination practical by keeping the first layer of intelligence active at microwatt power, then increasing sensing and compute only when the evidence justified it.

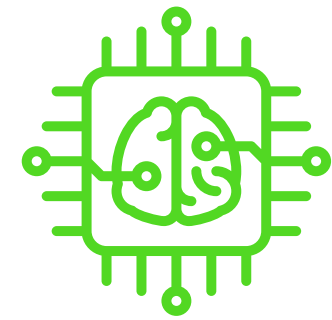


Fourteen Days Leaves No Room For Always-On Waste

A 200 mAh battery at 3.7 V stores approximately 740 mWh. Spread across 14 days, the complete product must average no more than 2.2 mW. Every sensor, memory access, compute cycle and radio transmission must fit inside that envelope.



Earlier MCU and BLE-centric approaches forced an unacceptable choice: process continuously and drain the battery, stream data to a phone and lose independence, or duty-cycle detection and create blind time.

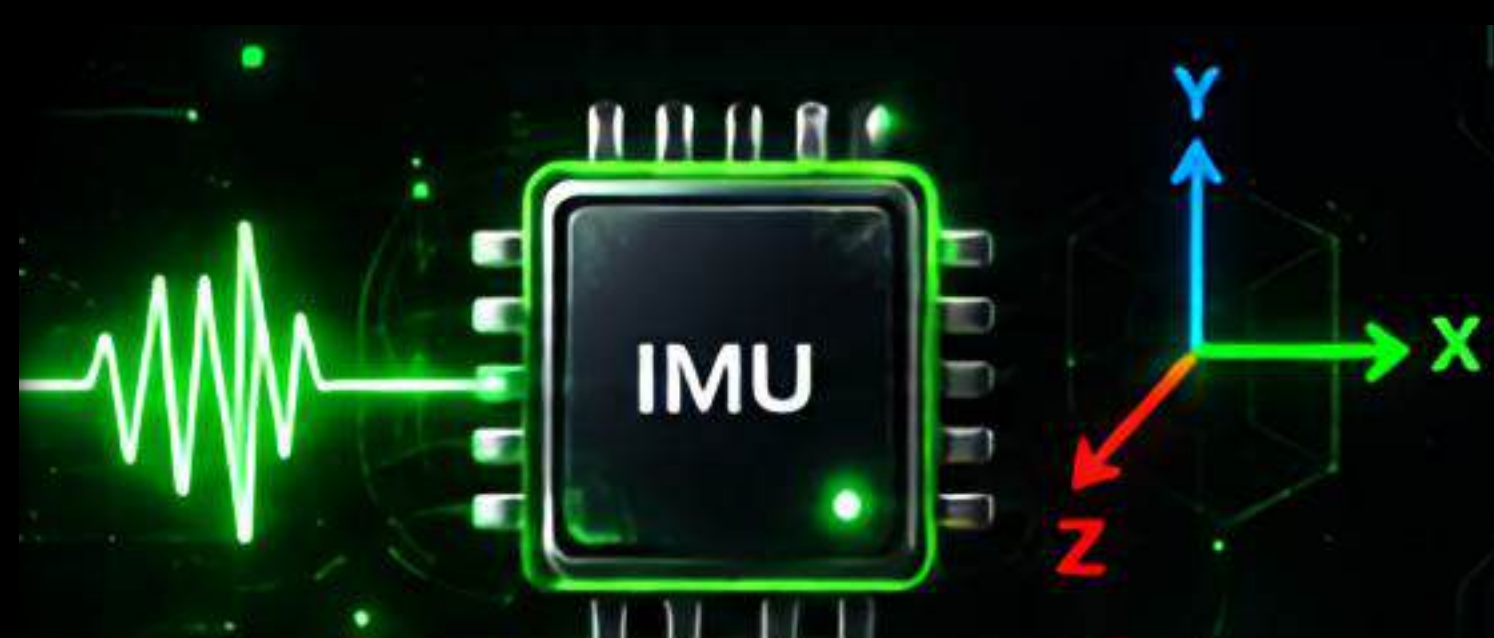
ARCHITECTURE APPROACH	FITS 2.2 MW BUDGET	AI STAYS ON DEVICE	CONTINUOUSLY AVAILABLE
 Always-on compute	× 15 mW	✓	✓
 Continuous BLE streaming	× 12 mW	×	× Phone-Dependent
 One second active in ten	✓	✓	× 90% Unobserved
 GPX10 Pro staged intelligence	✓ 0.2 mW	✓	✓

DimensionNXG needed continuous availability without continuous high-power operation.

Intelligence **Wakes In Stages**

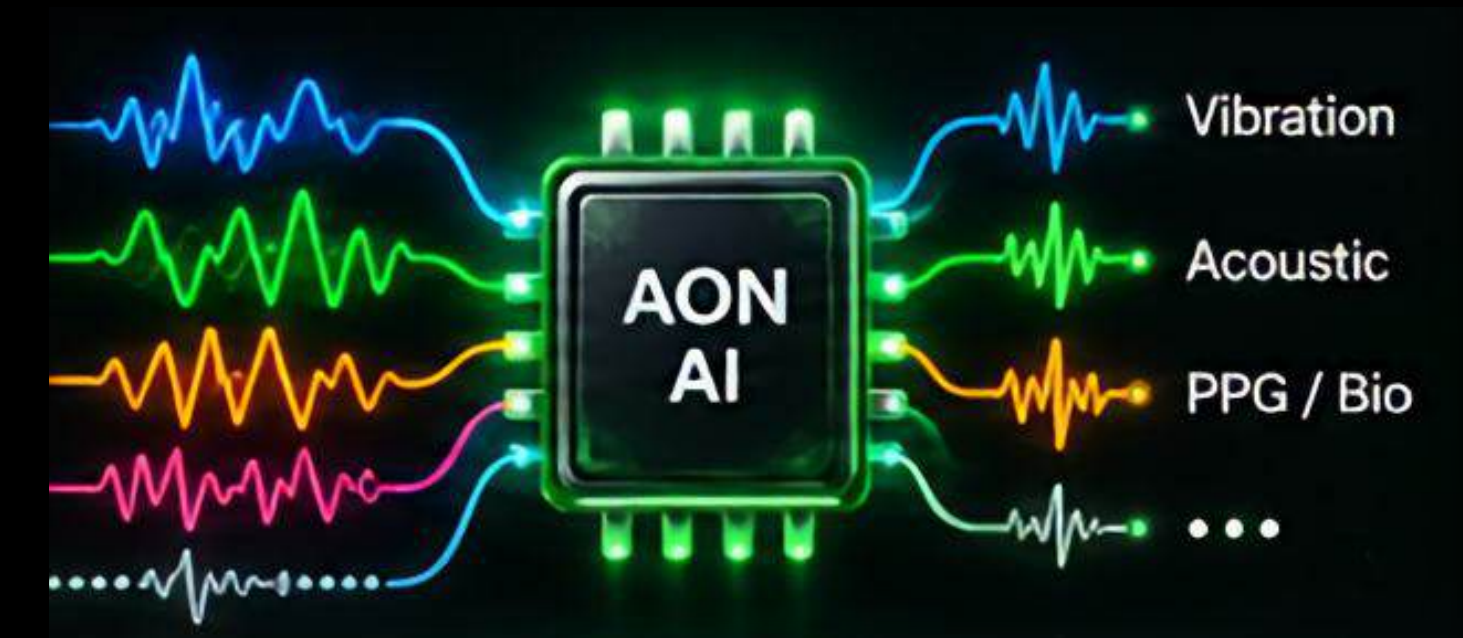
MAI does not keep every sensor, algorithm and radio active all the time. GPX10 Pro enables a staged intelligence pipeline that begins with the lowest-cost evidence and escalates only when confidence matters.

Less than 0.2 mW average for continuous detection and confirmation. Under a representative daily profile, MAI's motion and AI safety pipeline uses less than 10% of the 2.2 mW system power budget.



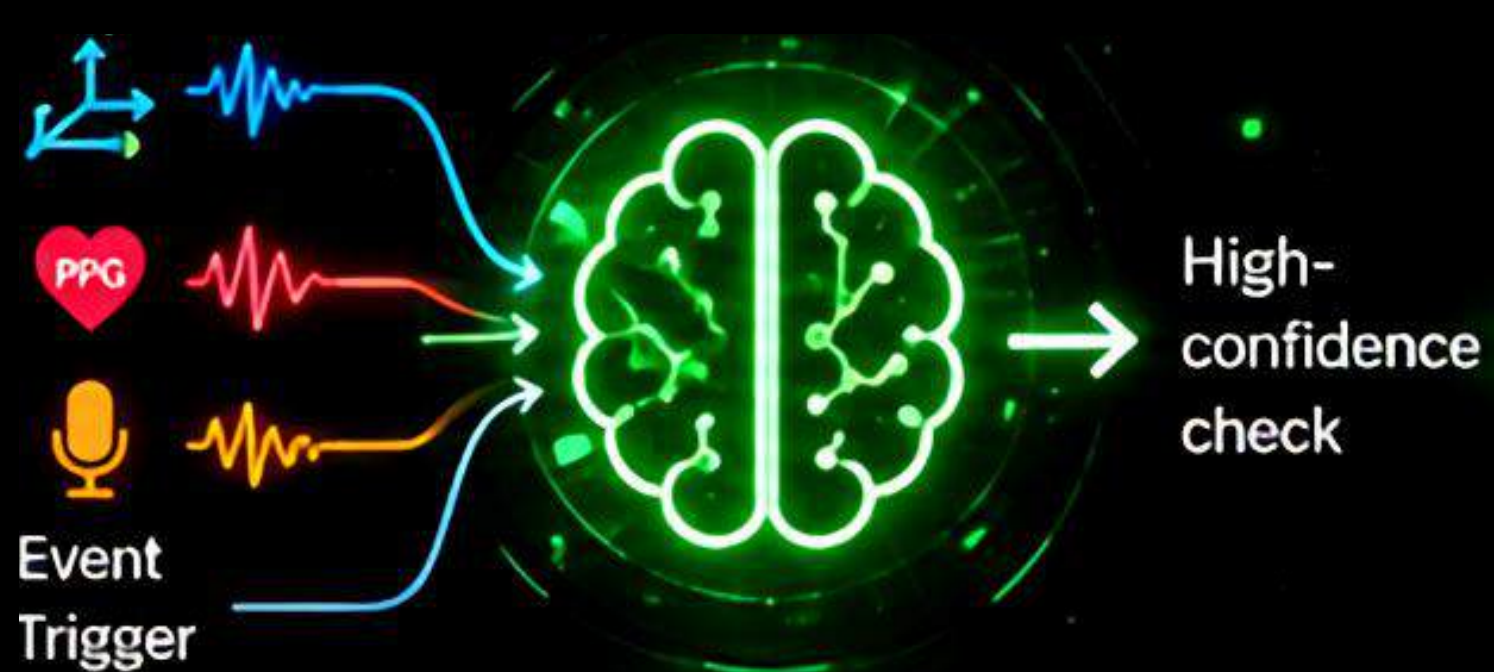
MOTION GATE | **AS LITTLE AS 15 μ W**

The accelerometer watches for meaningful movement. During extended inactivity, such as sleep, the AI pipeline remains off.



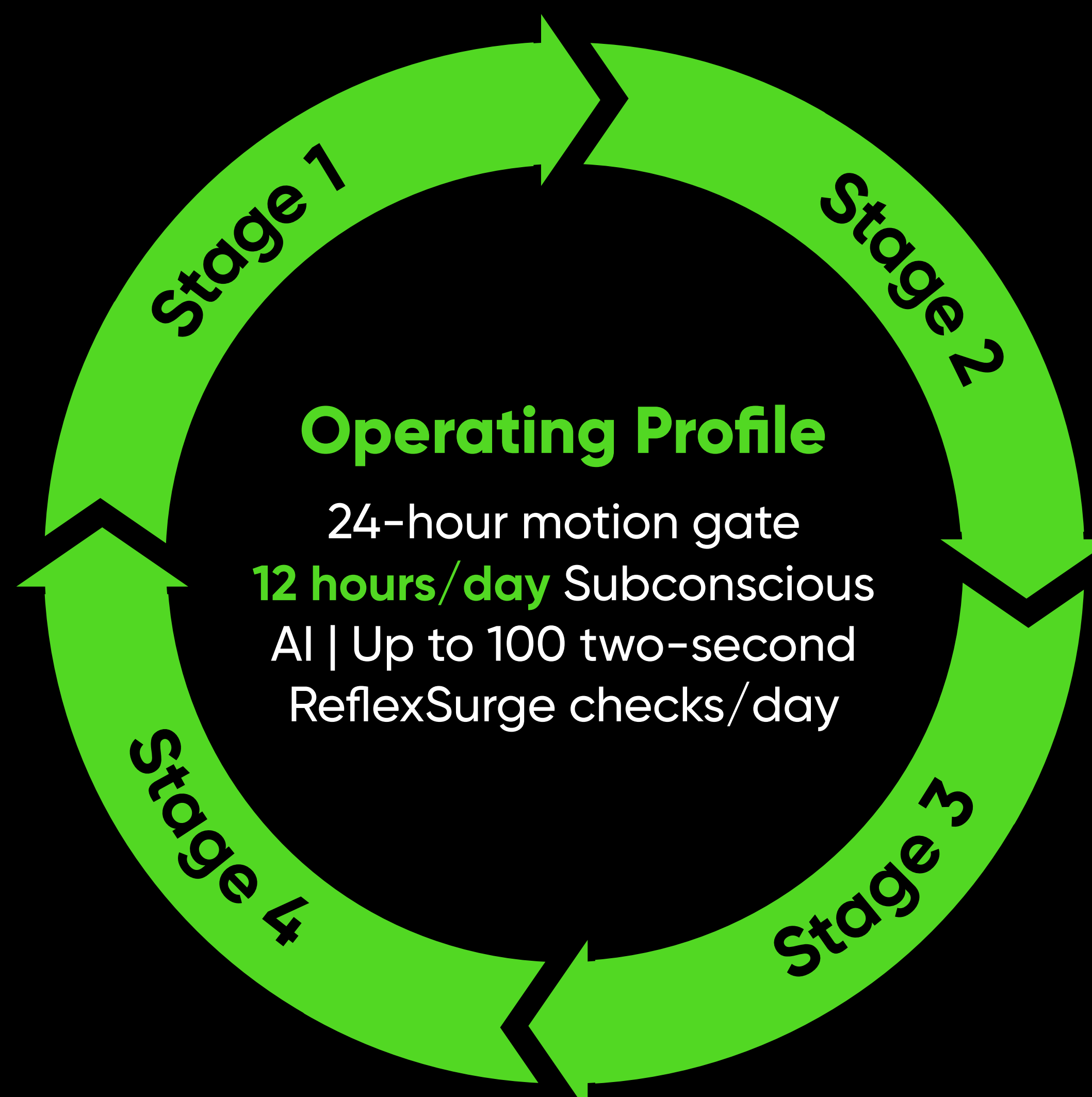
SUBCONSCIOUS AI | 300 μ W

Meaningful motion activates accelerometer-only fall and assault recognition. The wearable continuously looks for patterns that deserve closer examination.



ACT | SHORT RADIO BURST

Only a confirmed event triggers the user response and Bluetooth communication required to send the alert. The radio carries the decision rather than a continuous stream of raw sensor data.



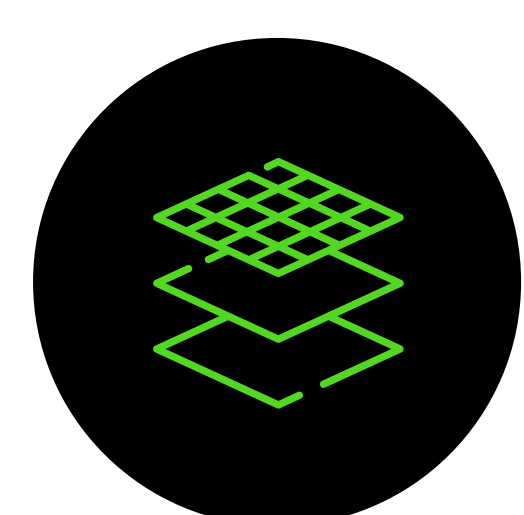
Instant escalation without reboot ↓



REFLEXSURGE | 4 mW

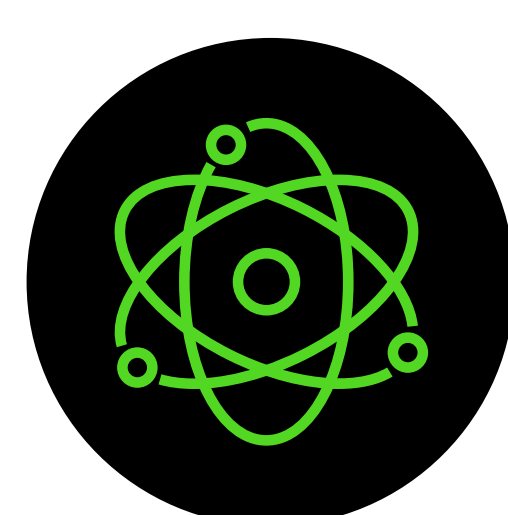
SenseMesh hardware fusion combines IMU, PPG and acoustic features for higher-confidence confirmation and fewer false alerts.

Why GPX10 Pro can stay always-on at 300 μ W



A-Cube architecture

minimizes inference energy by combining analog efficiency, digital precision and compute close to memory



Dynamic scaling

Dynamic voltage and frequency scaling activates additional compute only when the event requires confirmation



SenseMesh sensor fusion

Brings together motion, PPG and acoustic context when an event needs higher-confidence confirmation.



Continuous Protection Became A Product, Not A Power Trade-Off

The event-driven architecture gave DimensionNXG the efficiency and processing headroom to combine continuous safety features with a broader women's health platform. Detection remains local, while additional sensing and wireless communication activate only when the product has a reason to use them.

14 days from
200 mAh

>98% Fall and assault
recognition

Local & private
by default

//

Previous architectures forced us to choose between continuous intelligence and practical battery life. GPX10 Pro gave us the efficiency and performance headroom to keep safety intelligence on the wearable, use multiple sensors when confidence mattered and communicate only when action was required.

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— **Abhishek Tomar, CTO, DimensionNXG**

MAI SYSTEM SNAPSHOT

AI processor	GPX10 Pro with CubicCore analog and digital in-memory computing
Peak AI performance	512 GOPS
Motion gate	Movement detection consuming as little as approximately 15 μ W
Event-driven AI	300 μ W Subconscious AI with 4 mW ReflexSurge confirmation
Sensor fusion	IMU, PPG and microphone-derived acoustic features
Wireless and privacy	Bluetooth Low Energy 5.3 with local processing and event-driven communication
Battery result	200 mAh battery delivering 14 days of operation
Health capabilities	Heart rate, SpO2, personalized health trends and early PCOS and PCOD risk insights

Evaluate GPX10 Pro for your next product

Bring us your model, sensor configuration and battery target. Our team will help assess the fit and define the next evaluation step.

[Start a GPX10 Pro evaluation →](#)