Azure Sphere

La sicurezza per l'intelligent edge con le 7 proprieta' dei Device Altamente Sicuri

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Chi sono

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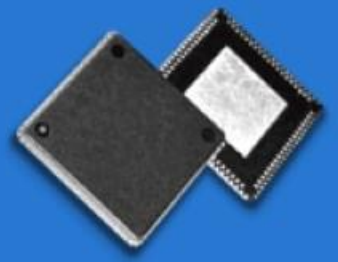
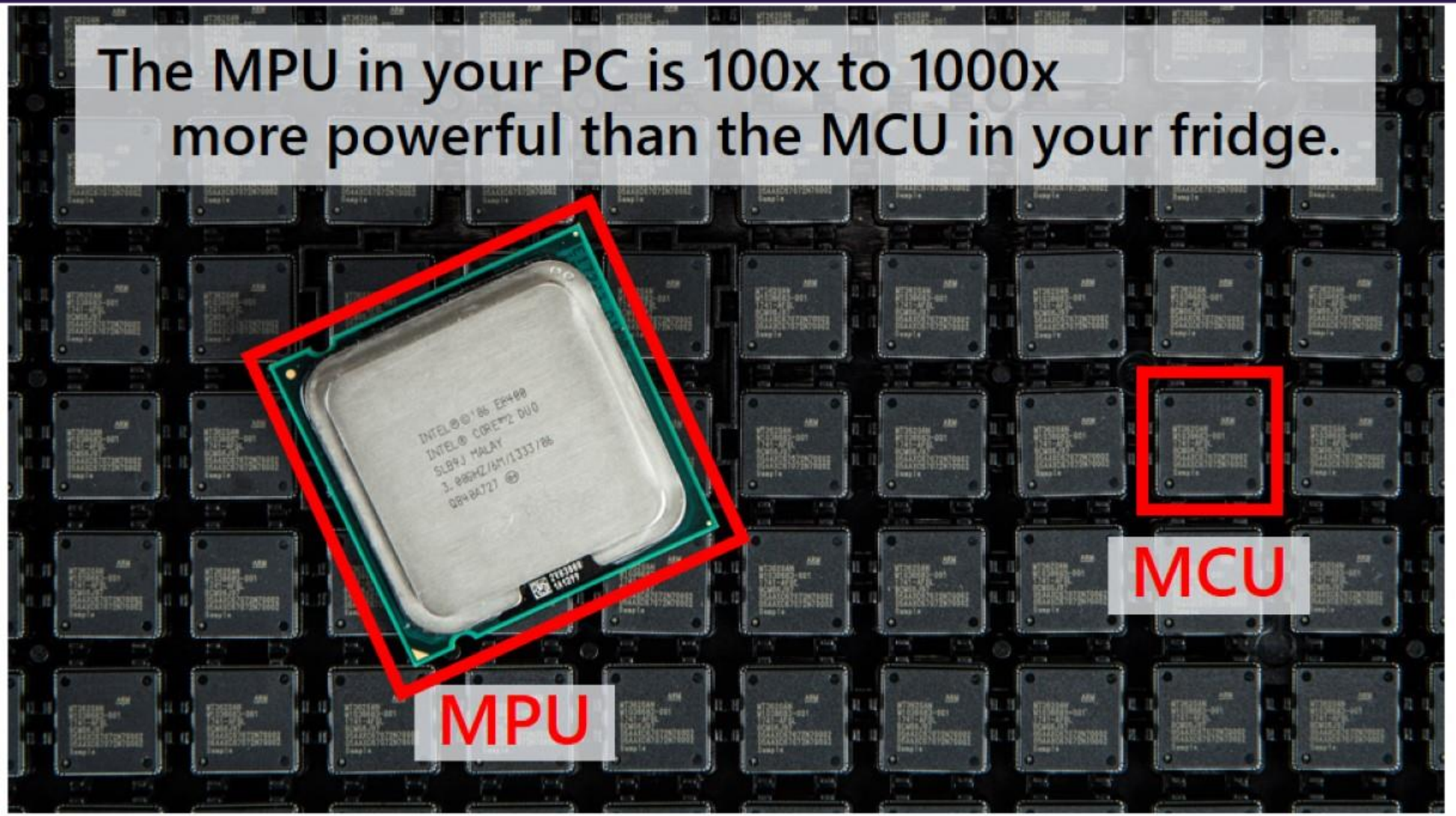
The microcontroller (MCU)
a low-cost, single chip computer



9 BILLION new MCU devices built and deployed every year


The MPU in your PC is 100x to 1000x
more powerful than the MCU in your fridge.
MPU
MCU

Connected MCUs will change your customer relationships

How does a consumer know the compressor in their fridge needs to be replaced?

Option 1	Option 2
Melted ice cream	Predictive maintenance

Connected devices create **profoundly better** customer experiences.

And, expose your business to unequalled risks…

Observations on October 21, 2016 Botnet Attack

Device security is a socioeconomic concern

Day 1 the attack is **Technology** headline in NY Times
Day 2 the attack is **Politics** headline

The attack exploited well-understood weaknesses

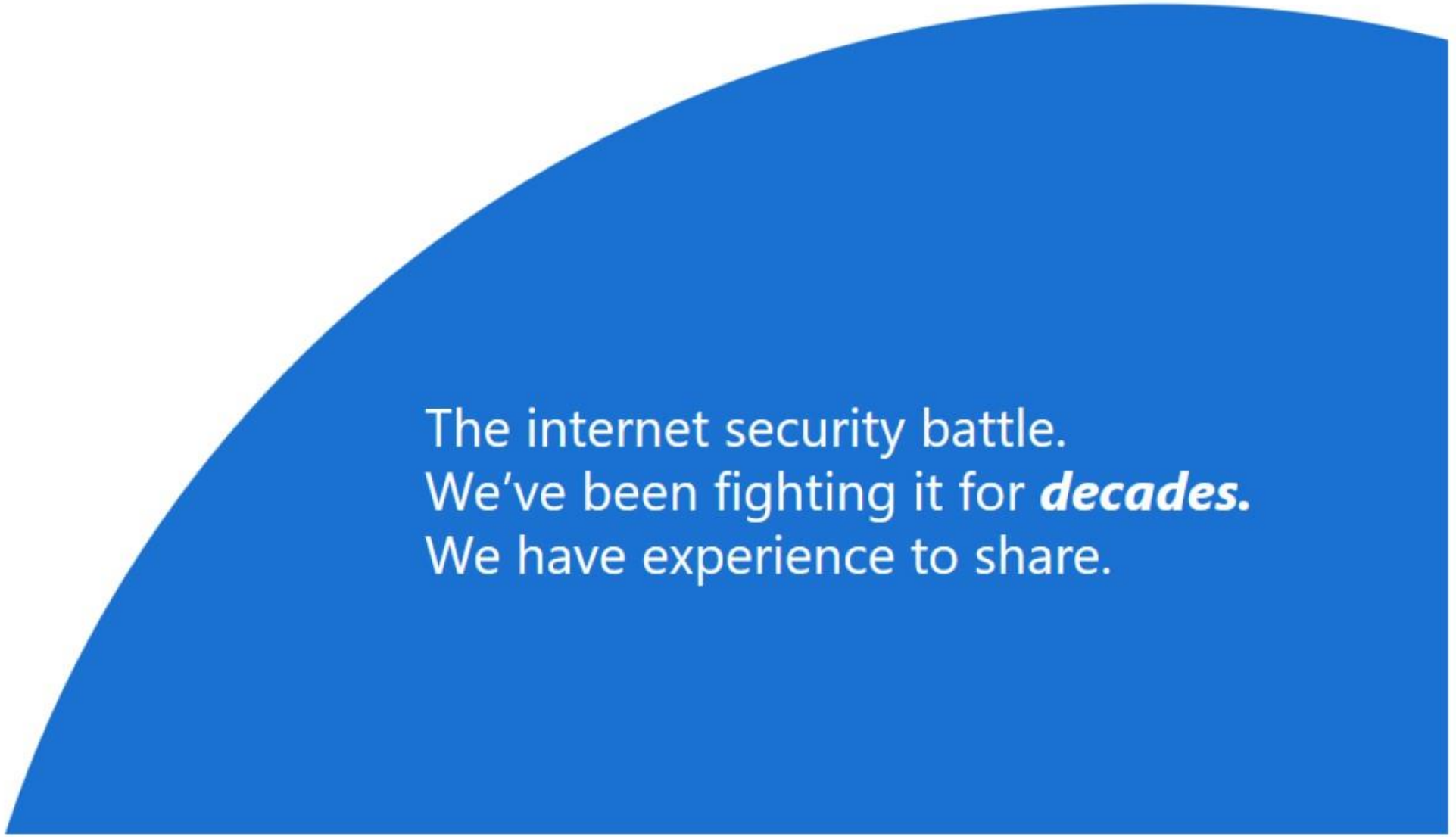
Weak common passwords, no early detection, no remote update, etc.

Future attacks could be much larger

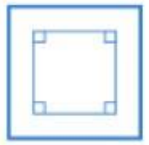
This attack was small; just 100k devices
Imagine a 100M-device attack

Future attacks could create huge liability exposure

Hackers could "brick" an entire product line in a day
Actuating devices could cause property damage or loss of life


The internet security battle.
We've been fighting it for *decades.*
We have experience to share.

Highly-secured connected devices require 7 properties



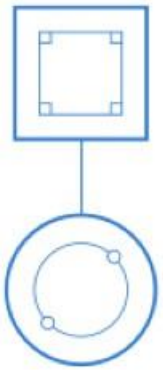
Some properties depend only on hardware support

Hardware Root of Trust

Unforgeable cryptographic keys generated and protected by hardware

Is your device's identity and software integrity secured by hardware?

- Hardware to protect **Device Identity**
- Hardware to **Secure Boot**
- Hardware to attest **System Integrity**



Some properties depend on hardware and software

Dynamic Compartments

Internal barriers limit the reach of any single failure

Can your device's security protections improve after it is deployed?

- Hardware to **Create Barriers**
- Software to **Configure Compartments**

Some properties depend on hardware, software and cloud

Renewable Security

Device security renewed to overcome evolving threats and security breaches.

Does your device's software update automatically?

- Cloud to **Provide Updates**
- Software to **Apply Updates**
- Hardware to **Prevent Rollback**

Azure Sphere empowers manufacturers to create highly-secured, connected MCU devices

SECURITY

Every device built with Azure Sphere is secured by Microsoft.

For its 10 year lifetime.

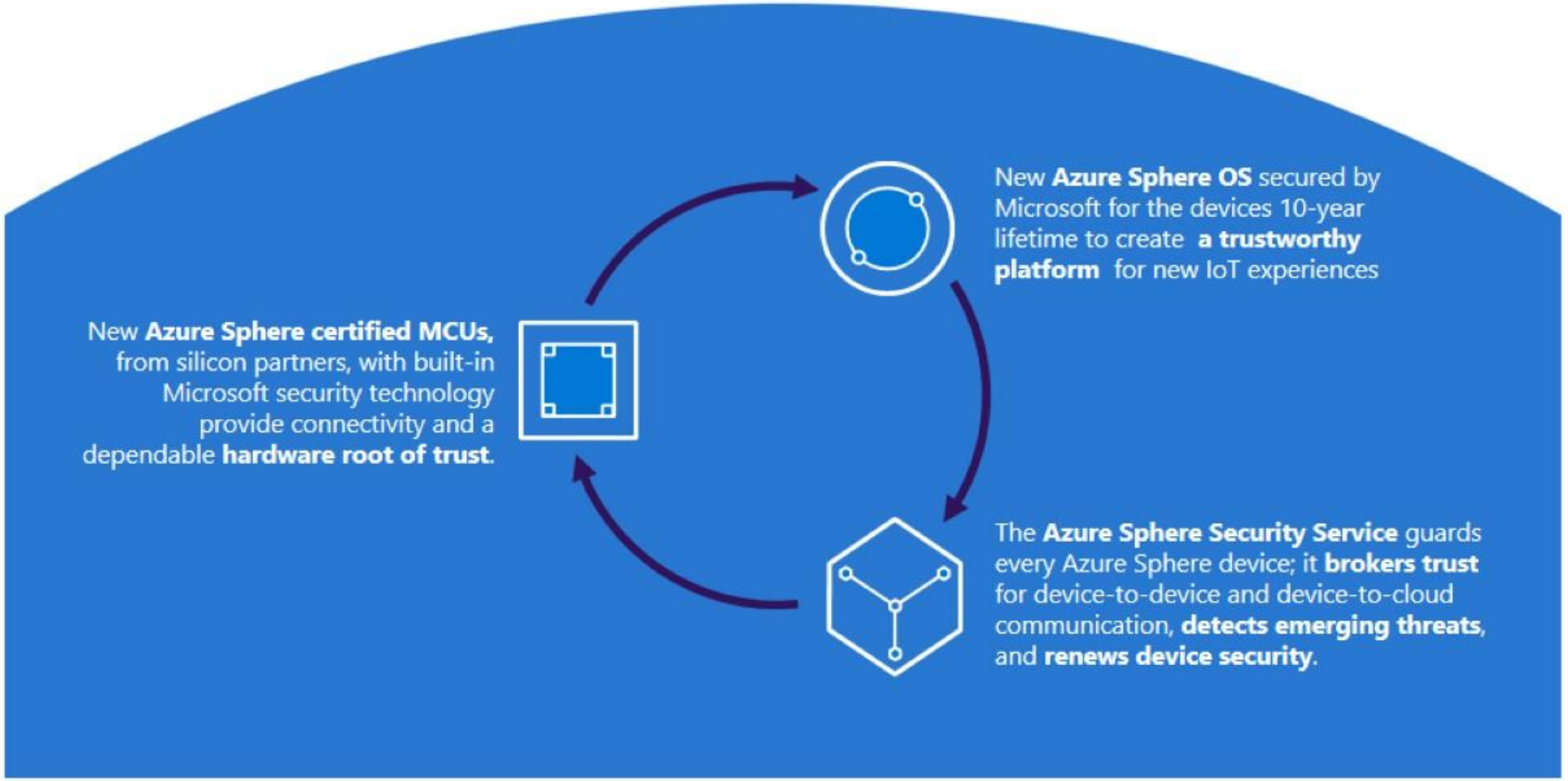
PRODUCTIVITY

The Azure Sphere developer experience shortens OEM time to market.

OPPORTUNITY

Azure Sphere empowers OEMs to create new customer experiences and business models.

Azure Sphere is an end-to-end solution for securing MCU powered devices

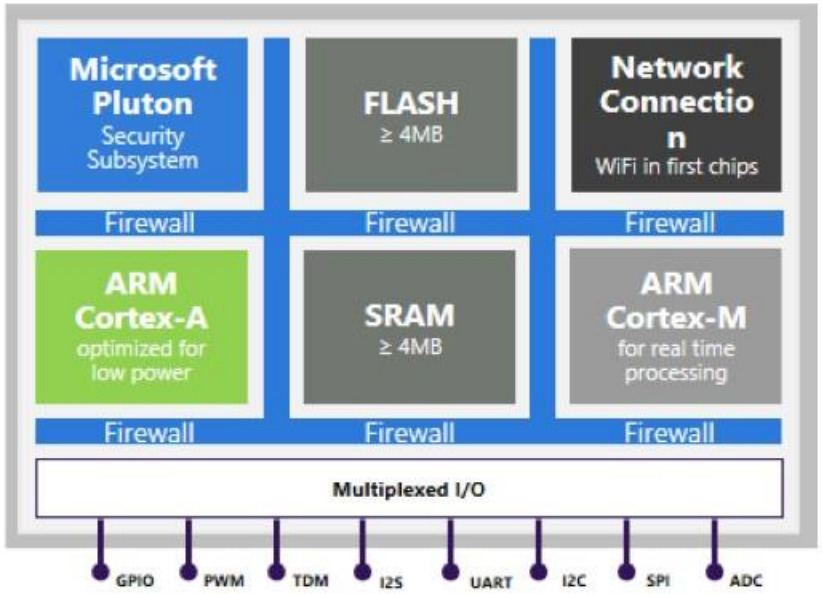


Azure Sphere certified MCUs create a secured root of trust for connected, intelligence edge devices

CONNECTED with built-in networking

SECURED with built-in Microsoft silicon security technology including the Pluton Security Subsystem

CROSSOVER Cortex-A processing power brought to MCUs for the first time



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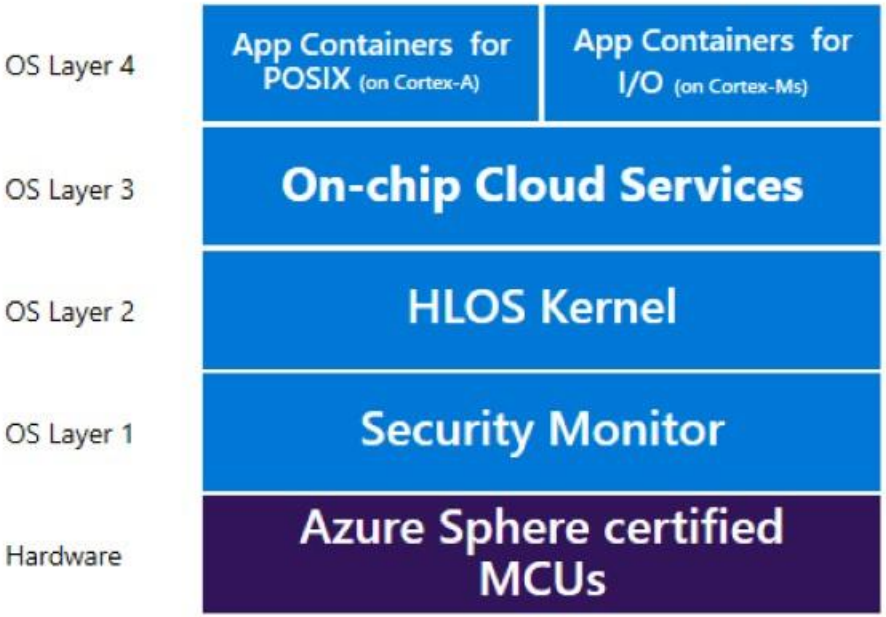
The Azure Sphere OS is optimized for IoT, Security and MCU agility

Azure Sphere OS Architecture



Secure Application Sandboxes
Compartmentalize code for agility, robustness & security

On-chip Cloud Services
Provide update, authentication, and connectivity

Custom Linux kernel
Empowers agile silicon evolution and reuse of code

Security Monitor
Guards integrity and access to critical resources

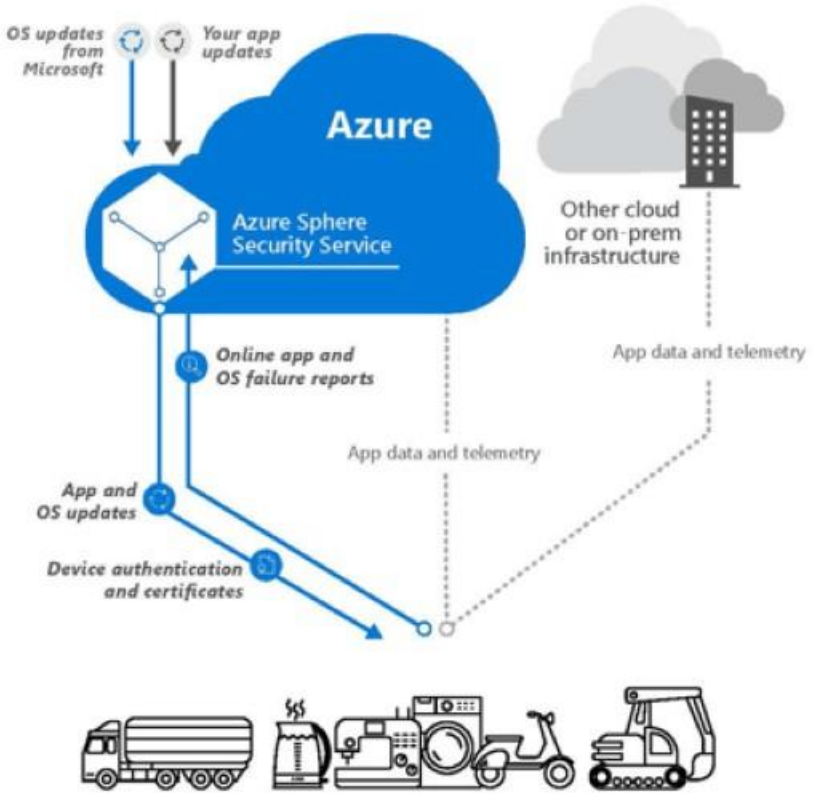
The Azure Sphere Security Service connects and protects every Azure Sphere device

Protects your devices and your customers with certificate-based authentication of all communication

Detects emerging security threats through automated processing of on-device failures

Responds to threats with fully automated on-device updates of OS

Allows for easy deployment of software updates to Azure Sphere powered devices



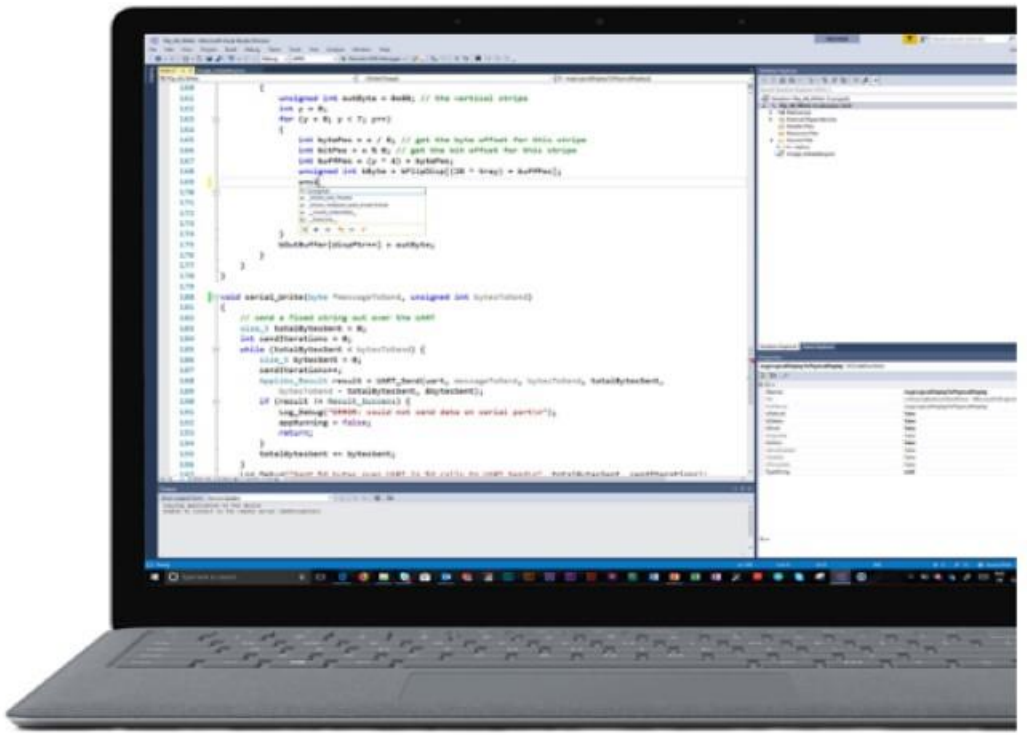
Modernize MCU development with Azure Sphere and Visual Studio

Simplify development
Focus your device development effort on the value you want to create

Streamline debugging
Experience interactive, context-aware debugging across device and cloud

Collaborate across your team
Apply tool-assisted collaboration across your entire development organization

Simplify Azure connect
Connect your Azure Sphere devices quickly and easily to Azure IoT



Three components.
One low price.
No subscription required.

An Azure Sphere certified MCU

The Azure Sphere Security Service
for 10 years

The Azure Sphere OS
with 10 years of on-device updates

Azure Sphere is open

Open to any MCU manufacturer
Pluton security subsystem licensied royalty **free for use** in any chip*

Open to any cloud
Azure Sphere devices are free to connect to Azure or any other cloud, proprietary or public for application data

Open to any innovation
MCU manufacturers are free to innovate with GPL'd OSS Linux kernel code base

* Azure Sphere branding requires an Azure Sphere chip with Azure Sphere OS and Azure Sphere Security Service

SECURITY

Peace of mind

Protect your products and customers with our turnkey, 7 property security solution that protects, detects and responds to threats dynamically so you're always prepared.

PRODUCTIVITY

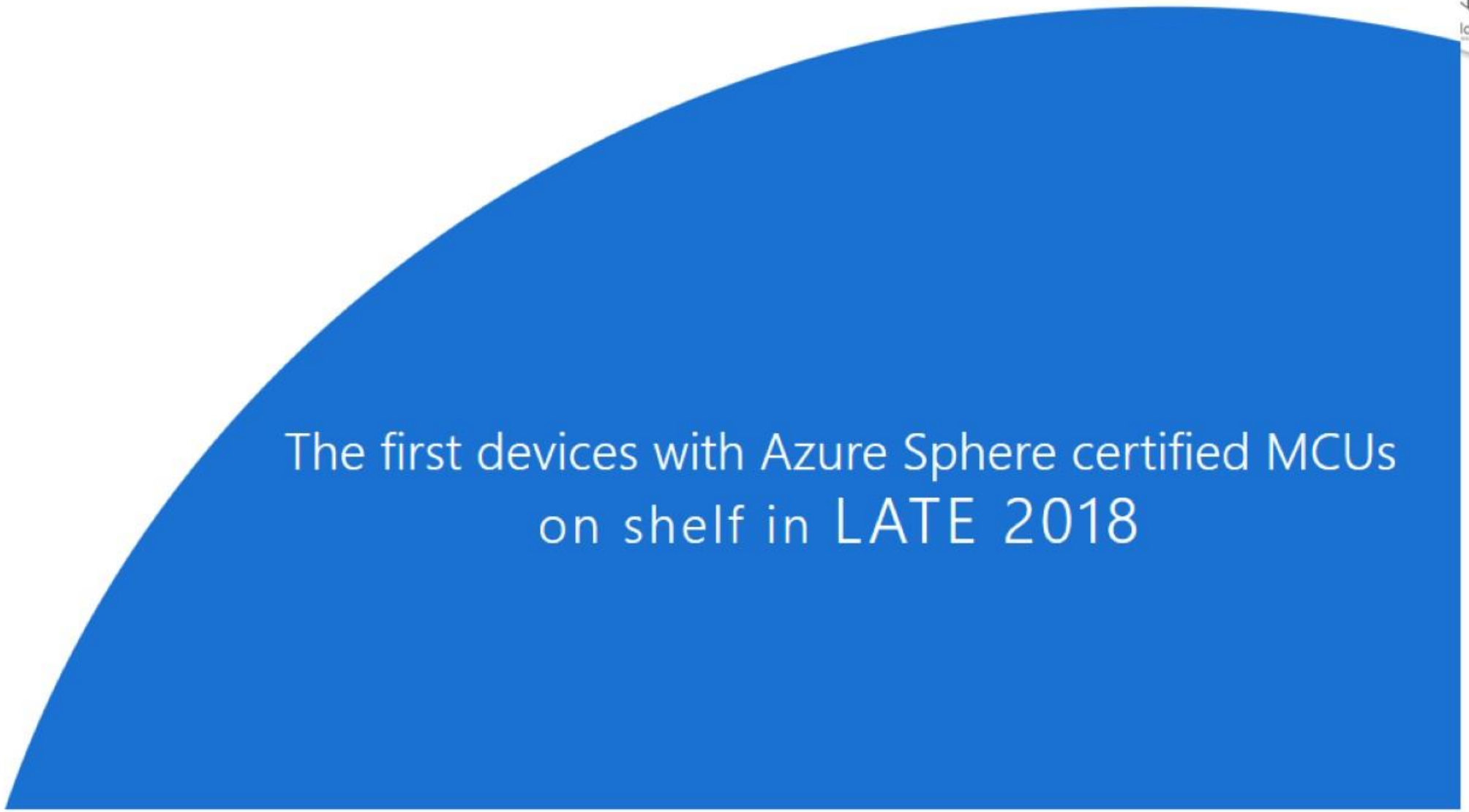
Faster time to market

Lower overhead and increase team efficiency with tools that deliver productivity and dramatically optimize development and maintenance of your device and experiences.

OPPORTUNITY

The future is now

Transform engagement your products and customer strategies, and enable new revenue streams with connected crossover chips powerful enough to create next generation experiences.


The first devices with Azure Sphere certified MCUs
on shelf in LATE 2018

Azure Sphere development kits include everything you need to get started prototyping and developing Azure Sphere applications.

Pre-order yours today at

www.microsoft.com/azuresphere

La scheda

Grazie

Domande?

DPCons

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