

16 APRILE 2021

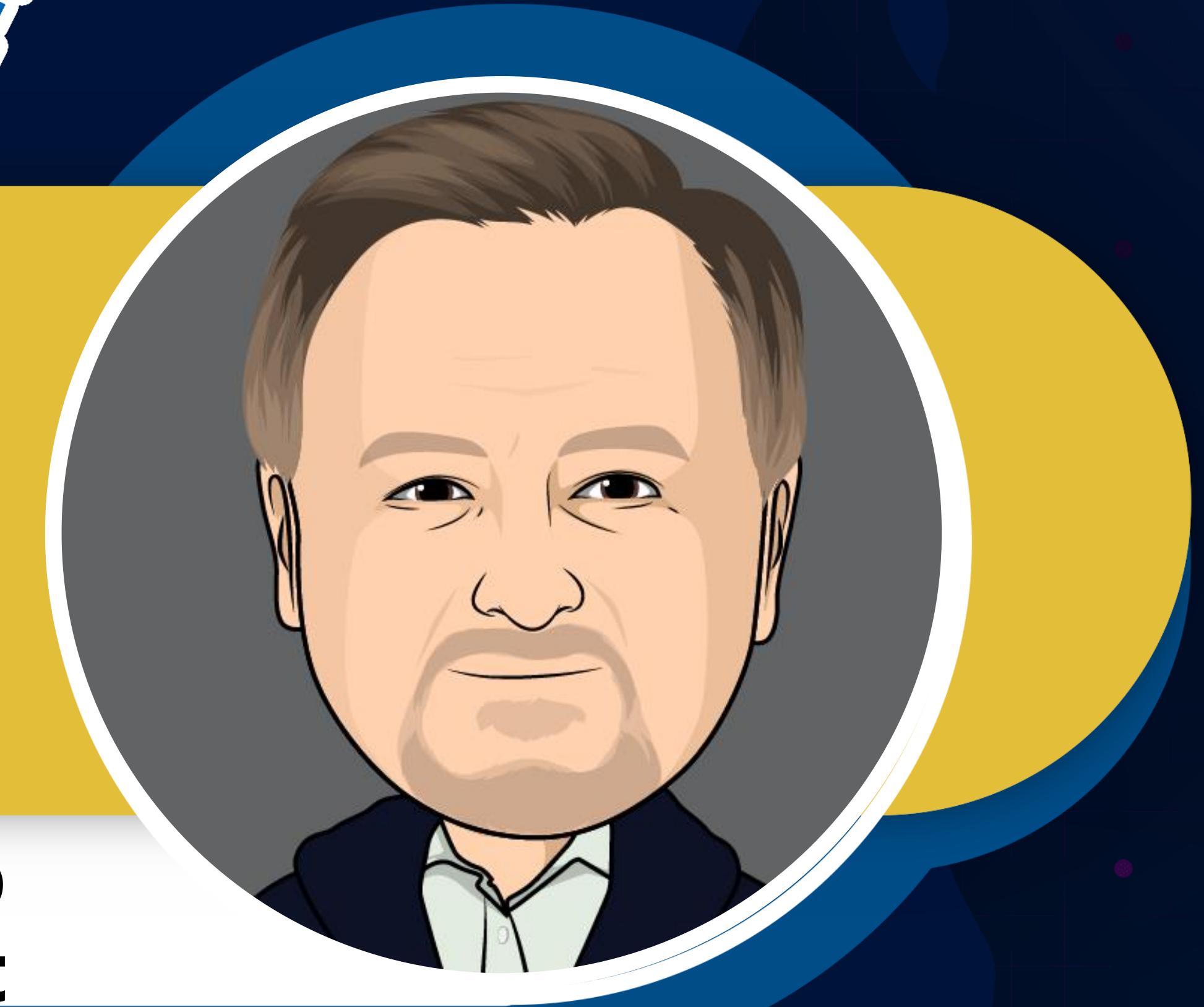


VIRTUAL EVENT

**Unleash the power of AI on
the EDGE with Azure Percept**

Marco Dal Pino
Microsoft

@MarcoDalPino



SPONSOR



managed/designs

il partner tecnologico per chi ha idee ambiziose. Innovazione pratica da 15 anni.



empower every person and every organization on the planet to achieve more.

#GLOBALAZURE



Swag and more

- Claim your attendee Learner Badge here:
- 30 Days to learn it: aka.ms/global-azure/30D2L
- Virtual background and ANOTHER Badge: blog.globalazure.net/Swag





PREVIEW

Azure Percept

Sense. Know. Act.

Edge intelligence from silicon to service

AI is pushing out to the edge



70% of IoT deployments will include AI for autonomous or edge decision-making by 2023*

\$1.5 billion edge devices will be sold by 2024.**

Edge AI is beneficial for:

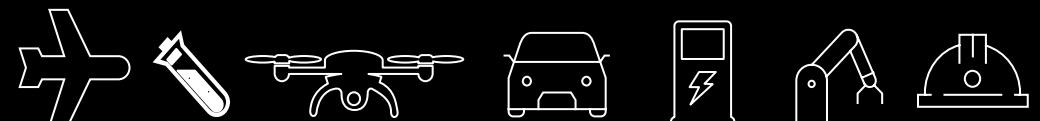
1. **Latency reduction**
2. **Cost reduction**
3. **Security and compliance**
4. **Innovation**

Evolution of edge adoption

Connected

HORIZON 1 - TODAY

Intelligent Assets



Intelligent

HORIZON 2 - EMERGING

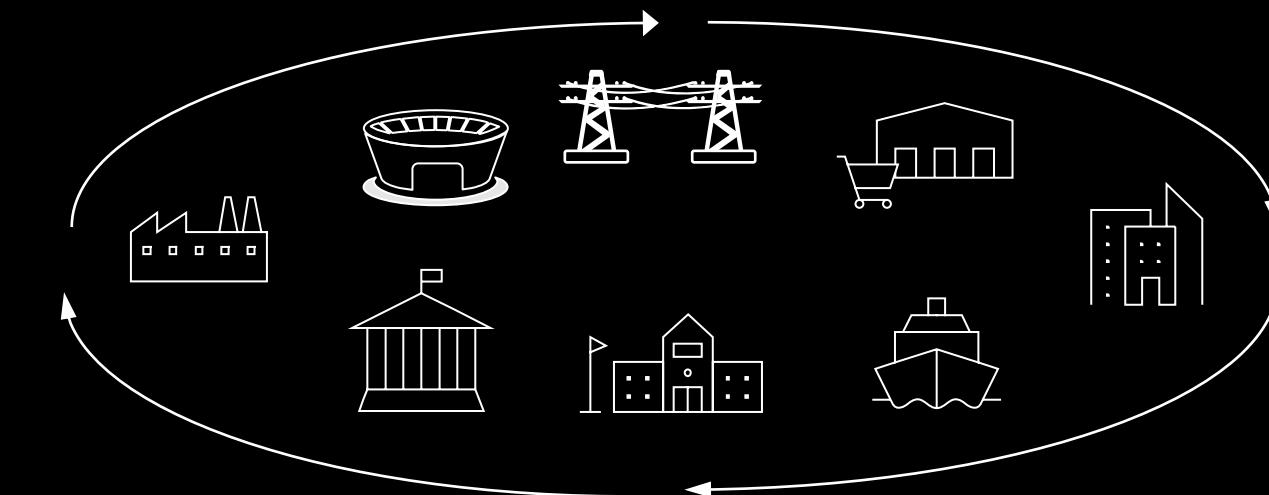
Intelligent Environments



Autonomous

HORIZON 3 - FUTURE

Intelligent Ecosystems



Innovate anywhere with Azure



Modernize productivity
with [Microsoft 365](#)



Modernize datacenters with
[Azure Arc + Azure Stack](#)

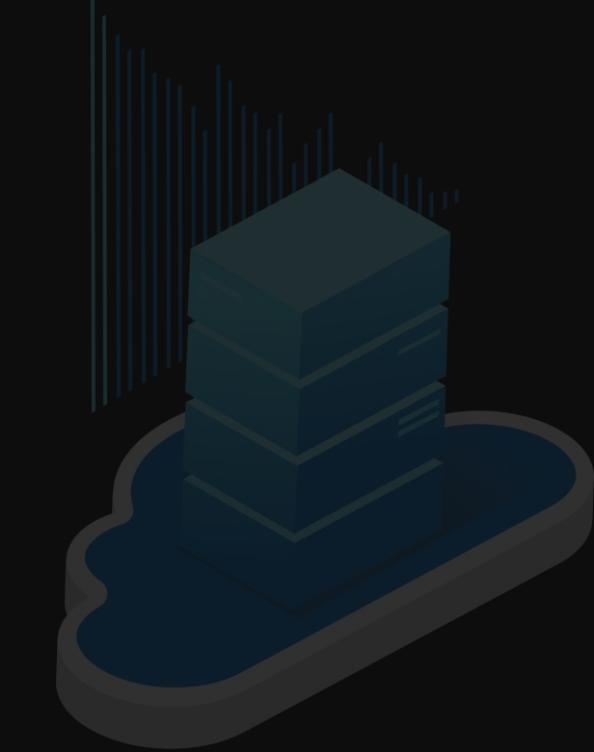


Modernize business
operations with [Azure IoT and AI](#)

Innovate anywhere with Azure



Modernize productivity
with **Microsoft 365**



Modernize datacenters with
Azure Arc + Azure Stack



**Modernize business
operations with [Azure IoT and AI](#)**

We spoke with over 500 customers

Top Priorities

100%

E2E blueprint

90%

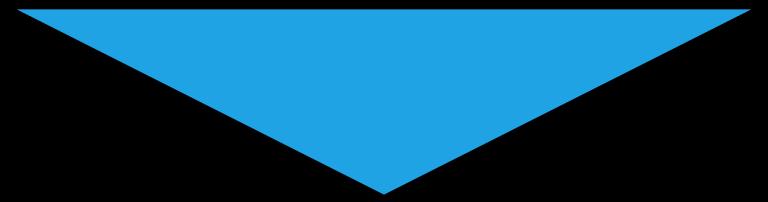
Matchmaking

75%

Security

70%

Azure services



Simplify edge + AI

Introducing

Azure Percept

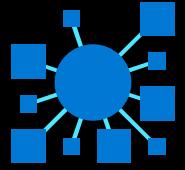
A comprehensive, easy-to-use platform with added security for creating edge AI solutions.

Azure Percept

Sense. Know. Act.



Complete edge
AI platform



Seamlessly build
and manage edge
AI solutions



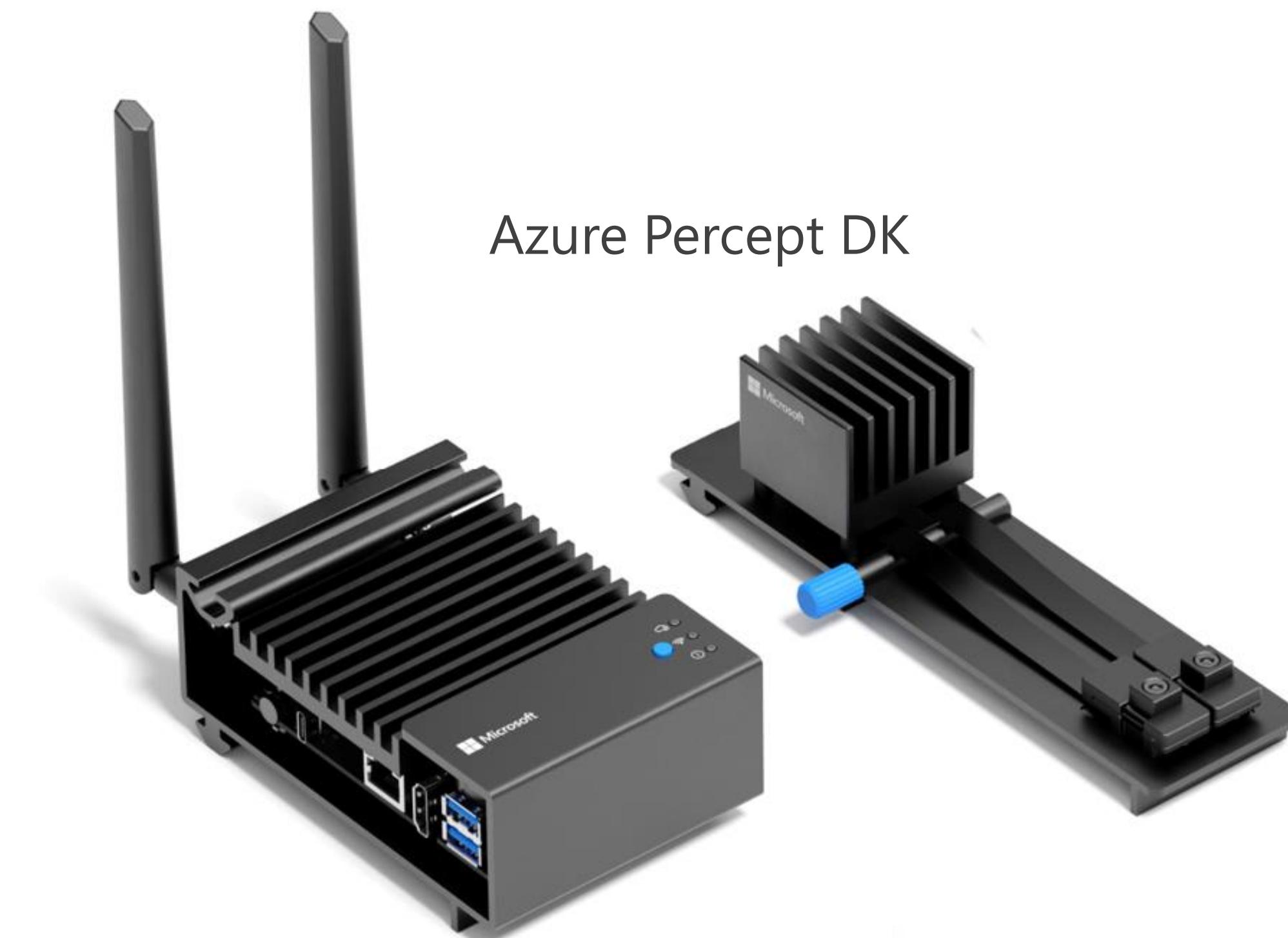
Designed with
modern security
in mind

Azure Percept

Start your proof of concept in minutes with hardware accelerators that integrate seamlessly with Azure AI and IoT services.

1. *Transform with a complete edge AI platform*

End-to-end edge AI platform including hardware accelerators integrated with Azure AI and IoT services.



Azure Percept DK

2. *Seamlessly build and manage edge AI solutions*

Edge AI lifecycle management services and pre-built AI models to help you go from prototype to production in minutes.

A screenshot of the Azure Percept Studio web interface. The page has a light blue header with the text "Learn, build and go live!". Below the header, there is a brief description of the service's purpose. The main content area features three circular icons representing different features: "Move, see & translate!", "Predictive maintenance", and "AI learning & enhanced results". Each icon has a short description and a "View product details" button below it. At the bottom of the page, there are several other buttons and links related to the service.

Azure Percept
Studio

3. *Designed with security in mind*

A hardware root of trust with the Microsoft Zero Trust security model helps safeguard sensitive data in transit and at rest.



Azure Percept
Audio

A complete edge AI platform

Hardware
accelerators
integrated with
Azure AI and IoT
services

BENEFITS

Start your proof of concept in minutes with hardware accelerators built to integrate seamlessly with [Azure AI](#) and [Azure IoT services](#).

Get solutions fully interoperable with these and other Azure services:

- Azure IoT Hub
- Azure IoT Edge
- Device Provisioning Service
- Azure Container Registry

FEATURES

A pilot-ready dev kit with carrier board, mounting tools, and Azure Percept Vision, a camera-enabled system on module (SoM) for rapid scenario-based customization

A voice-enabled system on module (SoM) with a 4-mic linear array to apply custom commands, far field speech and anomaly detection

Azure AI edge lifecycle management tools for developers of all skill levels

Azure Percept DK

A pilot-ready development kit with a carrier board, mounting tools, and Azure Percept Vision, a camera-enabled system on module (SoM) for rapid scenario-based customization. The mechanical design enables quick prototyping with 80/20 profile configuration.

The Azure Percept DK enables manufacturers to provide edge compute capabilities on low-power, low-latency devices. This development kit is deeply integrated with Azure AI, Azure Machine Learning, and Azure IoT management services.

INCLUDED:

- Azure Percept Vision
- Runtimes, tooling, SDK, Services
- OOBE
- NXP iMX8mq Processor with WiFi, Bluetooth and Ethernet



Azure Percept DK

\$349

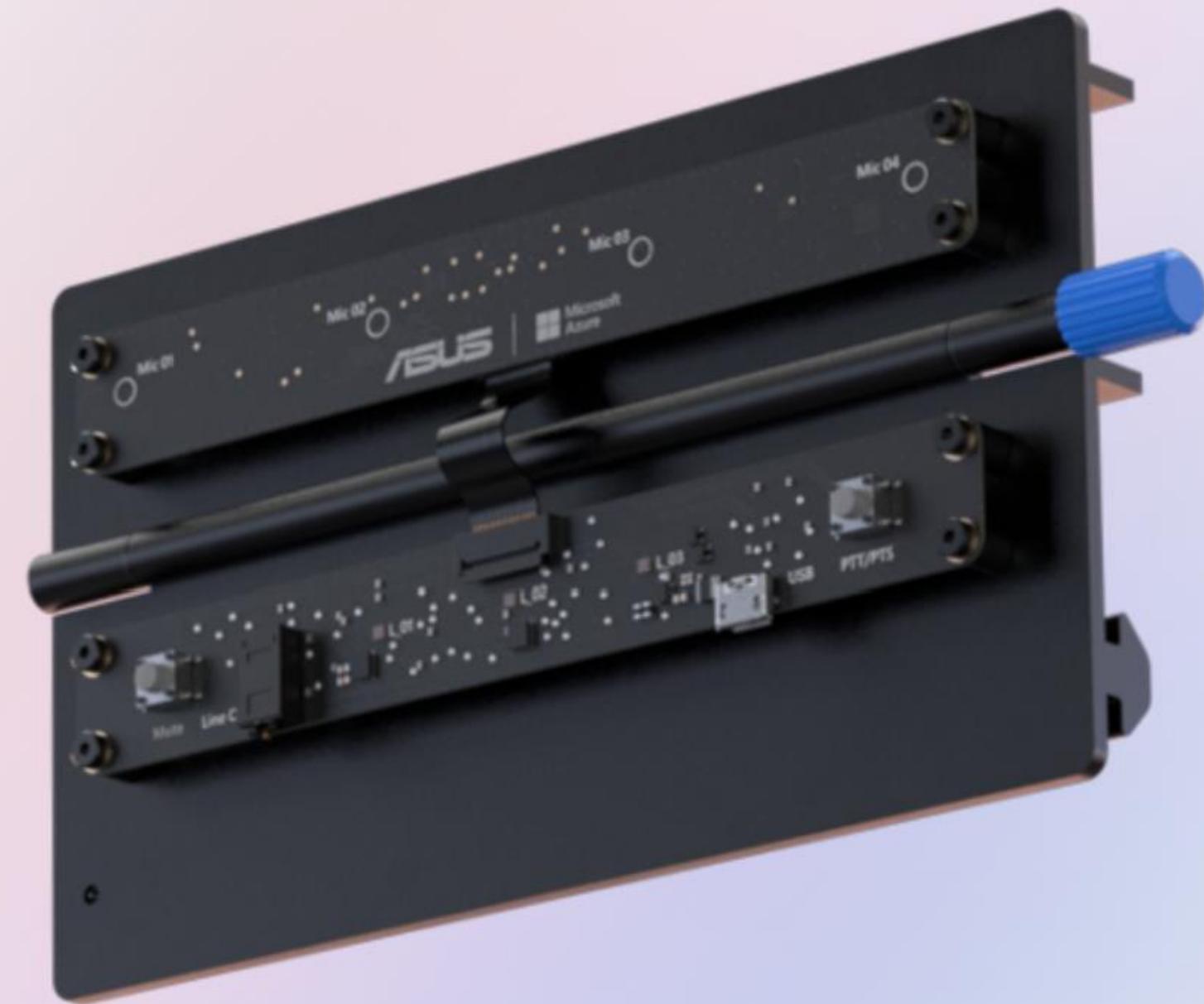
Azure Percept Audio

Extend your development kit with Azure Percept Audio, a voice-enabled system on module (SoM) with a 4-mic linear array to apply custom commands, far field speech and anomaly detection.

SUPPORTS

- Far-Field speech up to 5m
- Customizable keyword and commands
- 4-mic linear array
- Digital Signal Processing

- Azure IoT Hub
- Azure IoT Edge
- Azure Machine Learning



Azure Percept Audio

\$79

Seamlessly build and manage edge AI solutions

Edge AI lifecycle management services with pre-built AI models

BENEFITS

Use an integrated collection of Azure services and tools designed for device provisioning, AI and machine learning deployments, and AI lifecycle management at the edge. Azure Percept Studio is available during preview at no additional charge and included with purchase of the Azure Percept DK.

Deeply interoperable with these and other Azure services:

- Azure AI
- Azure Machine Learning
- Azure Cognitive Services
- Azure Custom Speech
- Azure Live Video Analytics

FEATURES

A library of pre-built AI models for vision capabilities including object detection, shelf analytics, vehicle analytics, and audio capabilities like voice control and anomaly detection

Customize AI model training with no code and deploy locally or in the cloud

Azure AI edge lifecycle management tools for developers of all skill levels

Pay for only the underlying Azure services used.

Azure Percept Studio

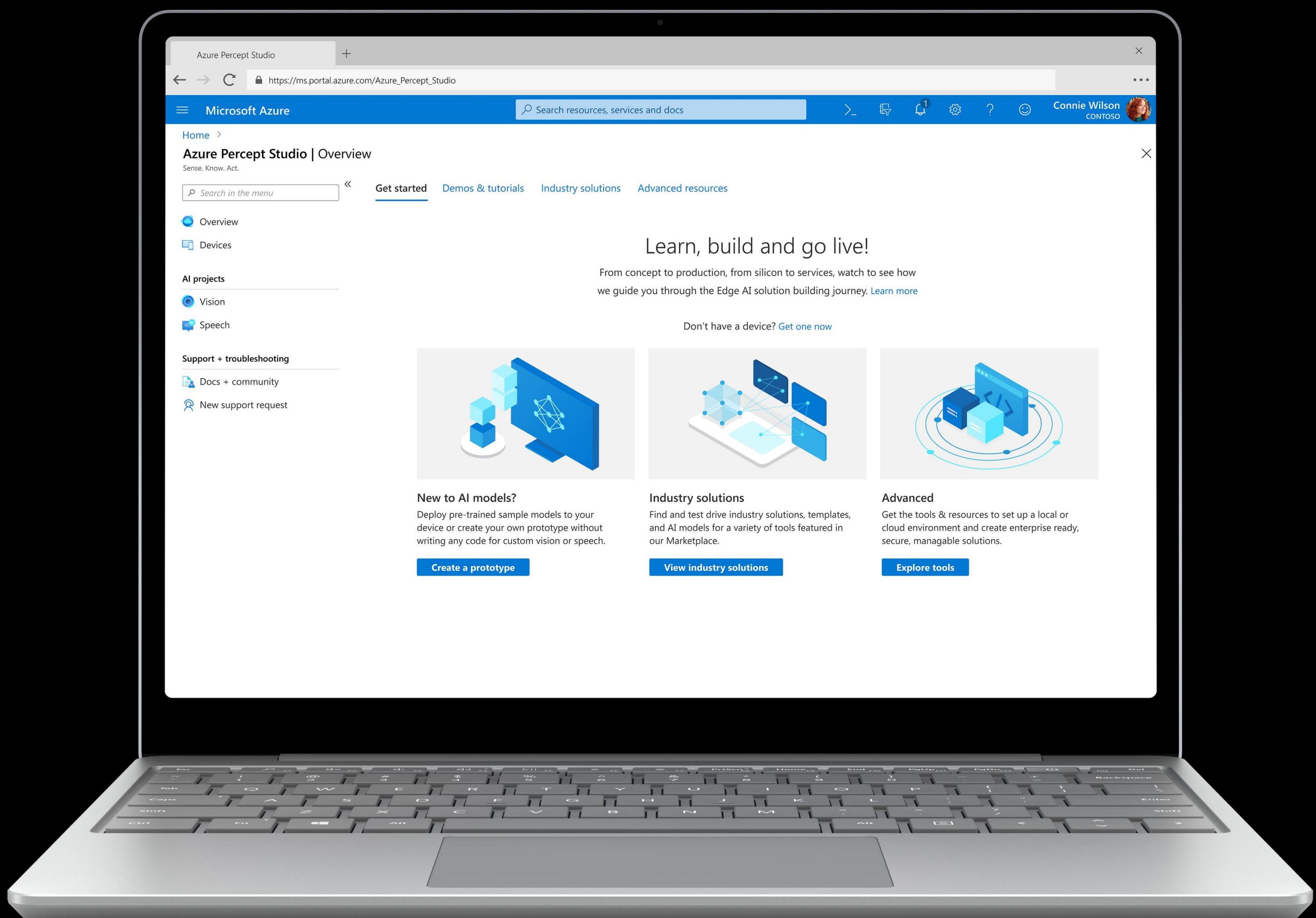
Delightful onboarding

Integrated experiences

No code flow

Advanced flow

Prototype and deploy



* Free during preview; included with purchase of the Azure Percept DK. Pay for only the Azure services you use.

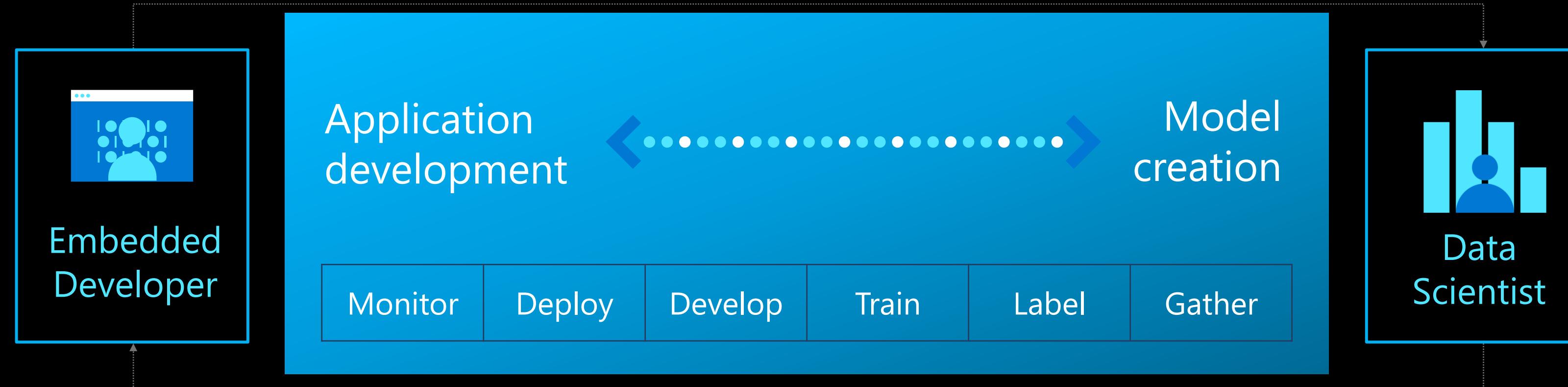
\$0*

Simplify edge + AI

Seamlessly build and manage edge AI solutions

INTEGRATED WORKFLOWS TO BUILD INTEGRATED SOLUTIONS

- Sensor tuning
- Accelerator silicon
- Video pipeline
- ISP
- HWRoT



- Model Architecture
- Data Wrangling
- Network Optimization
- Precision/Recall tuning
- Model format

Customer Field Ops

The future of edge computing: guided journeys

Manufacturing

Predictive maintenance
Field service
Worker safety & loss prevention
Factory automation & defect detection
Incident response
Automated supply chain & assembly

Smart City/ Buildings

Security & surveillance
Access control via custom command
Energy management
Transportation & traffic management
Utilities management
Monitoring & workplace safety

Automotive / Transportation

Factory automation
Cabin intelligence
Driver distraction
Passenger detection
Conversational AI
Command & control
Sensor data efficiency

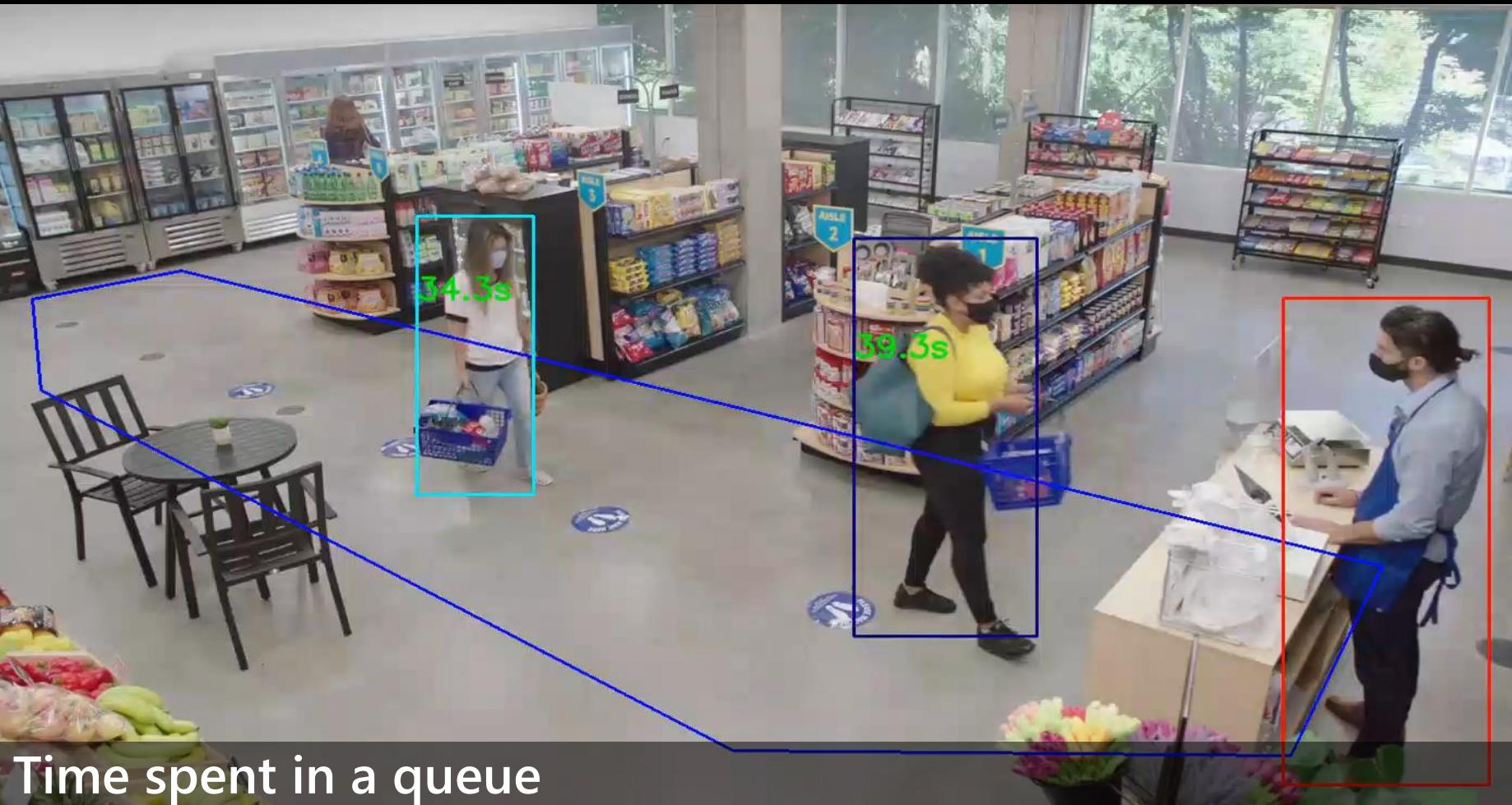
Retail

Space & assortment
Traffic patterns
Personalization
Inventory management
Shrinkage reduction
Optimal product placement

Healthcare

Patient recognition & monitoring
Supply chain & operational efficiency
Identification of patient issues
Waiting room prioritization
Scheduling & reminders

Azure Percept AI models



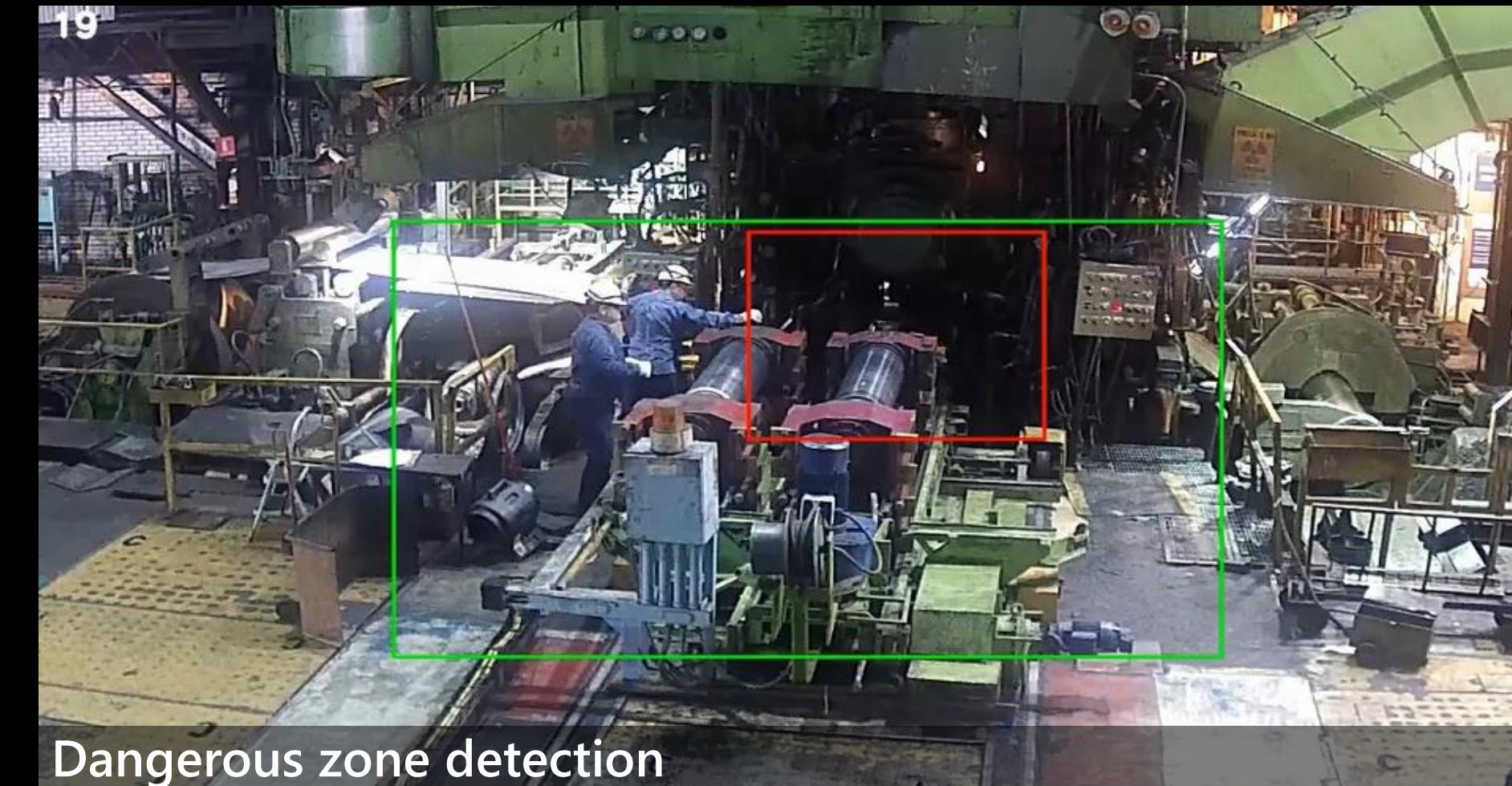
Time spent in a queue



Vehicle detection with parking stall alerting



Security and surveillance



Dangerous zone detection

Designed with modern security in mind

Edge AI devices with added security

BENEFITS

Azure Percept hardware accelerators are designed with a hardware root of trust which interacts with a device TPM and attestation service to help safeguard device identity.

Azure Percept also uses the Zero Trust security model to help safeguard sensitive AI models and data in transit and at rest for edge AI solutions.

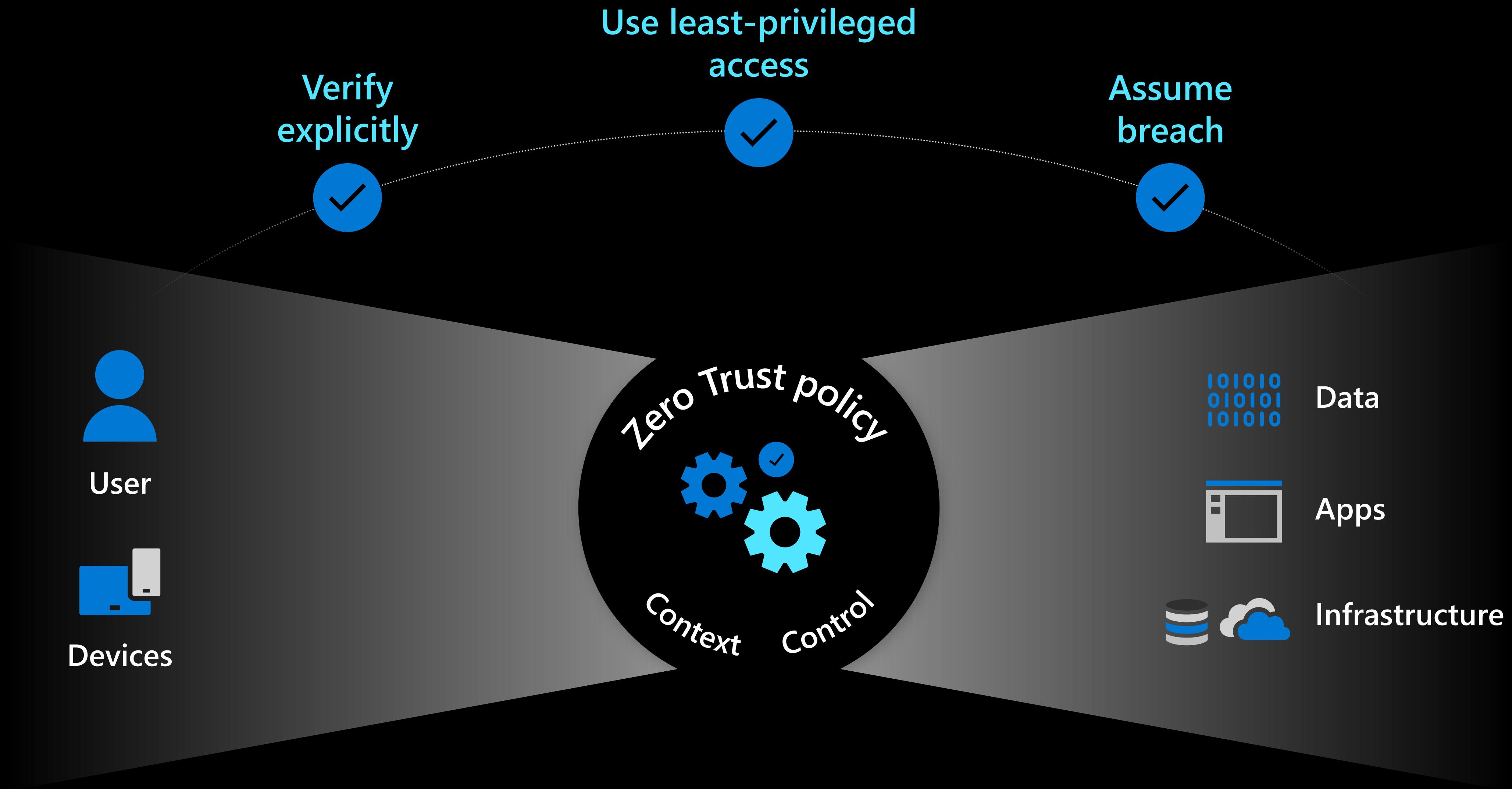
FEATURES

Hardware root of trust for device identity

Device TPM and attestation service

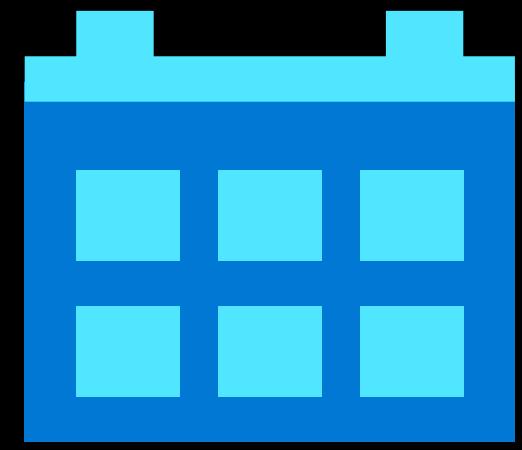
Zero Trust security model to help protect high-value IoT data in transit and at rest

Azure Percept supports a Zero Trust policy



Azure Percept

Sense. Know. Act.



Decreased time
to develop



Accelerated
time to ship

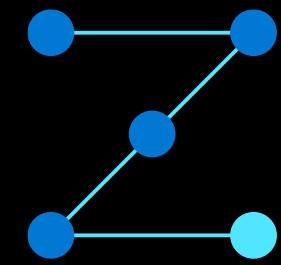


Reduced complexity
to operate

Accelerate intelligence at the edge

Device builder tools

Get your Microsoft-certified Azure Percept devices to market quickly



Reference Designs

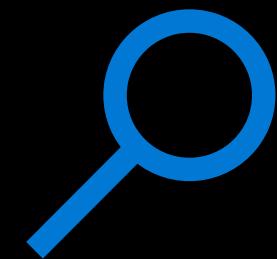
End-to-end hardware and software reference designs for building edge AI devices with added security

A fast path to Azure Device Certification



Device Certification

Compatibility and standardization allows for faster solution building



Azure Marketplace

Search our catalog of certified devices and solutions to start your proof of concept

Availability by Region

15

Available in 15 markets, starting with US in early March

2

Other markets will follow over the next 2 months

5

A total of 5 key distribution Partners

Key distribution partners:



First availability through Microsoft Store followed soon with availability through select distributors

Building our Azure Percept partner ecosystem



Get Started with Azure Percept



Accelerate AI
at the edge in new
or existing devices



Make real-time
decisions with one-
stop Azure AI and
IoT services



Leverage security
features to help
protect your data in
transit or at rest

Get started today

1.

Pre-order your
development kit.

2.

Seamlessly build and
manage edge AI
solutions.

3.

Modern security
from silicon to
service.

Resources



Website:

<https://aka.ms/azurepercept>

GitHub Repo:

<https://github.com/microsoft/Project-Santa-Cruz-Preview#welcome-to-the-project-santa-cruz-private-preview>



Thanks

@MarcoDalPino

Unleash the power of AI on the EDGE with
Azure Percept