



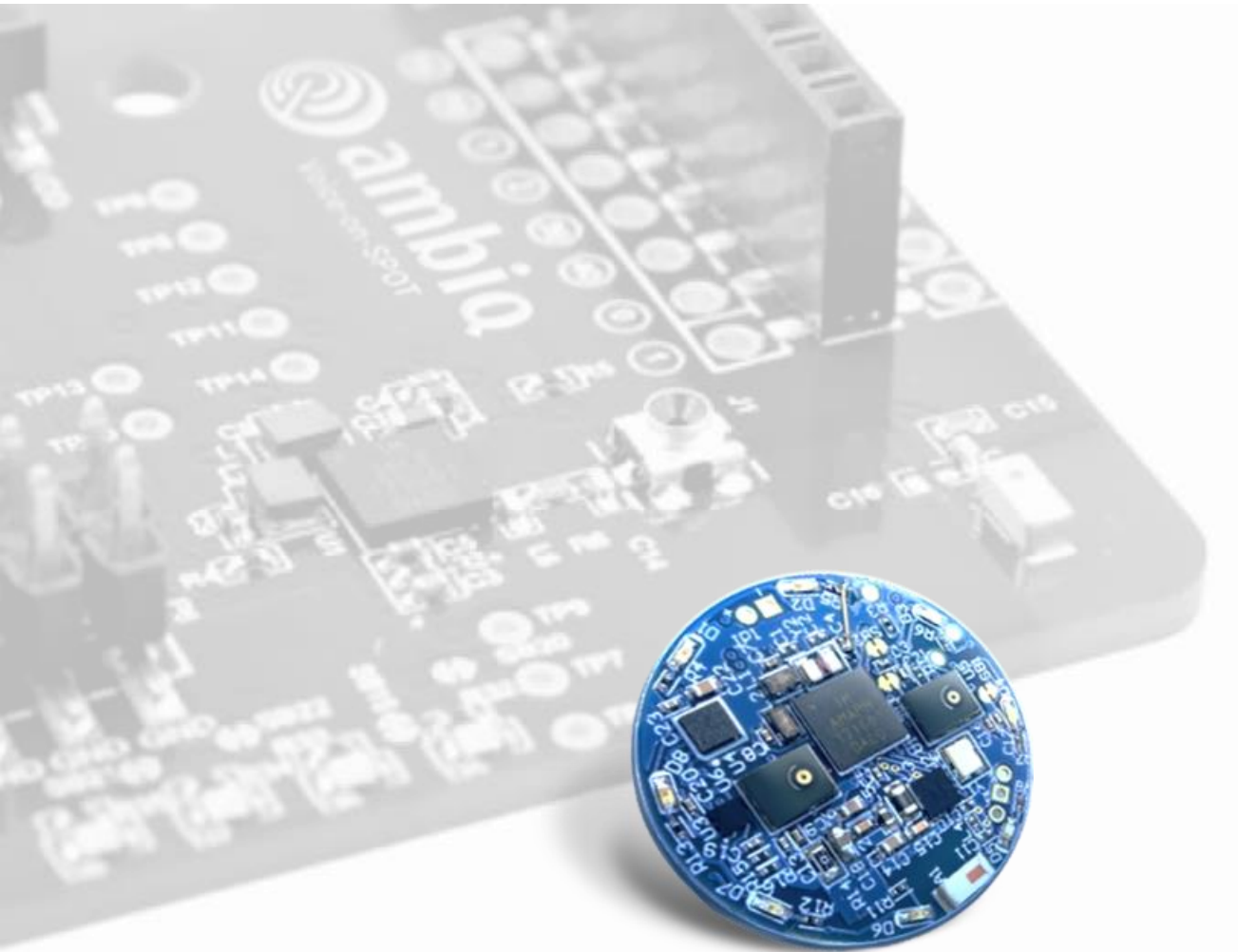
endpoint intelligence

Ambiq Makes Endpoint AI Possible

Jason Guo / 郭君
FAE Director



The World's Most Energy Efficient Solutions



- Founded in 2010 to provide ultra-low power solutions for the IoT
- Unmatched **ultra-low power** timing products, MCUs, and wireless SoCs
- Core technology (SPOT™) based on sub-threshold circuit operation
- **Sustained 2x** revenue growth
- SPOT technology to further increase growth by dominating **endpoint AI**

Equal-Footing on the World Stage with Industry Giants



TSMC

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Thank you to all the attendees for joining the live stream of [TSMC](#) CEO C.C. Wei's keynote at TSMC North America Symposium today. C.C. emphasizes that TSMC will continue to partner with our customers to unleash innovation that is both powerful and power efficient.

Special thanks to Lisa Su, President and CEO of [AMD](#), Cristiano Amon, President and CEO-elect of [Qualcomm](#), and Scott Hanson, Founder and CTO of [Ambiq](#). Their innovation plays a crucial role in this era of digital transformation.

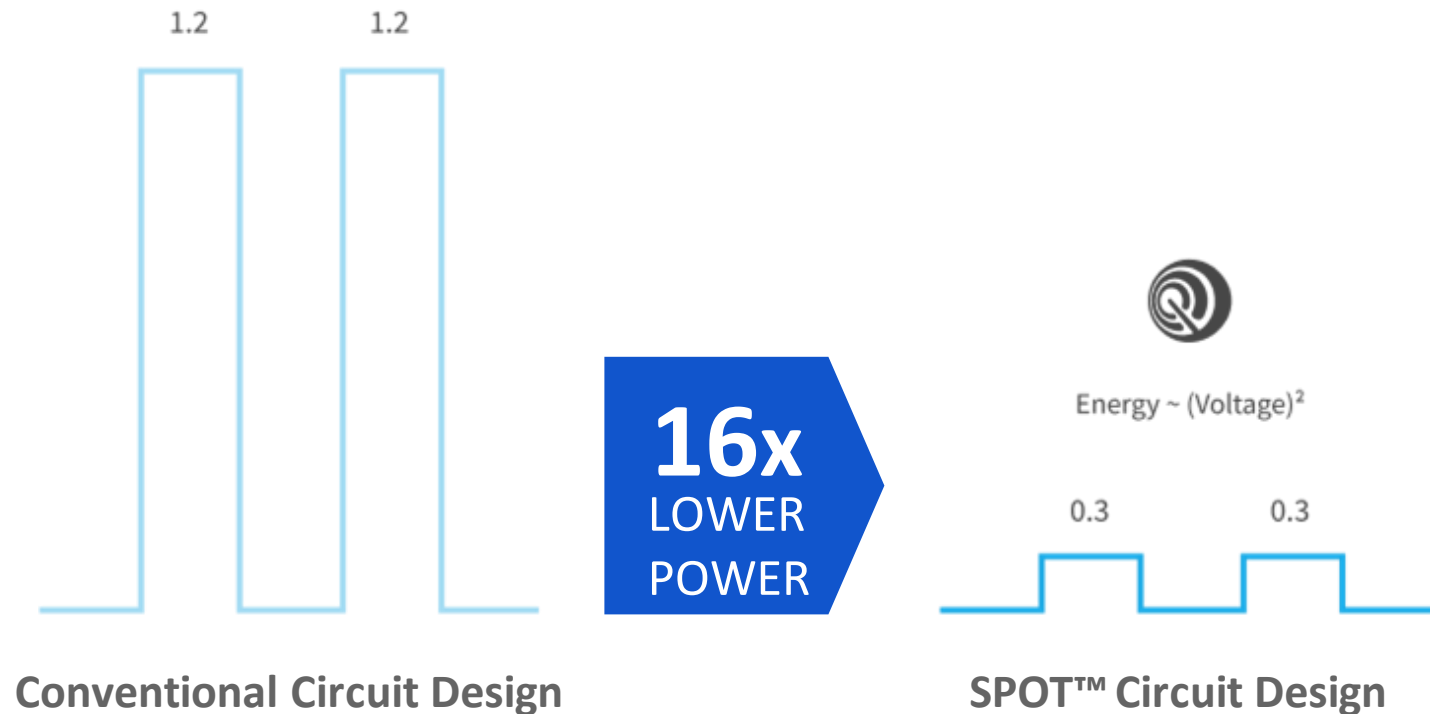
Stay tuned for TSMC Europe and Asia Technology Symposium which will be live in a few hours!

[#TSMC2021Symposium](#) [#semiconductor](#)



Ambiq's SPOT Circuit Platform Solves Fundamental Physics Problems

Subthreshold Power Optimized Technology (SPOT™)



TRUSTED &
PROVEN

>100M units shipped

UNIQUE & DISRUPTIVE

>50 blocking patents

TRUSTED & PROVEN

2x sustained revenue growth

Ambiq Product Comparison

	Apollo3 Blue Plus	Apollo4 Blue	Company N	Company S	Company N	Company S	Company D	Company S	Company C
MCU Freq	Up to 96MHz	Up to 192MHz	Up to 200MHz	Up to 160MHz	64MHz	64MHz	96MHz	120MHz	150MHz
MCU	32-bit ARM Cortex-M4F	32-bit ARM Cortex-M4F	32-bit ARM Cortex-M33 + DSP	32-bit ARM Cortex-M33	32-bit ARM Cortex-M4F	32-bit ARM Cortex-M4F	32-bit ARM Cortex-M33	32-bit ARM Cortex-M4F	32-bit ARM Cortex-M4F
MCU Power	6uA/MHz	4uA/MHz	35uA/MHz	30uA/MHz	52uA/MHz	53uA/MHz	95uA/MHz	47uA/MHz	101uA/MHz
Flash/NVM	2MB	2MB	-	2MB	1MB	1MB	NONE	2MB	2MB
SRAM	768KB	1.8MB	5MB	768KB	256KB	256KB	512KB	640KB	288KB
Graphics	-	2.5D GPU	2D GPU	-			-	2D-lite DMA	-
Display	SPI/QSPI	SPI/QSPI MIPI DSIx2 4-layer Display Controller	MIPI-DSI LCD	Parallel	SPI/QSPI	SPI/QSPI LCD	SPI	MIPI-DSI LCD	SPI/QSPI LCD
Audio	Mono/Stereo PDM mic inputs	4xStereo PDM 2xLP analog	Mono/Stereo PDM mic inputs	2x 16ch Serial Audio	Mono/Stereo PDM mic inputs	3xStereo PDM	Mono/Stereo PDM mic inputs	2xStereo PDM mic inputs	Mono/Stereo PDM mic inputs
Comms	BLE5	BLE5.1	NONE	NONE	BLE5 / 802.15.4	BLE5 / 802.15.4	BLE5.1	NONE	BLE5

SPOT Has Brought Intelligence to > 100M Battery-Powered Endpoint Devices

>100M

Largest US Wearable Brand

Global Apparel Brand

Largest Japanese Wearable Brand



荣耀手环6
新潮 更大视界

1.47" 臻彩大屏 | 两周续航* | 心脏健康管理*

HONOR



realme



Goertek



OURA



SONY



PELTON



Google TensorFlow



MASIMO



SUUNTO



CloseBy Card



Whistle



AcBel



BYTON



CLOUD DX



nedap



IDEMIA



iottie



HORN



VALENCCELL



FOSSIL



CITIZEN





endpoint intelligence



Wearables



Fitness Bands



Hearables



Smart Watches



Child Watches

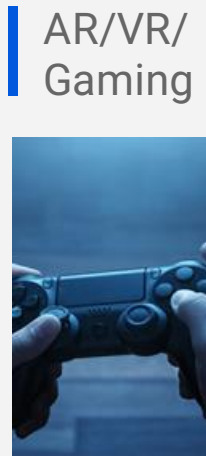
Smart Home



Security



Smart Speakers



AR/VR/
Gaming

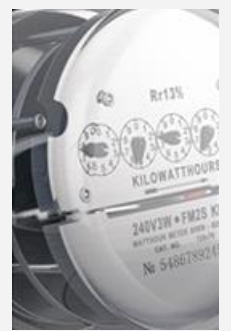


Remote Controls

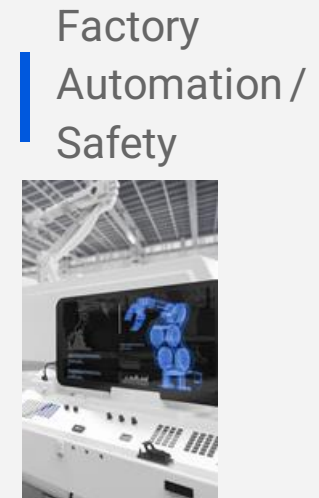
Smart Industrial



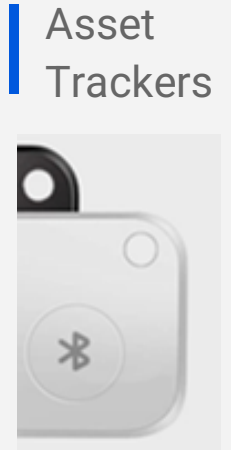
Preventive Maintenance



Metering



Factory Automation / Safety

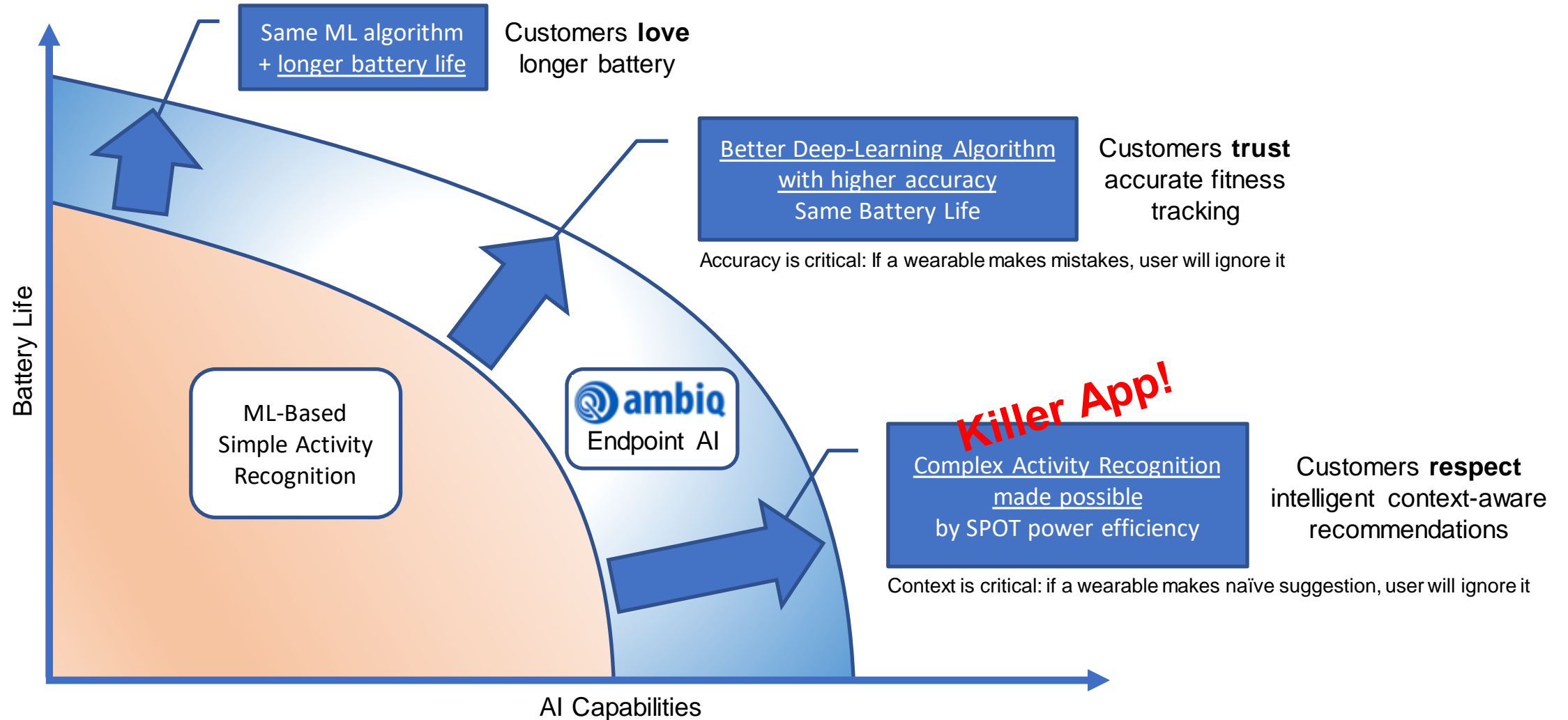


Asset Trackers

Artificial Intelligence Unable to Reach 10s of Billions of Endpoints



Example: SPOT Enables Better Fitness Activity Recognition



Building a *Complete* Solution for 100B Intelligent Endpoints

**SW
Platform**

AI Suite

Tensorflow Lite for Microcontrollers
Power-Optimized Model Zoo
AmbiqSuite AI Integration
Compiled Model Support

Wireless
(BLE, BT, WiFi, etc.)

Security

Graphics

Build Out

**HW
Platforms**



AI-Enabled Product Family

Expand

SPOT



Innovate



Thank You!