Emerging Gen-AI Wearable Devices

Overview and Highlights

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Catherine Kalke

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Introduction

Briefing requested on the following Emerging Gen-AI devices:

- hu.ma.ne AI Pin
- Rabbit (LAM "rabbit OS" on the R1 device)
- Motorola Flex device

Summary

- Top Level message for each device
- DA View on the Emerging Trends
- Comparison of each device:
  - Platform Comparison
  - Software Comparison
  - AI Assistant Feature Comparison
  - Competitive Analysis
- Feature Trends in Gen-AI devices – DA view
- Privacy EULA Implications
- Next Steps
- Names of Additional New Gen-AI Wearables
- Intricate Details on Each Device

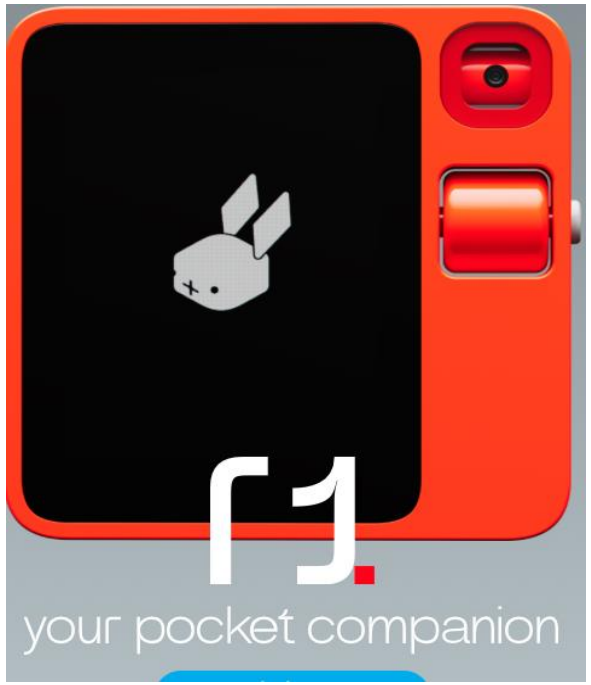
Emerging Gen-AI Device Highlights – Top Level

hu.ma.ne AI Pin

Main Purpose

Quick information access and communication.

Primary interaction is voice



Rabbit R1 Pocket Companion

Main Purpose – Productivity Assistant.

Task Oriented, interacts with digital services at the user's request.

Physical interaction is replaced with nuance-aware voice interaction.

Motorola Flex Device

Main Purpose

Extend user's personal style to the flexible form factor device (bendable and free standing)

Emerging Gen-AI Device Platform Comparison

Partner/Feature	hu.ma.ne	Rabbit	Motorola
Network	TMO LTE eSIM, Wi-Fi 802.11ac	Tethered Wi-Fi, Unlocked LTE SIM slot	Cellular and Wi-Fi
Privacy	Privacy chip for data encryption Trust Light	"agents" connect to 3rd party apps Personal information stored locally Vision and voice only runs when in use	Under NDA
Phone	Has Phone features, different UX • Visual interface projects directly onto hand • Outgoing Voice call initiated by tap gestures & voice commands • Incoming Voice call accepted with tap gesture	Has Phone features, different UX • Content focused interfaces ; simplified UI with majority of actions performed via voice commands • Physical Scroll Wheel • One-Handed Usage • Shake the device for the Phone Dialer screen and initiate an outgoing call • Incoming Voice call accepted using the touch screen or the push to talk button	Phone with normal UX
SMS/MMS	• Supports SMS/MMS • Outgoing SMS/MMS initiated by tap gestures & voice commands • Incoming SMS/MMS accepted and transcribed into voice and summarized by the AI Assistant • Incoming SMS/MMS projected also visually onto the hand for user to read	• Supports SMS/MMS using voice commands and a shake to type on keyboard feature • Has access to a normal phone texting UI but utilizes voice to interact with texting/calling	Under NDA

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Emerging Gen-AI Device Software Comparison

Feature	hu.ma.ne	Rabbit	MotoAI
Operating System	hu.ma.ne OS	Rabbit OS • Built for real time interactions • Teach Mode for the AI Assistant for ”personal preferences” Rabbit is doing beta testing on the Teach Mode	“Mya” Phone Personal Assistant
Large Language Model Processing	Cloud	Cloud	Under NDA
Laptop Control Center	hu.ma.ne Control Center Running on MacBook	Rabbit Hole Portal Running on MacBook	Under NDA
Natural Language Processing	Yes	Yes	Yes

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Emerging Gen-AI Device AI Assistant Features

Gen-AI Assistant Features		
hu.ma.ne	**Rabbit**	**MotoAI**

• Ask Anything
• Response to Search Questions
• Can instruct AI Pin to show on LED display what is in near proximity
• Supports Voice to Text messages
• Modify the personal tone of the audio messages sent
• AI Summarizer of Messages
• AI language translation
• Health and Nutrition
	• Large Action Model
	• Ask Anything
	• Response to Questions in Voice and Text within 500ms
	• Play Music on Request
	• Book a ride
	• Flight booking
	• Trip Itinerary
	• Teach Mode
	• Rabbit-Eye features:
	  • Find a recipe from a photo of ingredients
	  • Object identification
	  • Price locator
		• Conversational Interactions
		• Smart Vision
		• Contextual actions
		• Life management
		• Intelligent performance
		• Self-improvement features
		• Smart Capture
		• Smart Photo Editing
		• Generative Themes
		• Notification AI
		• AI Summarizer

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Emerging Gen-AI Device Competitive Analysis

hu.ma.ne Pin	Rabbit R1	Moto AI Flex
Purpose built		Reaches across all devices
AI Assistant task-oriented productivity device		Enhances individual personality
	MotoAI is closest to Rabbit in the “assist” features and the rapid processing times from intent to action	
	The Rabbit R1 Eye is a big feature.	
	The Rabbit R1 is currently closest to the idea of an intelligent Gen-AI Assistant	
The hu.ma.ne Pin is heavy on interaction capabilities. Appears to be broad based.		
		The MotoAI Flex Device is niche focused. It is not a Gen-AI wearable device.
		The MotoAI Flex Device is PoC only and may not be introduced as-is commercially

Emerging Gen-AI Device Trends

The following feature trends were observed from the review of the three devices under study:

- **Differentiation through power or domain** via unlimited or purpose-specific offboard AI (device is a portal to Gen-AI and other AI bounded only by network speed and cloud power)
- **Cross-platform transfer across multiple AI devices**
- **Differentiation through form factor** as shaped by UI model and local/cloud dependency
- **New neural, learning, and interaction models** (as opposed to programmer-created functional APIs, apps, and resulting unnatural UX)
- **Privacy tension where insight implies less privacy:** Suggestions of on-device privacy and local processing often defeated by open-ended EULAs or "agree or else".
- **Onboard AI (neural engine is entirely located in the device) is finite but still useful** to enhance UI and local functions (Gen-AI to some degree such as chat autoreplies or image modification, but also lots of routine AI such as speech/writing/intent recognition)

Proposed Next Steps

1) Gauge interest in receiving a hands-on analysis of each device:
    - hu.ma.ne Pin
    - Rabbit R1 pocket companion square puck
2) DA to evaluate specific requirements and tests applicable to the certification of Wearable Gen-AI devices for operation on AT&T's network:
    - Example #1: AT&T e-SIM capability is added to the hu.ma.ne and Rabbit devices
    - Example #2: ADAPT for On-device AI chipset families for integration into AT&T Gen-AI Wearables

Additional Names of Emerging Gen-AI Wearables

Samsung Galaxy Ring wearable watch – announced at MWC

Smart Glasses coming on the market – like Ray Ban, Google

Tab AI pendant necklace (personal pattern observer, behavior coach, and verbal interface to services) made by Avi Schiffmann.

Tiny voice-only insight-providing BT pendant

Tab (Preorder Edition) **$600.00**
Tab is a wearable AI companion by Avi Schiffmann.
Shipping 2024, your order includes 1 Tab preorder
(batch 2) edition device and 1 year access.

Alexa is incorporating AI Assistant features

Appendix

Intricate Details on Each Device

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hu.ma.ne AI Pin Highlights and Features - 1

Personal AI Assistant features:

- Standalone device and software platform built for AI
- Runs on a Snap Dragon platform SM7125 with Qualcomm AI Engine
- Dedicated Hu.ma.ne operating system which runs AI Experiences stored on the device and the cloud
- Supports a Hu.ma.ne control center application which is managed by the user on the laptop
- AI Pin Does not support Apps
- Pin = Computer + Battery Booster
- Can swap out the battery booster when needed
- Perpetual battery system
- Comes in three colors (clips, equinox, and lunar)
- Touch interface activated by touching the Pin or hand flex
- Personic speaker – can be loud or intimate
- Trust Light with privacy chip for data encryption
- Any unauthorized tampering with the AI Pin will lock the device and require hu.ma.ne to restore operation
- Ultra wide RGB Camera

ai pin

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hu.ma.ne AI Pin Highlights and Features - 2

Personal AI Assistant features:

- Beacon for message notification from trusted contacts as they become available
- Right AI in the moment
- AIs are streamed in the moment and at the speed of light
- Partnered with Title for music content
- Can instruct the AI Pin to play specific music i.e. Prince
- Projects laser display on human hand
- Can rotate through screens using thumb/index finger taps
- Can use Bluetooth headphones

Pricing and Availability:

- Available as of Jan 2024
- Retail $700
- Monthly subscription includes T-Mobile plan

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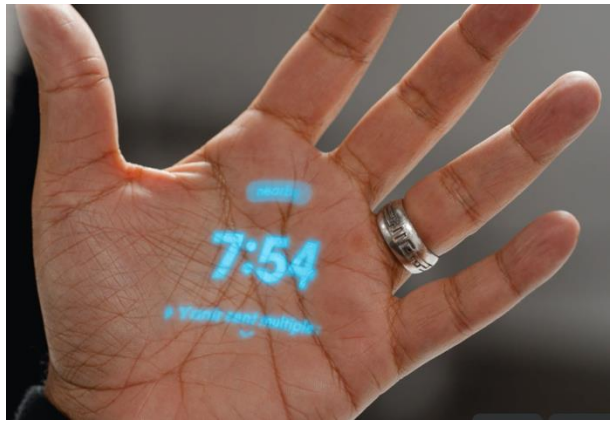
hu.ma.ne AI Pin Highlights and Features - 3

Personal AI Assistant features:

- Can search and report restaurant recommendations
- Can instruct AI Pin to show on LED display what is in near proximity
- Can instruct AI Pin to perform a search and return output
- Supports Voice to Text messages
- Can modify the personal tone of the audio messages sent
- Can play out collected messages by voice
- Can instruct a search through collected messages (i.e. gate code that Andrew sent)
- AI language translation – can translate spoken audio from Spanish to English
- Health and Nutrition –
  - Can report on the nutrition content of foods and how much protein consumed today
  - Can scan a physical product and report back on the name of the product

hu.ma.ne AI Pin Highlights and Features - 4



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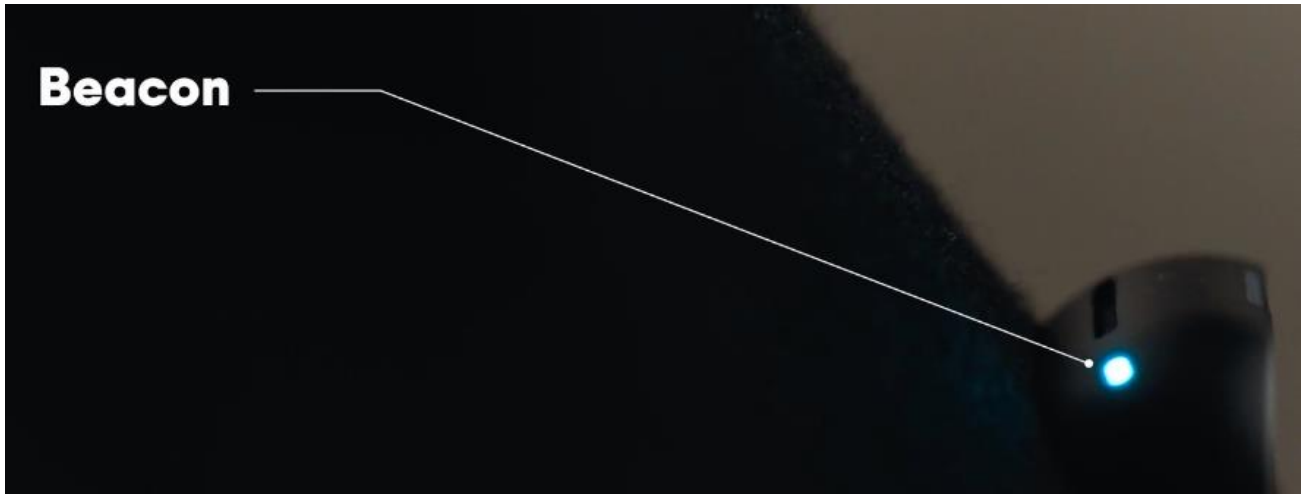
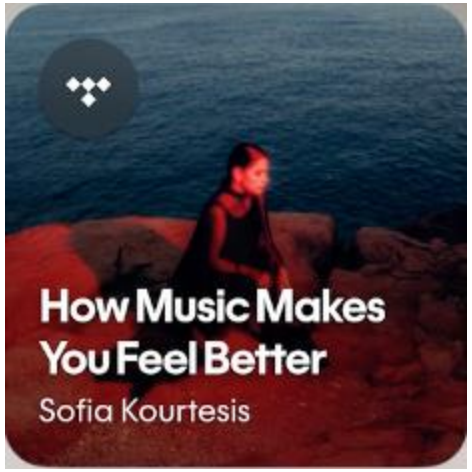
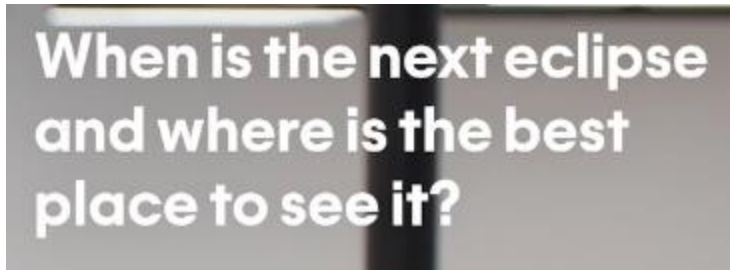
hu.ma.ne AI Pin Highlights and Features - 5







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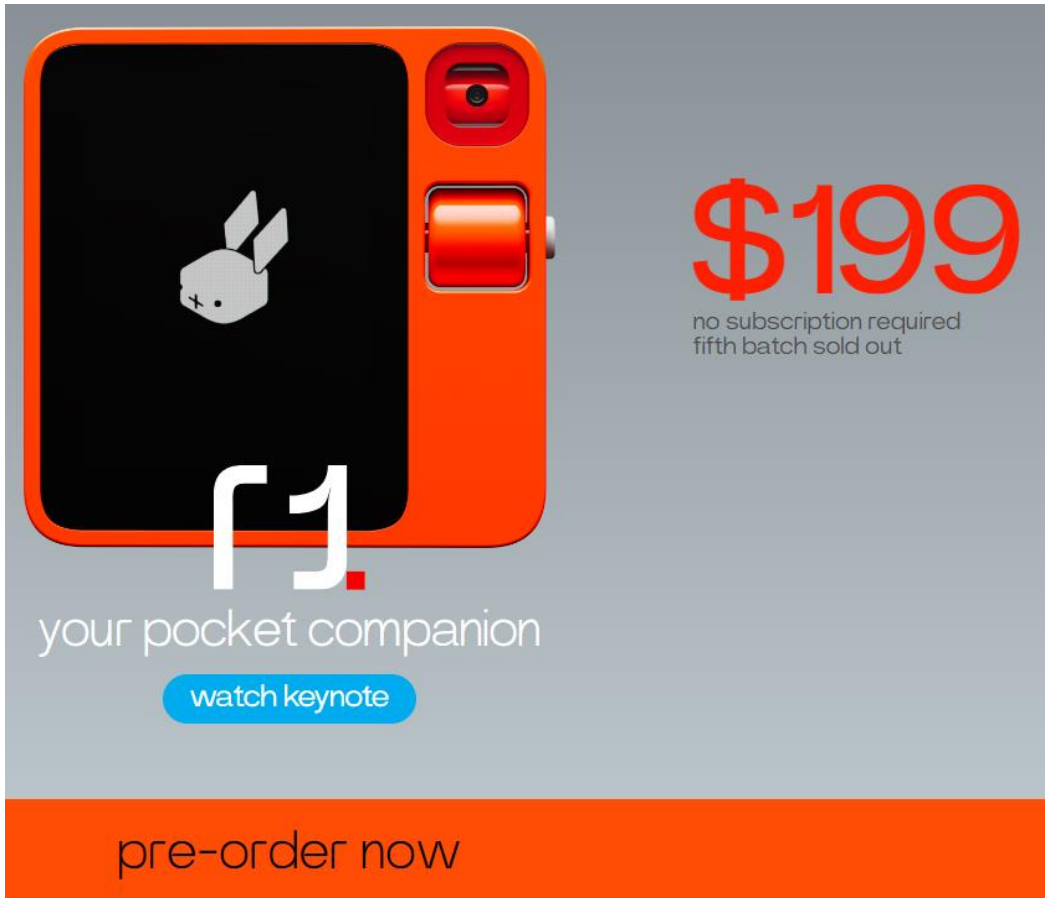
Rabbit R1 Highlights and Features - 1

Rabbit R1 (prototype)

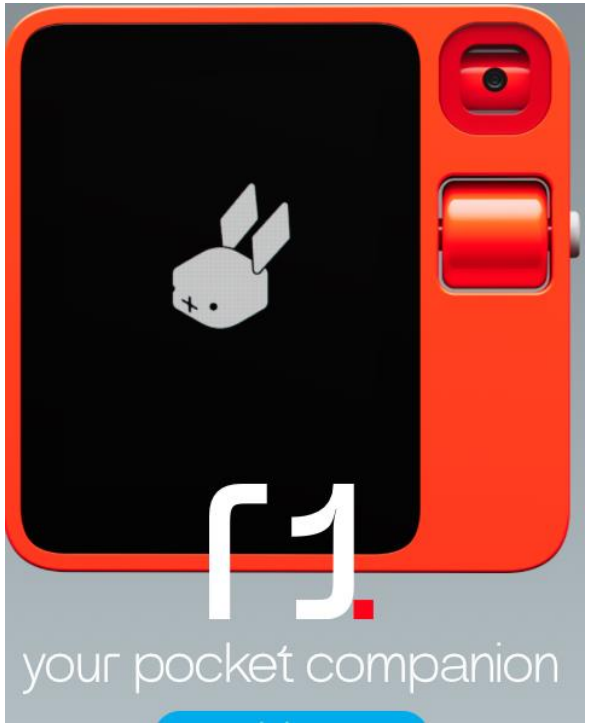
- 2.88" touchscreen
- Push to Talk UI button
- Scroll wheel for "card" interaction
- Far-field dual mic array, speaker
- GPS, accel/gyro
- 360-degree front/back rotational camera, 8MP (3264x2448, 24fps 1080p)
- BT5, 2.4/5GHz Wi-Fi, 4G LTE
- 2.3 GHz MediaTek MT6765 Helio P35 processor
- 4GB memory, 128GB storage
- USB-C
- Unlocked SIM slot
- No subscription



Rabbit R1 Highlights and Features - 2

Rabbit OS

- Goal is to replace physical interaction (and UI design, app coding, APIs) with nuance-aware voice interaction (AI Q&A seems solid)
- Abandons disjoint discovery and execution, each laden with granular user actions
- Steps back from models anchored in spoken/written language and builds around neuro-symbolic techniques.
- AI agent learns spoken intentions through observation, Large Action Model relates those to app interactions, and eventually exercises actions on cloud app instances without need for local apps.
- Cloud apps will include popular standalone apps in music, maps, shopping, rideshare, travel, etc. Rabbit OS extends behavior across platforms



Rabbit R1 Highlights and Features - 3

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MotoAI Highlights and Features - 1

MotoAI Flex Device

- Motorola Active Display : 6.9-inch pOLED Display
- TBD, but resolution is greater than 1080p
- Able to bend into multiple stand modes; when bent, it will be a 4.6” display
- Wrap the device around your wrist and wear it like a smart watch
- The bendable phone concept is a form factor [disruptor concept device](),

MotoAI Highlights and Features - 2

MotoAI

The MotoAI concept is an innovative approach to the latest trend in AI with large language models (LLMs). Users can engage with their personal MotoAI assistant to answer questions, draft messages, schedule tasks, and so much more. While most LLMs run cloud-based operations, MotoAI can process data and run tasks locally on-device. which offers users enhanced data privacy. MotoAI also features an on-device knowledge base where the user's patterns and preferences inform their experience, making it more dynamic, personal, and helpful over time.

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MotoAI Highlights and Features - 3

motorola

2023

INTRODUCING AI PERSONAL ASSISTANT... MYA

Mya is simple but distinctive with a fun personality and is assistive in your daily activities

Conversational interactions – responding to questions and commands in a fluid and personable manner

Smart vision – augments the user's vision and aids in understanding their environment

Contextual actions – surfaces relevant actions or suggestions at the moment

Life management – stays on top of daily demands and helps the user know what's important when they need to know

Intelligent performance – takes care of trusted devices and easy ways to improve usage and performance

Self improvement – helps the user be the best version of themselves

Use cases details

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Information Sources

Hu.ma.ne
https://hu.ma.ne/aipin
https://www.xda-developers.com/humanes-ai-pin-isnt-the-future-of-computing/
https://www.qualcomm.com/news/releases/2024/02/qualcomm-continues-to-bring-the-generative-ai-revolution-to-devi

Rabbit
rabbit — introducing r1, a pocket companion that moves AI from words to action
rabbit — rabbit os
https://www.rabbit.tech/research
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Rabbit announcement

Jan 9, 2024 (25min)

MotoAI
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https://motorolanews.com/motorola-redefines-what-is-possible-with-ai-and-adaptive-display-devices-at-lenovo-tech-world-23/
https://www.oled-info.com/motorola-demonstartes-new-bendable-phone-concept-based-lgd-poled-display

AI Pendant Necklace – Avi Schiffmann
https://www.fastcompany.com/91007630/avi-schiffmanns-tab-ai-necklace-has-raised-1-9-million-to-replace-god