

/ Avnet /IOTCONNECT Solutions Suite

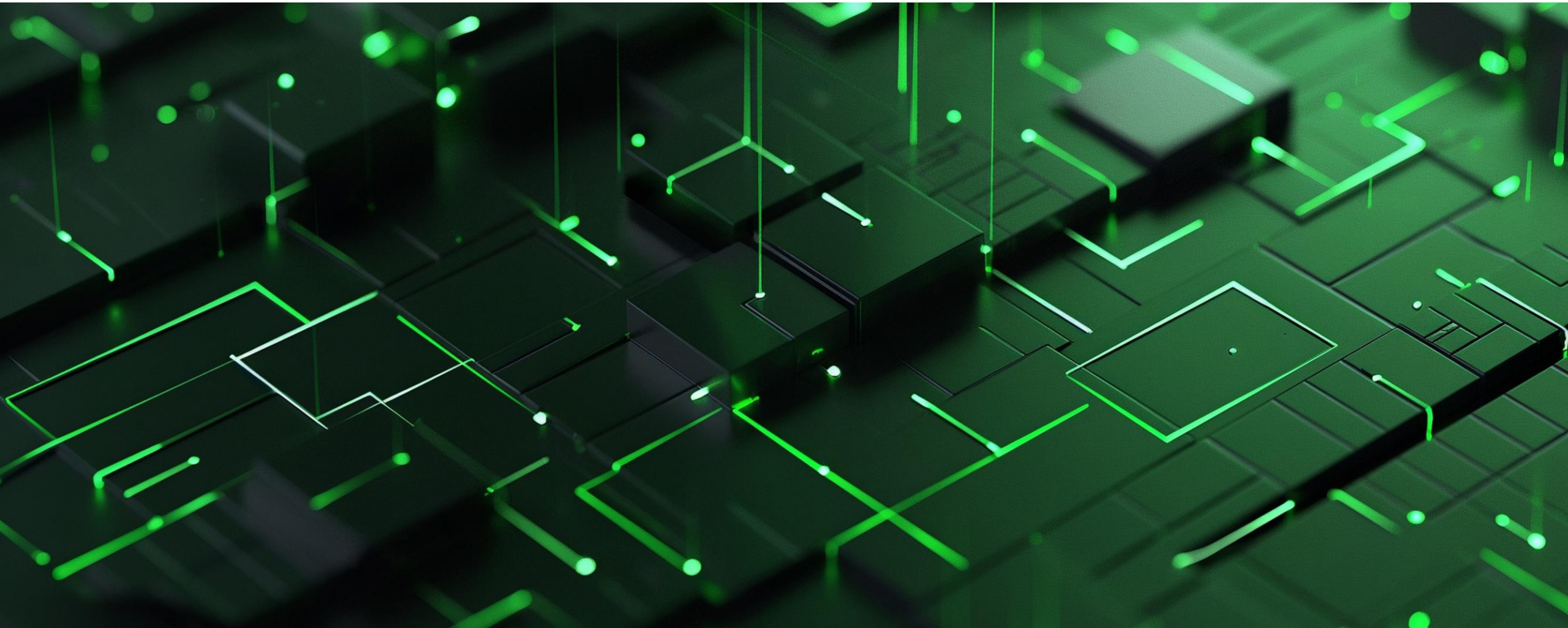
Engenuity eViewIoT | Energy Management & AI-Driven Fault Detection



AVNET®

/IOTCONNECT™

Manage | Secure | Deploy



/ Solution Accelerator & Marketplace Index

/IOTCONNECT enabled solutions

Smart Generator Monitoring

Smart Warehouse Monitoring

Smart City Noise Detection

AWS IoT Greengrass

Smart Asset Monitoring

AWS Physical AI

Smart Facility Solutions

STM32 Amazon Sidewalk

Smart Factory Solutions

Security CRA

Smart Fleet Management

Engenuity eViewIoT

SaaS offering

/IOTCONNECT™

Engenuity eViewIoT on Avnet /IOTCONNECT

eViewIoT, powered by Avnet /IOTCONNECT and AWS, gives multi-site operators one platform to monitor and control HVAC, refrigeration, lighting, and energy use across every location. Edge AI on AWS IoT Greengrass flags equipment faults before they become failures, and Ask eView, a GenAI assistant built on Amazon Bedrock, turns live fleet data into technician-ready actions. The result: lower utility bills, fewer emergency repairs, and portfolio-wide visibility for restaurants, retail, and light commercial buildings.

All Avnet Listings



Engenuity eViewIoT on Avnet /IOTCONNECT

eViewIoT, powered by Avnet /IOTCONNECT and AWS, gives building owners, operators, and facilities teams one platform to monitor and control HVAC, refrigeration, lighting, and energy use across every location. Edge AI detects equipment issues early, before they turn into failures, and Ask eView delivers plain-English answers and technician-ready guidance. The result is lower utility bills, fewer emergency repairs, and one place to manage the entire portfolio.



Remote Control: Centralized HVAC, lighting, and refrigeration setpoints for every site



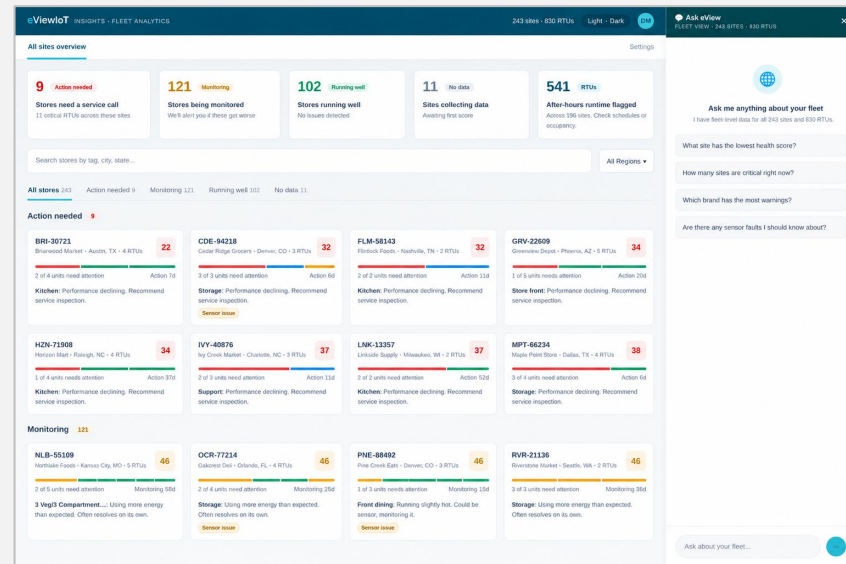
AI Fault Detection: Edge ML flags equipment drift days before failures and emergency repairs



Ask eView: Plain-English answers and work orders from live fleet data



Verified Savings: Site-level metering and ESG reporting to prove energy reductions



Features

Hardware-agnostic: works with existing BMS, sensors, and IoT-enabled devices. Deploys in days without rip-and-replace and scales from one site to thousands. Built on AWS IoT Greengrass, AWS IoT Core, Amazon SageMaker, and Amazon Bedrock, managed through Avnet /IOTCONNECT, with Axsys Automation hardware and firmware services for rollout.

[Learn more](#)

[Marketplace Listing](#)

AVNET

/ The Market & The Problem

5.9M

Commercial buildings in the U.S.

Restaurants, convenience stores, retail, and light commercial spaces

97%+

Under 100,000 square feet

Buildings over 100,000 sq ft are only ~2% of the U.S. commercial stock

1+

Rooftop unit per building

Most run on a basic thermostat with no onboard diagnostics

Why most rooftop HVAC units run blind

1

Rooftop units lack intelligence

A basic thermostat means no diagnostics, no connectivity, no data. Owners learn of problems only when the unit fails.

2

Tracked data isn't used

Where smart equipment exists, readings sit in a proprietary gateway or an unmonitored dashboard, or need a specialist to interpret.

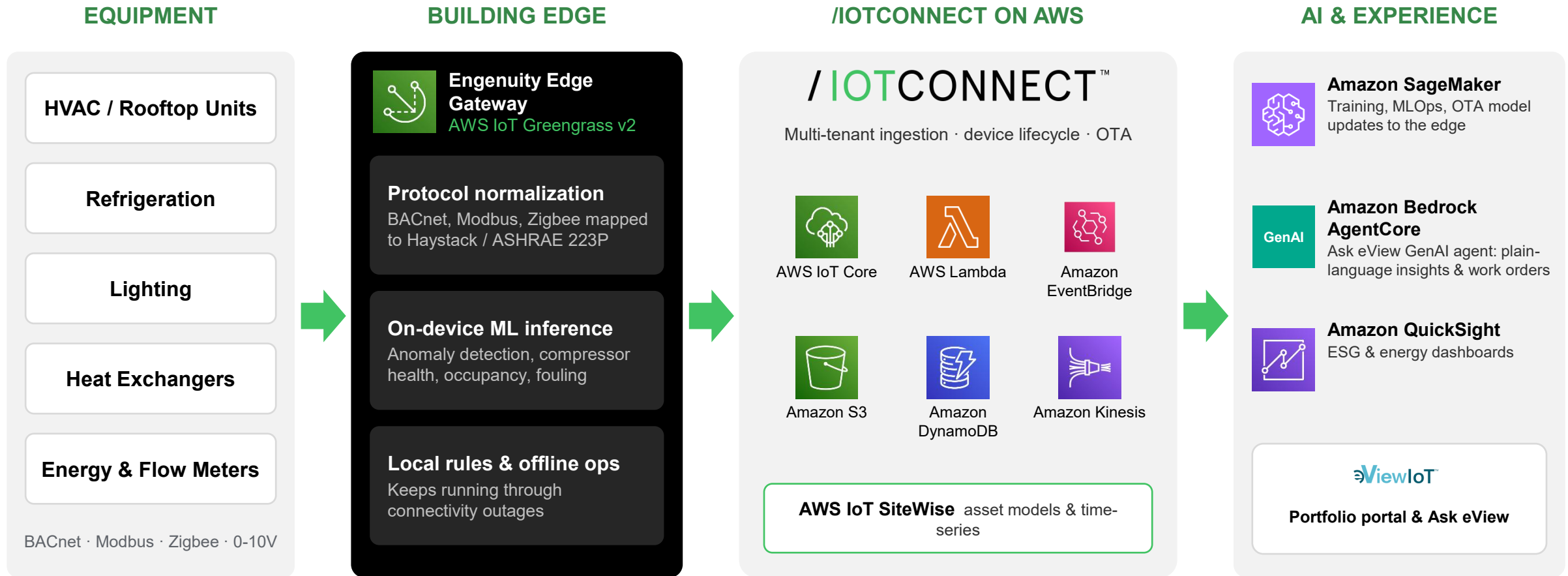
3

Insight never reaches the tech

The insight that could prevent the failure never reaches the person who can act on it.

The eViewIoT approach: replace the basic thermostat with a communicating device, normalize the data at the edge, and apply AI diagnostics in language a technician can act on.

/ Solution Architecture – eViewIoT on AWS



EDGE: classical ML for speed and resilience

CLOUD: agentic GenAI for reasoning, fleet learning, and retraining

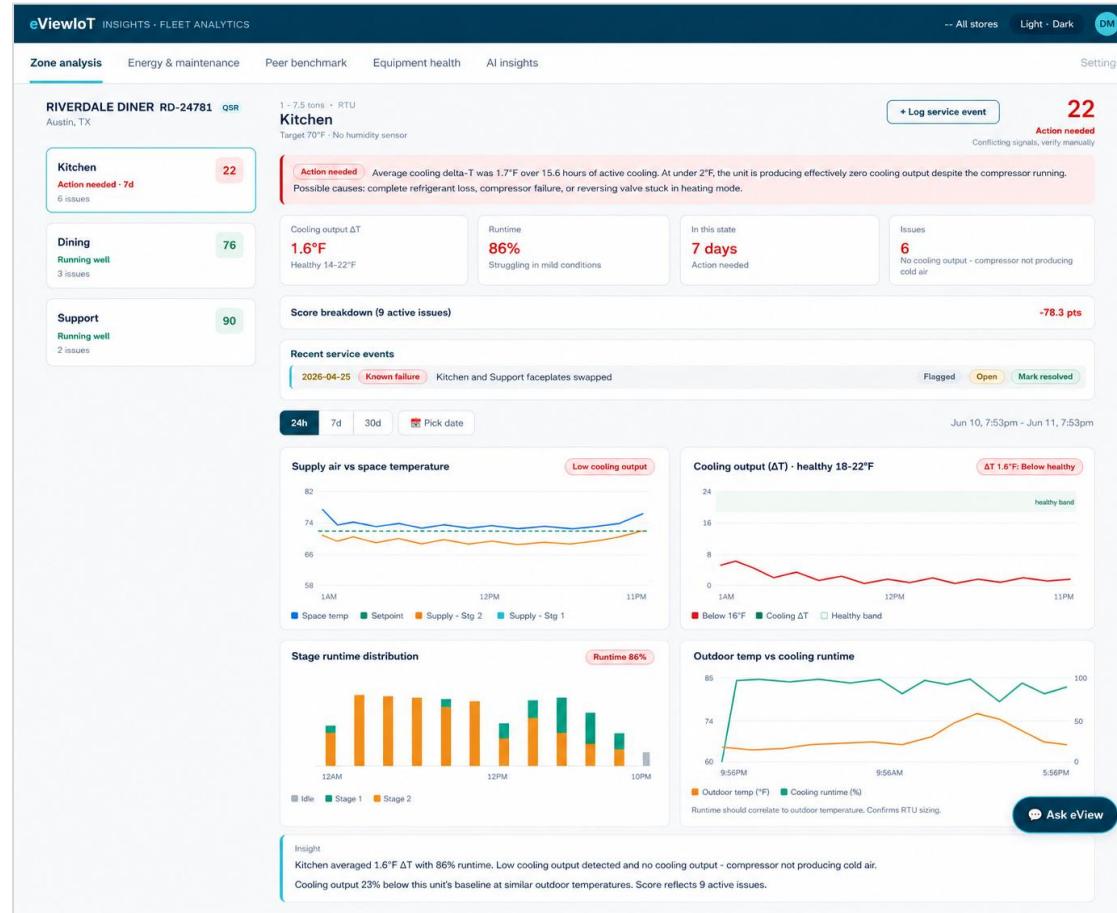
/ Use Cases

On-device ML watches temperature, airflow, pressure, and runtime signatures on every rooftop unit. Drift shows up at the edge days before a comfort complaint, and AI identifies the likely root cause at the zone and RTU level.

HVAC Fault Detection

Refrigeration Health

Portfolio Energy Management



Zone Analysis view — actual operating data, anonymized

BEFORE · Reactive

Comfort calls and emergency repairs after the unit fails.

AFTER · Predictive

Drift detected days before failure; service scheduled on your terms.

KEY CAPABILITIES

- Cooling performance & staging analysis
- AI-generated root cause
- Technician-ready summaries

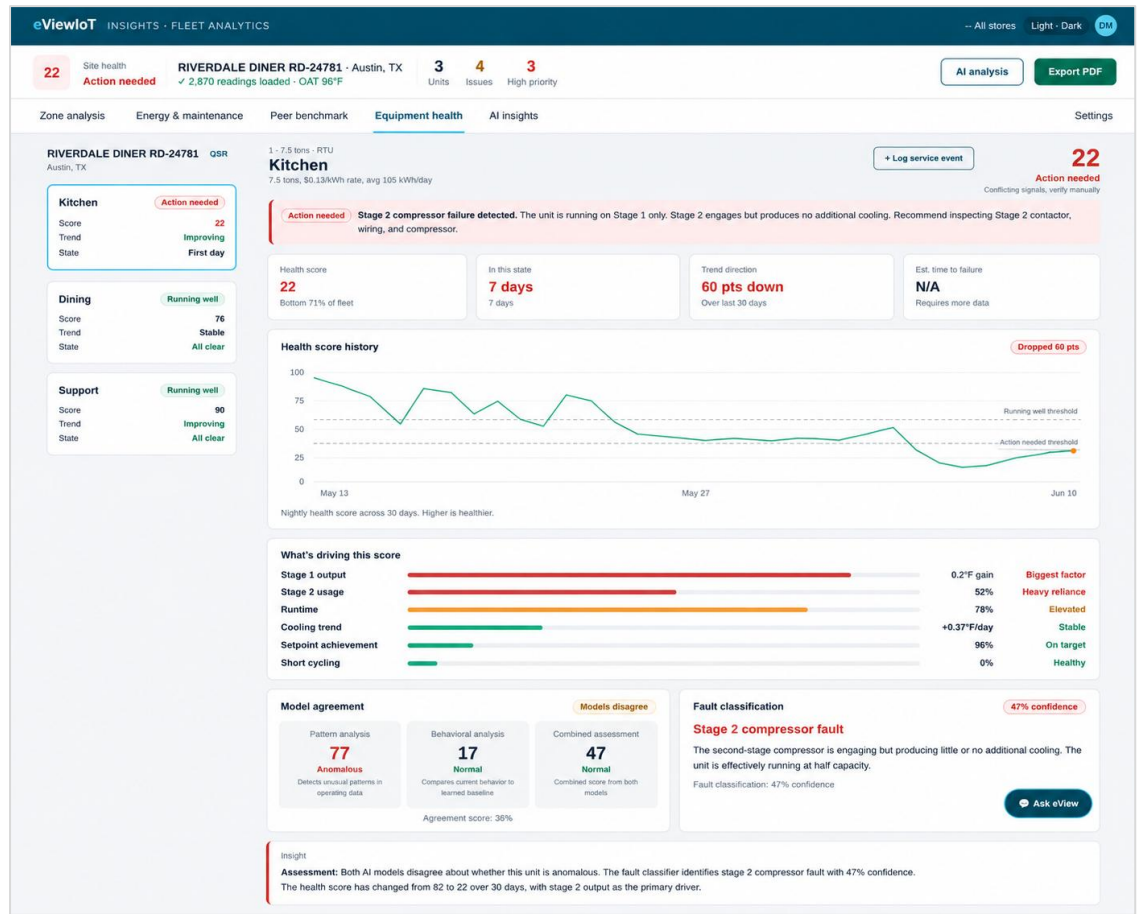
/ Use Cases

Current and vibration features feed a compressor degradation classifier at the edge, while walk-in and reach-in temperatures are tracked with alerts. Health scores and fault classification show where equipment is heading, with a confidence level.

HVAC Fault Detection

Refrigeration Health

Portfolio Energy Management



Equipment Health view — actual operating data, anonymized

BEFORE · Reactive

Product loss is what triggers the alarm.

AFTER · Predictive

Compressor service scheduled before failure; inventory and food safety protected.

KEY CAPABILITIES

- Walk-in & reach-in temperature alerts
- Equipment health scoring
- Multi-model fault classification

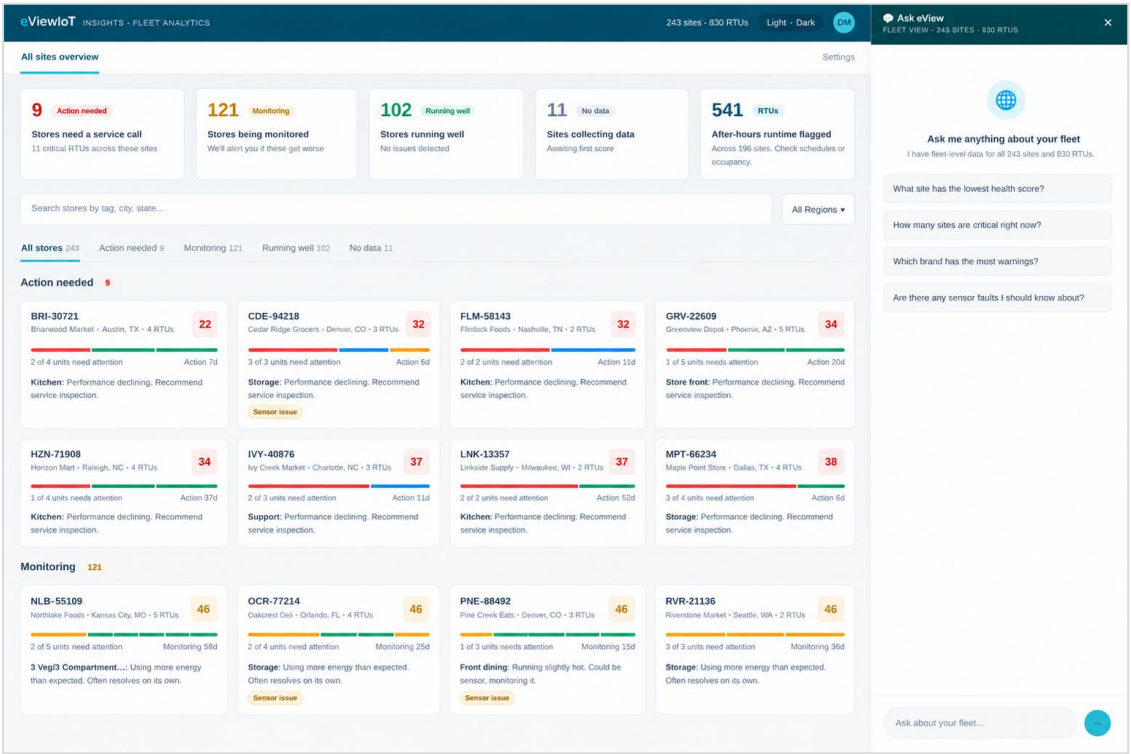
/ Use Cases

One view of every site: fleet-wide health scoring, a prioritized service queue, and AI site analysis. Energy & Maintenance views tie equipment performance to energy cost, with automated pre-cooling and site-level metering to verify savings.

HVAC Fault Detection

Refrigeration Health

Portfolio Energy Management



All Locations view — actual operating data, anonymized

BEFORE · Reactive

Site-by-site reviews, fixed schedules, and no way to verify savings.

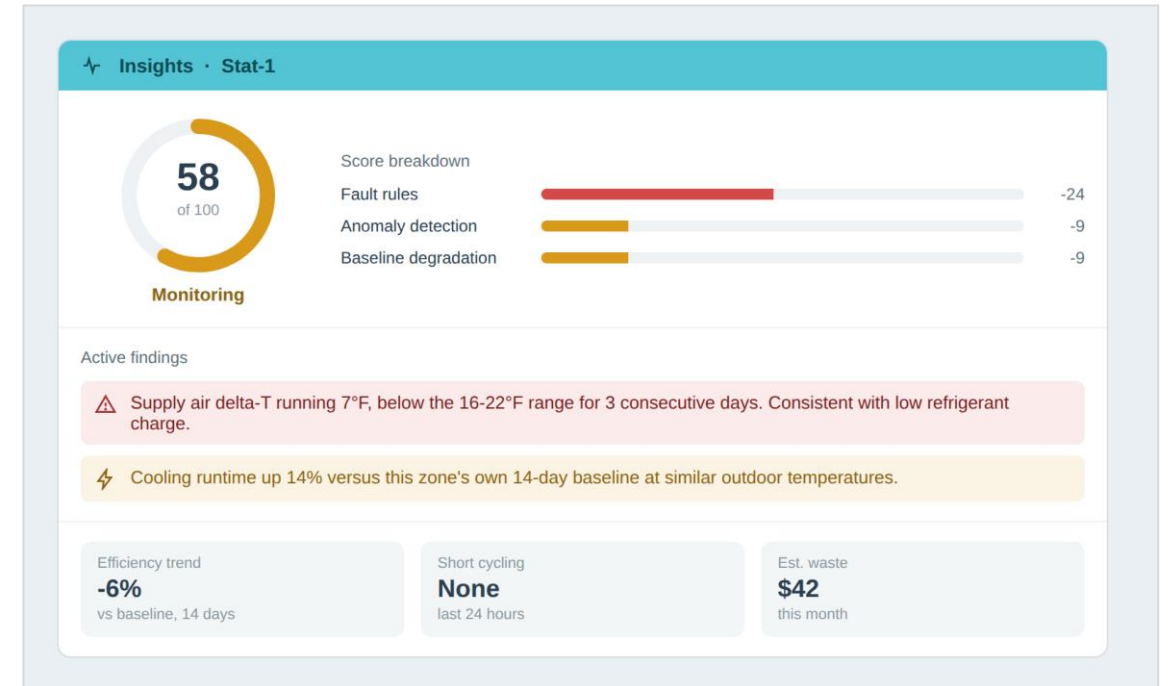
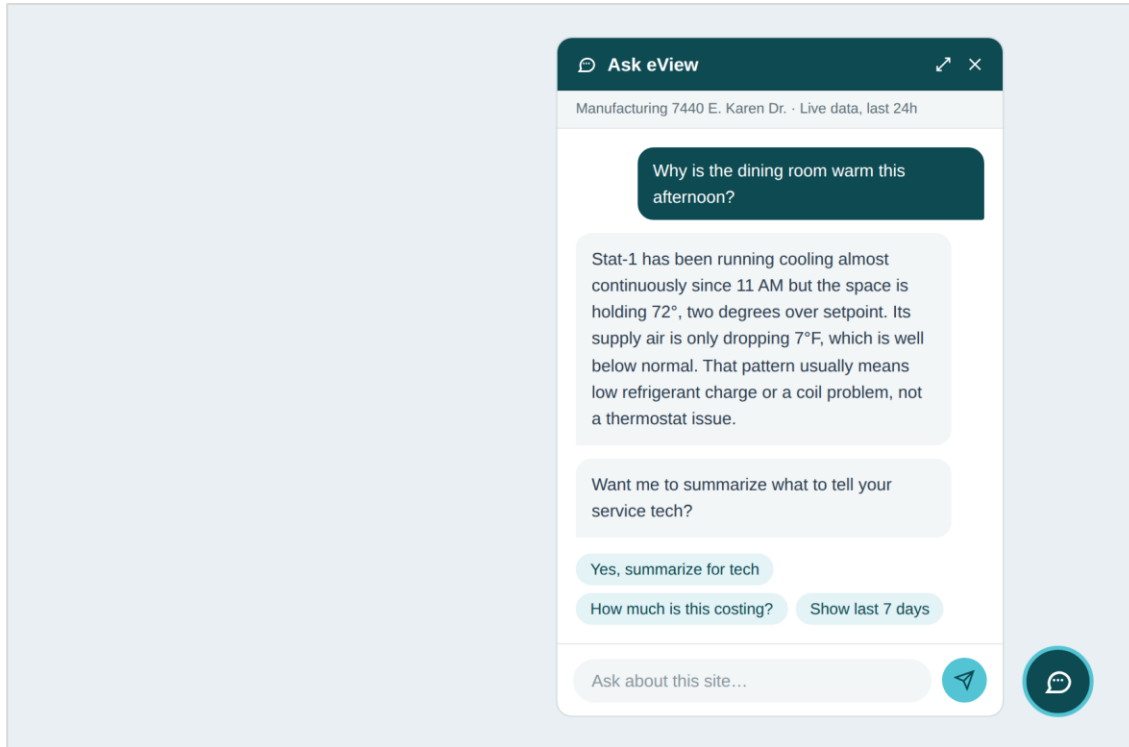
AFTER · Predictive

Resources focused on the highest-impact sites, with ESG-ready energy data.

KEY CAPABILITIES

- Prioritized service queue
- Consumption tracking by site
- Automated pre-cooling optimization

/eViewIoT Pro AI in Action



Ask eView — Live AI Assistant

Ask in plain English, such as “Which RTU is closest to failure?”, and get answers in seconds from live fleet data, with a one-click summary for the technician.

AI Insights & Equipment Health

A common AI engine scores every unit from fault rules, anomaly detection, and baseline degradation, then ranks actions by energy waste and repair cost avoided.

/ Measured Customer Results

< 18

months

to full return on investment

Affordable BMS with edge-AI economics, within reach for small and mid-sized buildings

12–30%

Energy consumption reduction

25–40%

Fewer unplanned service events

30–40%

Faster deployment times

50–70%

Faster problem identification

8–12 hrs

Labor hours saved weekly per portfolio manager

60%

Less time on ESG compliance reporting

Source: Engenuity Systems customer deployments of eViewIoT Pro, as presented on the EDGE AI FOUNDATION live stream (June 2026). Results vary by site, equipment, and baseline.

/ Summary & Next Steps

Benefits

1. **Lower Energy Spend:** 12–30% energy reduction in customer deployments, verified with site-level metering.
2. **Fewer Emergency Repairs:** Edge AI detects equipment drift days before failure, with 25–40% fewer unplanned service events.
3. **One Platform:** Monitoring, control, AI fault detection, and Ask eView for every site, on Avnet /IOTCONNECT and AWS.

Outcomes

1. **Predictive Operations:** HVAC and refrigeration move from break-fix to planned maintenance.
2. **Protected Inventory & Comfort:** Refrigeration and comfort issues are caught before product loss or complaints.
3. **Fast Payback:** Full ROI in under 18 months, with ESG-ready energy reporting.

Next Steps

Start a Low-Cost Pilot on AWS Marketplace

Contact us: sales@avnet.com | support@iotconnect.io

More About Avnet /IOTCONNECT & Softweb Solutions (an Avnet company)

/ About Avnet

AVNET

Quick facts

- Founded in 1921
- Headquartered in Phoenix, Arizona
- AVT listed on the NYSE since 1960
- AVT listed on NASDAQ since 2018
- #181 on FORTUNE 500 (US) in 2025

14,500+

Employees
worldwide

2,000+

Engineers around
the world

3.3M+

Engineering
community members

450K

Customers in
140 countries

250+

Locations
globally

\$22.2B

FY25 Revenue

Avnet Capabilities

AVNET

AVNET®

CORE SEMI

softweb
solutions

AN AVNET COMPANY

CLOUD APPLICATION DEVELOPMENT

TRIA™
AN AVNET COMPANY

EMBEDDED MODULES
& BOARDS

/IOTCONNECT™

IOT PLATFORM
FOR OEMS

W
Witekio

AN AVNET COMPANY

EMBEDDED SOFTWARE
DESIGN SERVICES



DESIGNED BY AVNET

SOLUTIONS DEVELOPMENT:
ADVANCED APPLICATIONS GROUP



Cloud Migration | MAP SPRINTS

Migrate data sets and apps to the cloud securely



AWS AI / ML | Gen AI

Rekognition, SageMaker, Bedrock & more



Mobile Applications

Powerful mobile apps for global audiences



Server Monitoring

Detect cloud computing and network issues



Big Data & Analytics

Scalable and secure big data solutions



Enterprise Applications

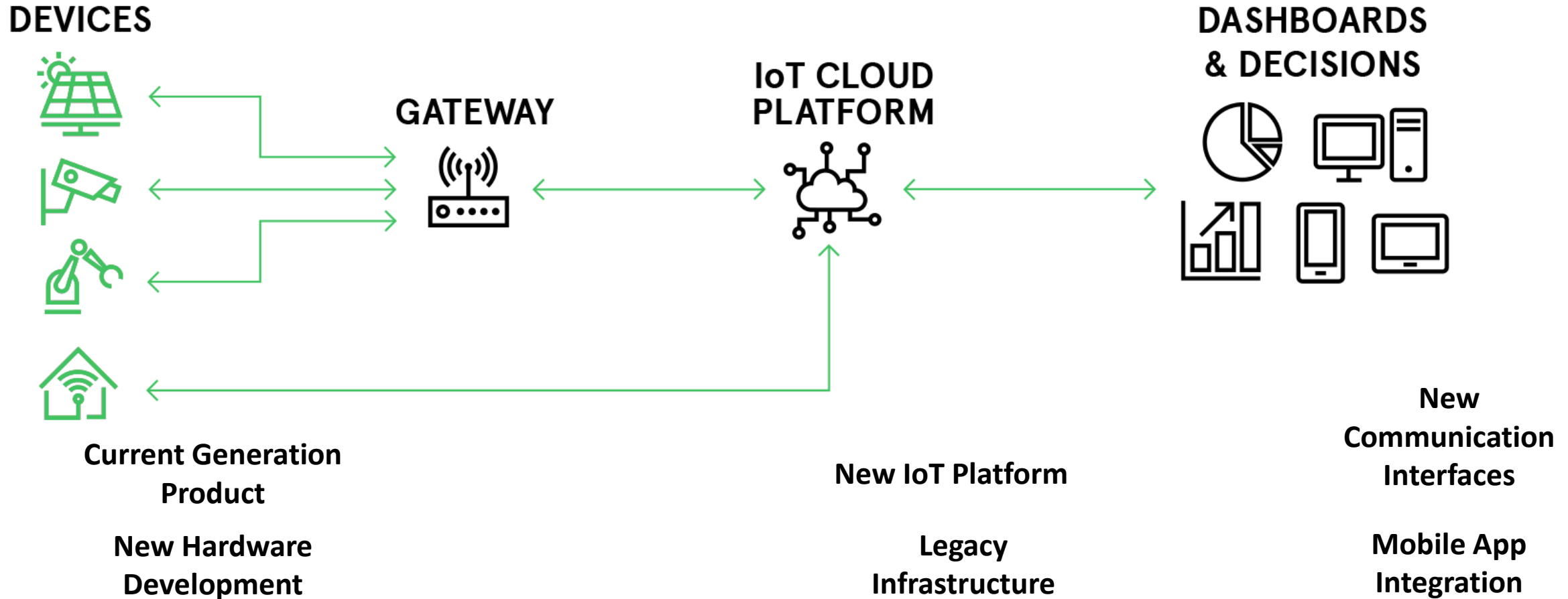
Mission-critical apps running on AWS



Managed Services

Infrastructure management on AWS

/ Challenge of IoT



Developing an IoT product is costly, cumbersome, and time consuming.

/ Challenge of IoT

DEVICES



GATEWAY



IoT CLOUD PLATFORM



DASHBOARDS & DECISIONS



/ IOTCONNECT[®]

With /IOTCONNECT, IoT development becomes simple, secure, and scalable.

Things

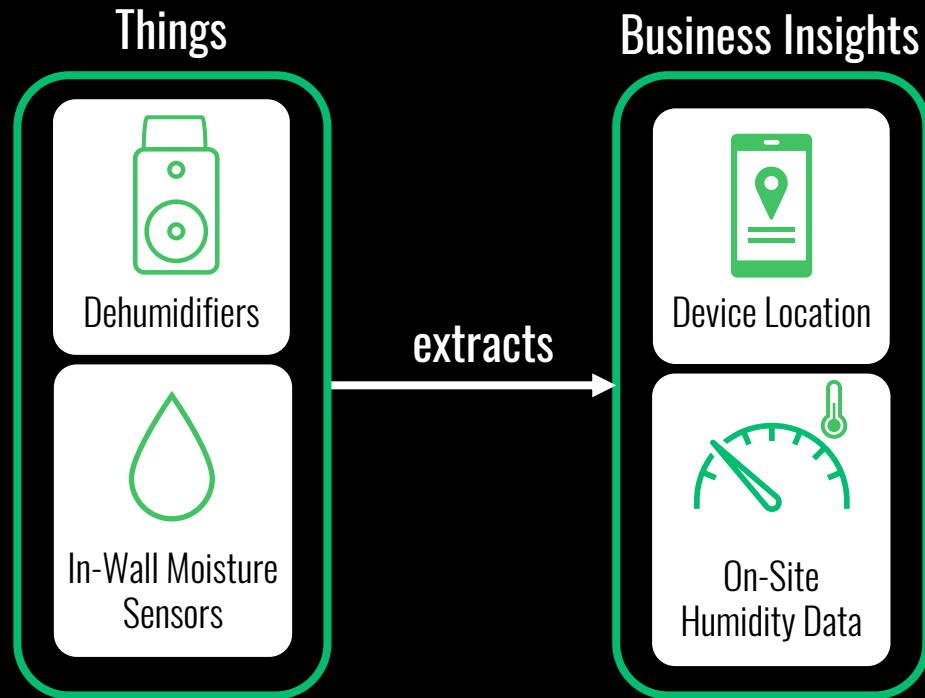


Dehumidifiers

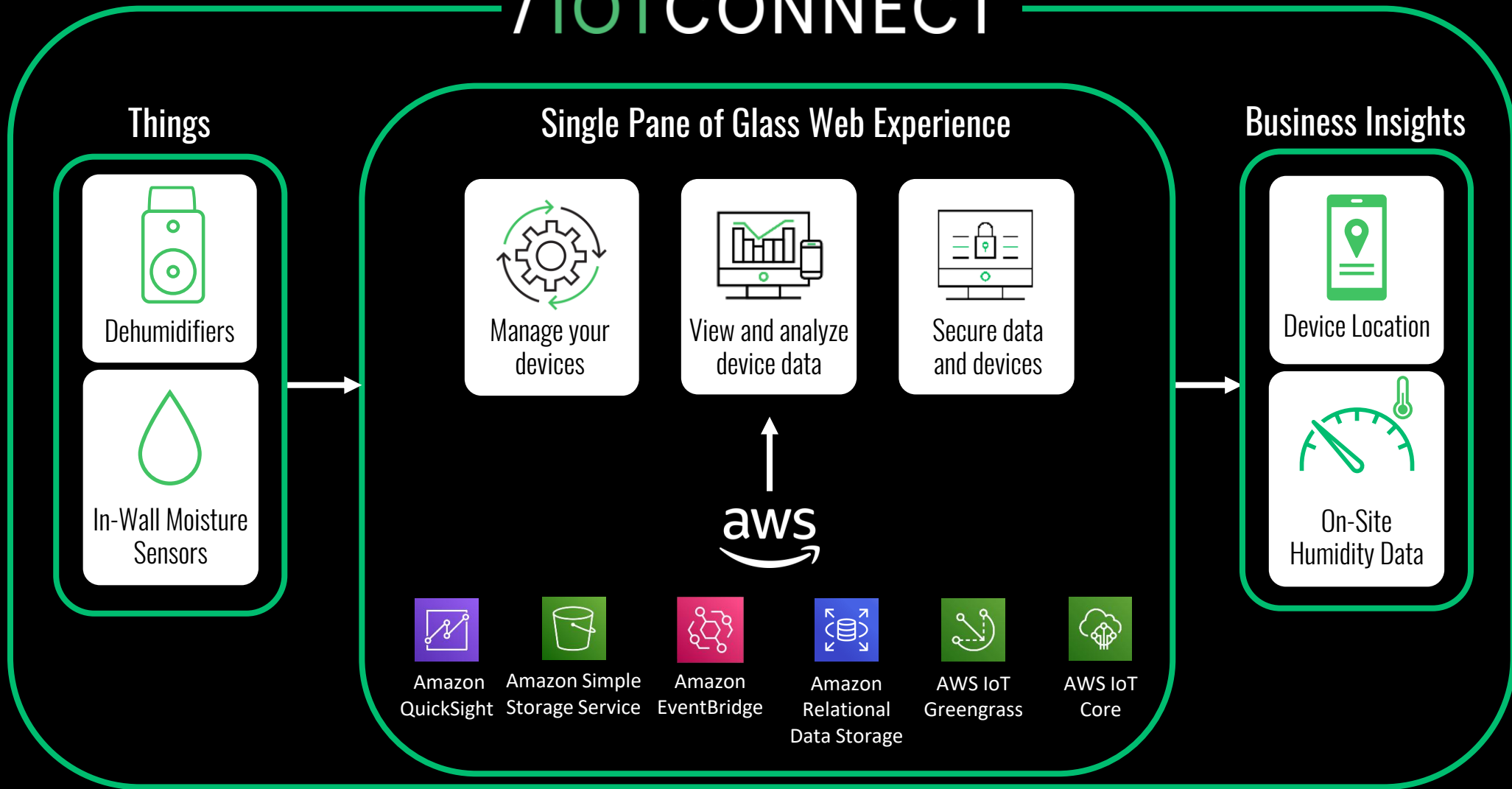


In-Wall Moisture
Sensors

It takes **things** like **connected dehumidifiers** and **moisture sensors**

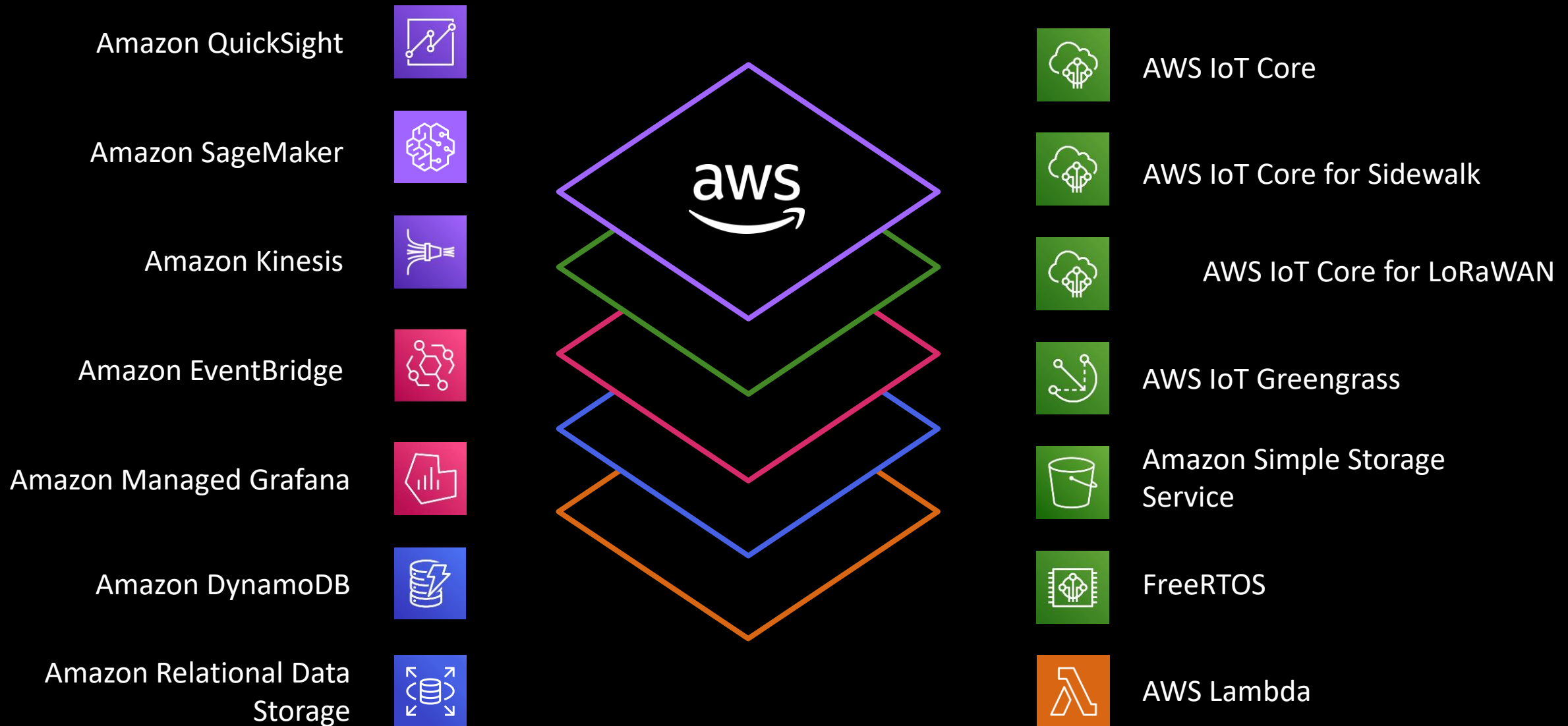


and **extracts valuable insights** to improve business intelligence



to create a **single pane of glass** experience

that's **built on AWS**



We take needed **AWS services** for IoT solution development



/IOTCONNECT[®]

Solutions Suite

AVNET

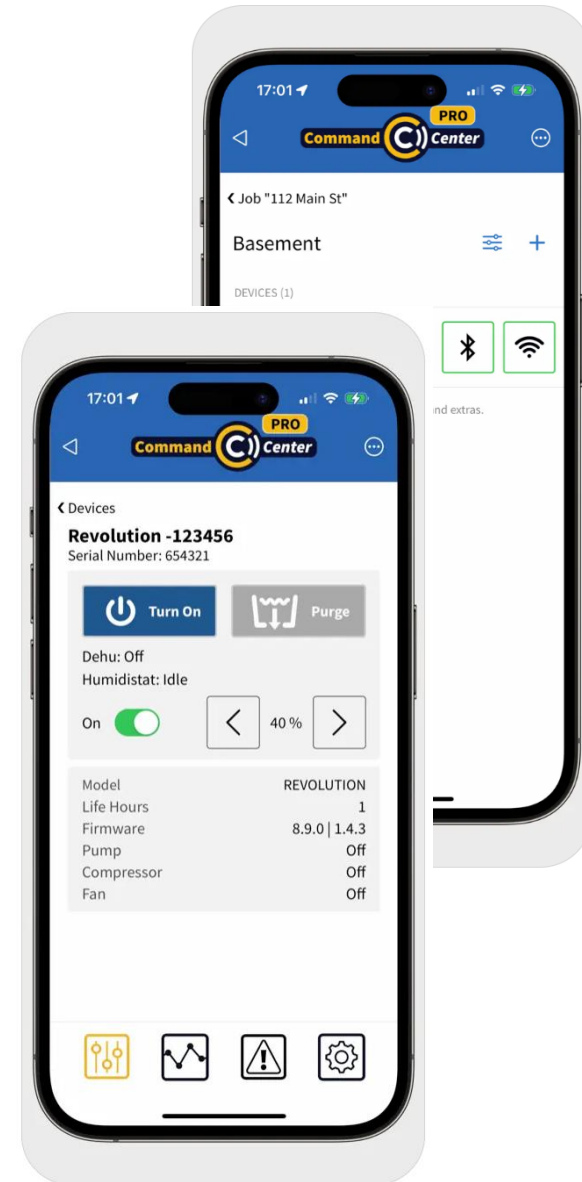
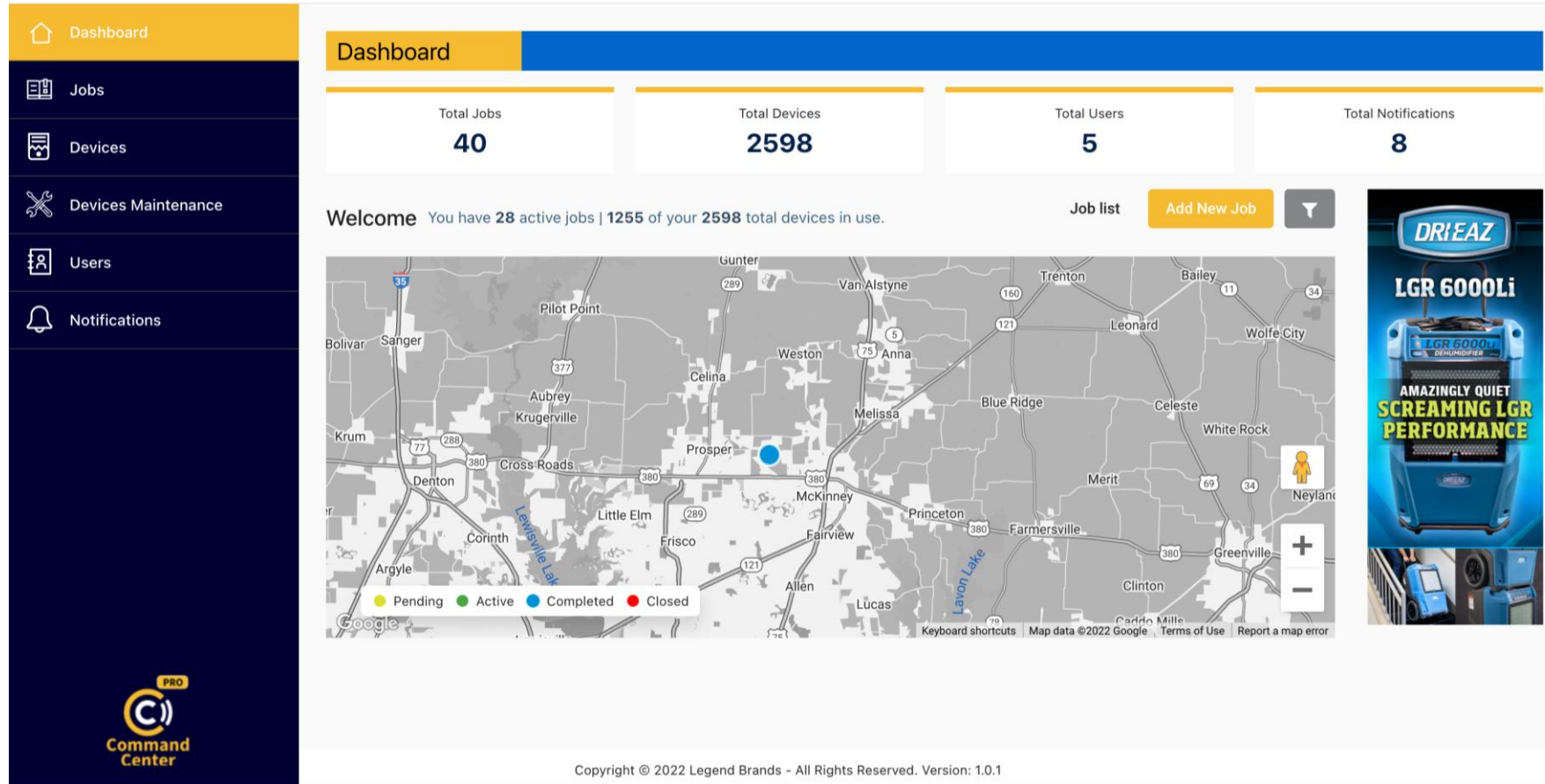


One interface for AWS
services

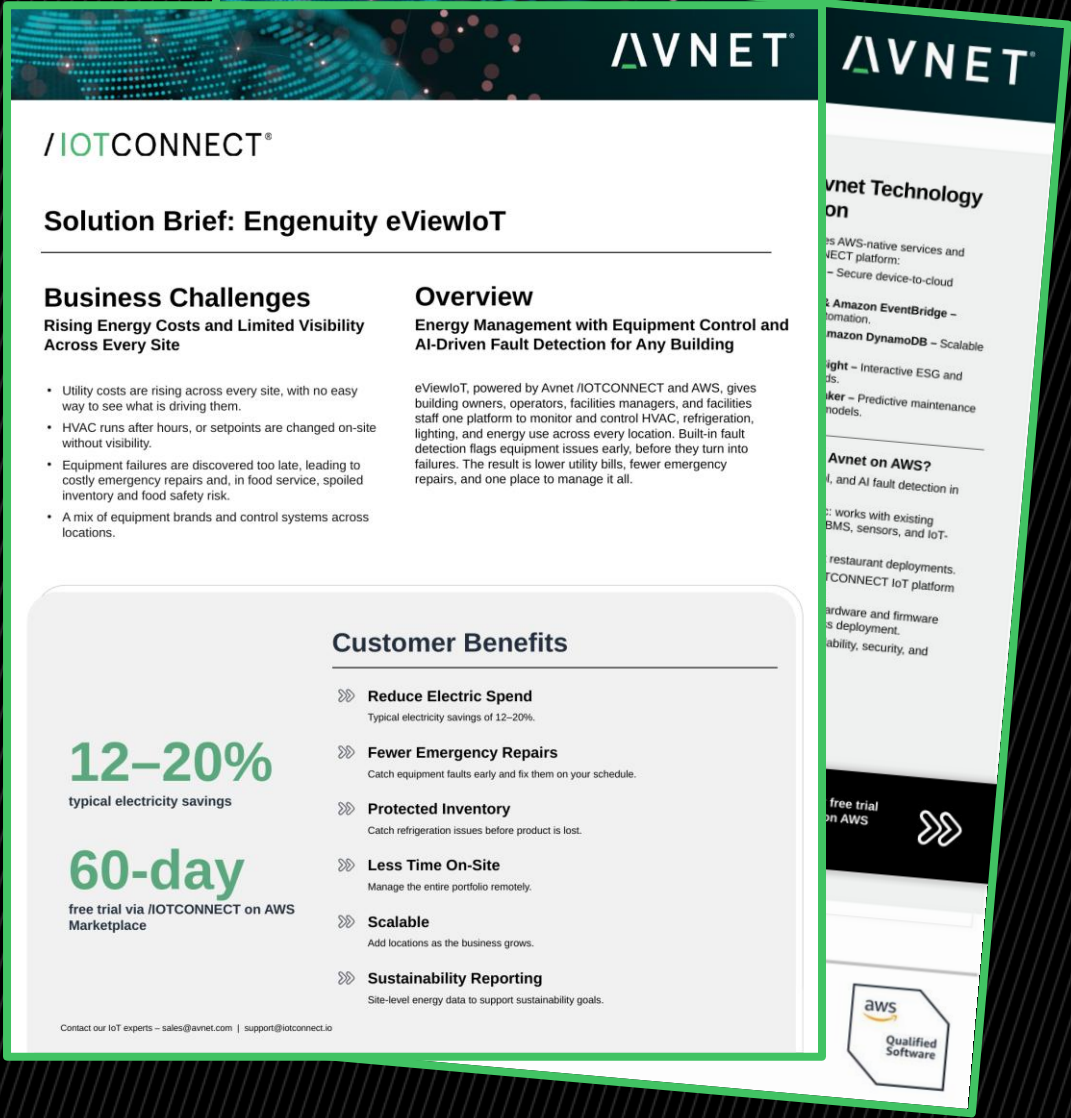
And aggregate them to create **one ecosystem** for **production ready IoT**

/IOTCONNECT SaaS Application in Action

AVNET



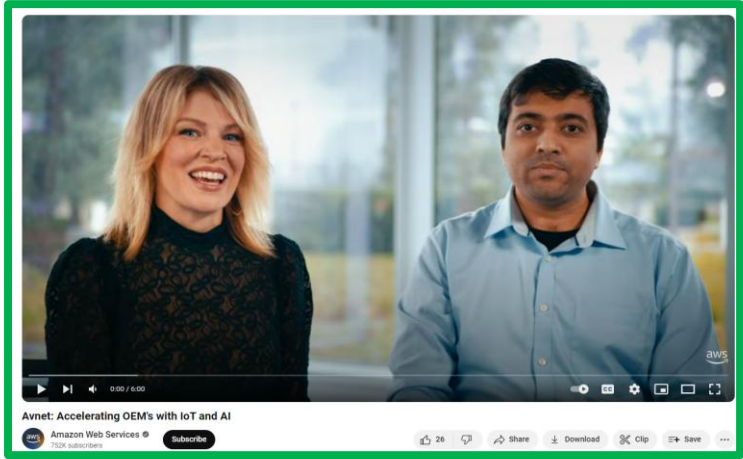
Next Steps



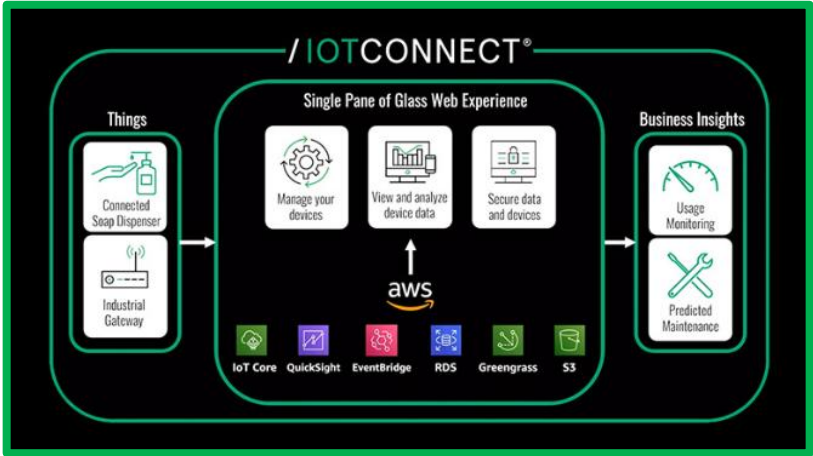
Contact us!

Learn more

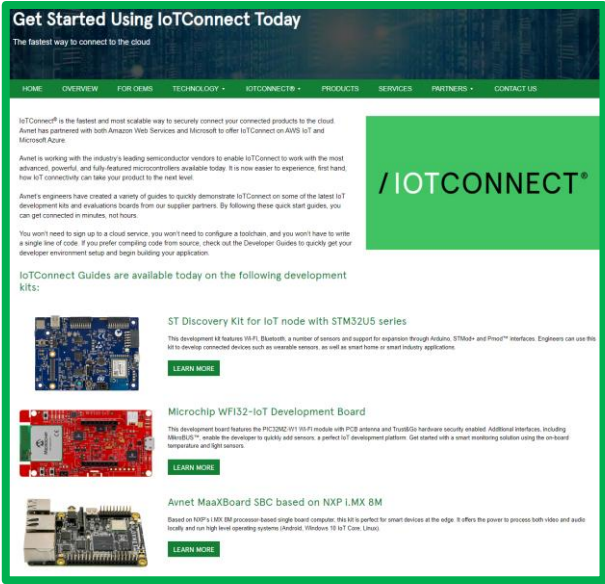
/Resources



[Avnet and AWS:
This is My Architecture](#)



[Avnet
/IOTCONNECT Webinar](#)



[/IOTCONNECT Quick Start
Development Kits](#)

/IOTCONNECT Quick Start Enablement

IoTConnect Guides are available today on the following development kits:



ST Discovery Kit for IoT node with STM32U5 series

This development kit features Wi-Fi, Bluetooth, a number of sensors and support for expansion through Arduino, STM32+ and Prox™ interfaces. Engineers can use this kit to develop connected devices such as wearable sensors, as well as smart home or smart industry applications.

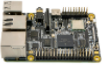
[LEARN MORE](#)



Microchip WFI32-IoT Development Board

This development board features the PIC32MZ101 Wi-Fi module with PCB antennas and TrustZone hardware security enabled. Additional interfaces, including MicroBLU™, enable the developer to quickly add sensors, a perfect IoT development platform. Get started with a smart monitoring solution using the on-board temperature and light sensors.

[LEARN MORE](#)



Avnet MaaXBoard SBC based on NXP i.MX 8M

Based on NXP's i.MX 8M processor-based single board computer, this kit is perfect for smart devices at the edge. It offers the power to process both video and audio locally and run high level operating systems (Android, Windows, IoT Core, Linux).

[LEARN MORE](#)



Renesas CK-RX65N Cloud Kit Based on RX65N MCU Group

This kit combines the RX65N MCU with an LTE Cellular CAT-M1 module and Ethernet connectivity. With IoTConnect support, you start capturing data in the field and send to the cloud in minutes.

[LEARN MORE](#)



Infineon XENSIV Kit with PAS CO2 sensor

The XENSIV™ connected sensor kit is ideal for battery-powered IoT devices. Its small size hides a lot of performance. With both Wi-Fi and Bluetooth connectivity, the kit includes a CO2 sensor and the OPTIGA™ Trust M security device. The kit works with IoTConnect's Secure Device Management features to provide IoT connectivity with total end-to-end security.

[LEARN MORE](#)

Pick a Board

Access our quick start landing page to look at the variety of developer board options that we have enabled. Select which board fits your need.

README

IoTConnect SDK for STM32-U5 based on X-Cube-Azure

SDK and sample application to connect [STM32U5 IoT Discovery Kit](#) to IoTConnect.

The QuickStart Guide below provides a binary image to program the board for quick evaluation of the sample application.

- [QuickStart Guide](#)

Use this Developer Guide to setup the project and modify the source to further develop using the sample application.

- [Developer Guide](#)

The BG96 Module from the [P-L496G-CELL02 Combo](#) is also supported by this project. To run your board with this module, follow the respective BG96 sections linked in the Developer or QuickStart guides.



Access GitHub

Click the GitHub link to see the sample code we have created for each of these developer kits. These include templates and dashboards.

Select a Personal Plan



Test Drive

2 Months Free

- Messages **30K** (Max)
- Devices **5** (Max)
- Users **5** (Max)

[SUBSCRIBE NOW](#)

No Credit Card Required.

Sign up for Free Trial

Using the provided link from the quick start guide, sign up for a free /IOTCONNECT account and demo all of the design acceleration features.

Temperature



Pressure



Humidity



Env Sensors



Device Command

Select Command: Parameter Value:

[Execute Command](#)

Command	Executed On (UTC)	Status	Executed Count
accelerometer	2023-08-21 15:05:45	30	
accelerometer	2023-08-21 15:05:45	-17	
accelerometer	2023-08-21 15:05:45	1011	
X Axis Check			
Button Count	2023-08-21 15:33:45		

Start Developing

With dynamic dashboards and easy onboarding widgets, /IOTCONNECT makes designing for your application simple, secure, and scalable.

Appendix

/IOTCONNECT™ Supports All Devices

AVNET

aws
Services



AWS IoT Core



AWS IoT Core for
LoRaWAN amazon sidewalk



AWS IoT Greengrass
+ Greengrass lite

Device
Types



Connected
Devices



Gateway &
Child Devices



Private
LoRaWAN
Base Station



Private
LoRaWAN
Concentrator



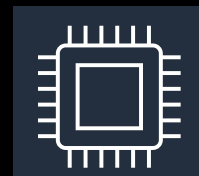
Public
LoRaWAN
Device



Amazon
Sidewalk
Device

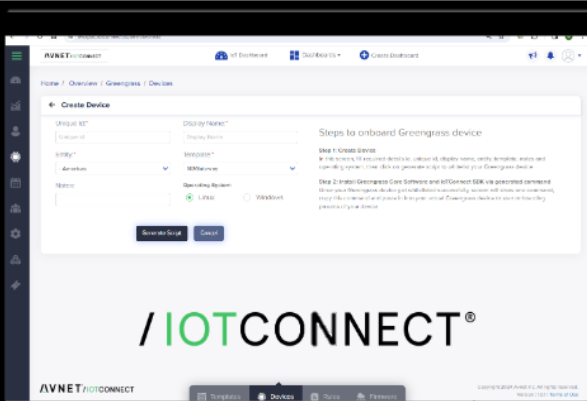


Edge Server
or Gateway



Memory Constrained
Edge Device

Device
Enablement



yocto
LINUX



AWS IoT
Greengrass



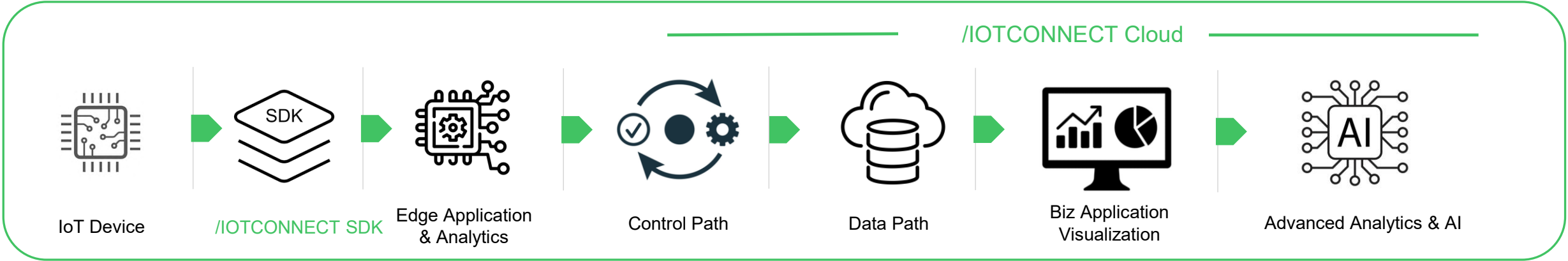
ECLIPSE
FOUNDATION
ThreadX



Ubuntu

/IOTCONNECT™ enables ALL devices types through a single pane of glass.

/IOTCONNECT Building Blocks w/ AWS



FreeRTOS



Python



Greengrass



IoT Core



RDS



QuickSight



SageMaker



C



EventBridge



S3 Data Lake



Grafana

Transport



LoRaWAN™

PRIVATE | PUBLIC



Kinesis



S3



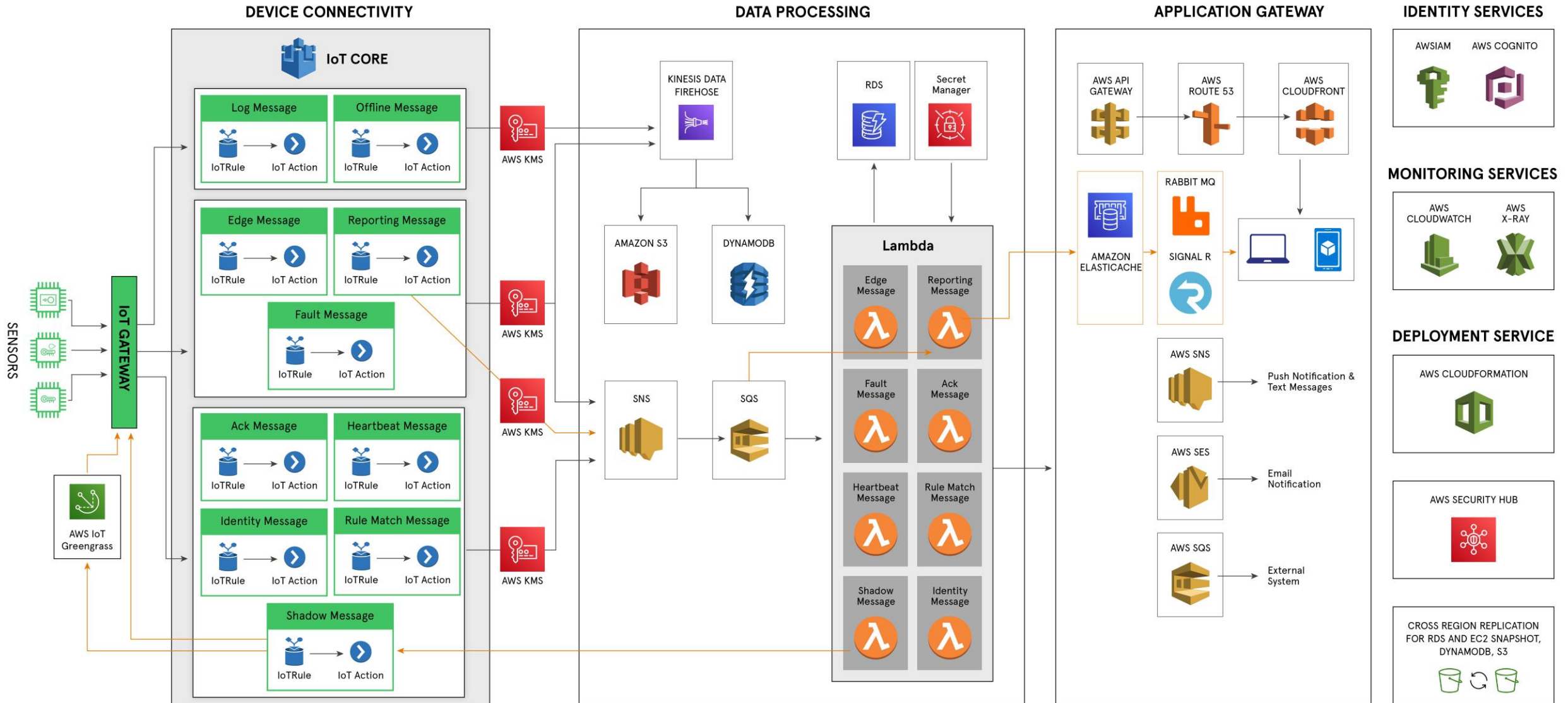
Lambda



DynamoDB

/IOTCONNECT®

/IOTCONNECT Platform Architecture



//IOTCONNECT Developer Personas



- Device, User, Roles, and Entity Admin
- Security manag
- Basic dashboarding
- Internal Ops

Device Builders & Deployment Managers



- RESTful API
- Predictable URLs
- Intelligent error handling
- OAuth 2.0 authentication
- Access to all IoT functions

Application & UX Developers



- Dynamo DB, S3
- Signal R
- MQTT
- Grafana
- AWS SNS

Cloud Developer & Data Science

/IOTCONNECT SDKs: Deliver a Positive Developer Experience



Objectives:

- Deliver device-builders a positive developer-experience
- Integrate into the Avnet Supplier's development flow and ecosystem
- Provide confidence for a successful outcome at the onset of our customer's IoT journey



Software Resources

- /IOTCONNECT Enablement, Witekio, and Softweb service teams
- Access to global and scalable Avnet software services
- Skills: C, Python, Java, OS/RTOS, Applications, AI/ML



Deliverables

- /IOTCONNECT Library
- SDK (C / C# / Python / ...)
- Test Strategy
- Platform Targeted Samples
- Developer Guide
- QuickStart Experience

/ Device Enablement: SDKs

Generic SDKs

Multiple Languages and Environments



Platform-specific SDKs

Development Boards and Embedded Hardware



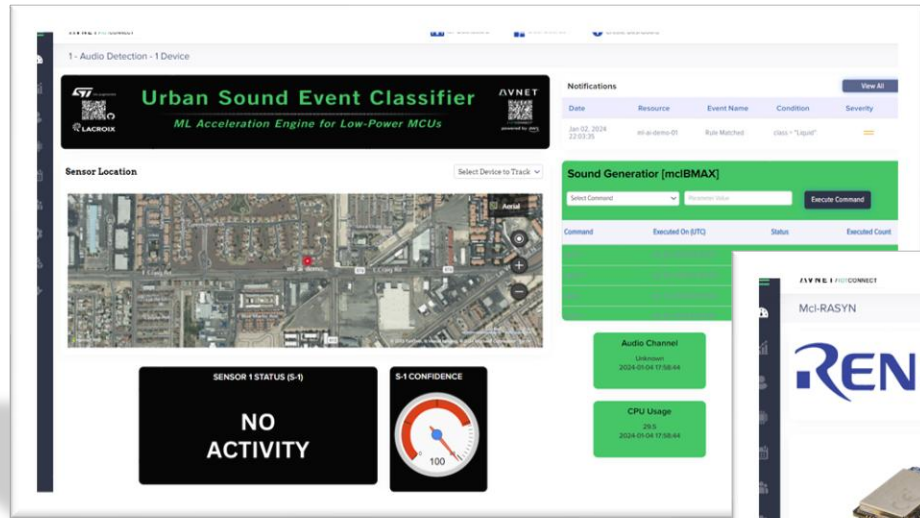
 <https://docs.iotconnect.io/iotconnect/sdk/>

 <https://github.com/avnet-iotconnect/>

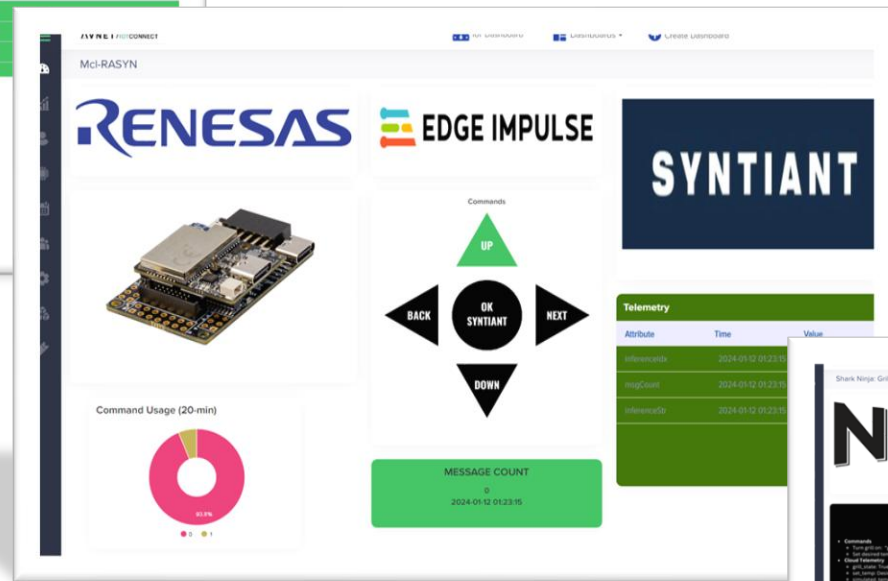


/IOTCONNECT AWS Demo Examples

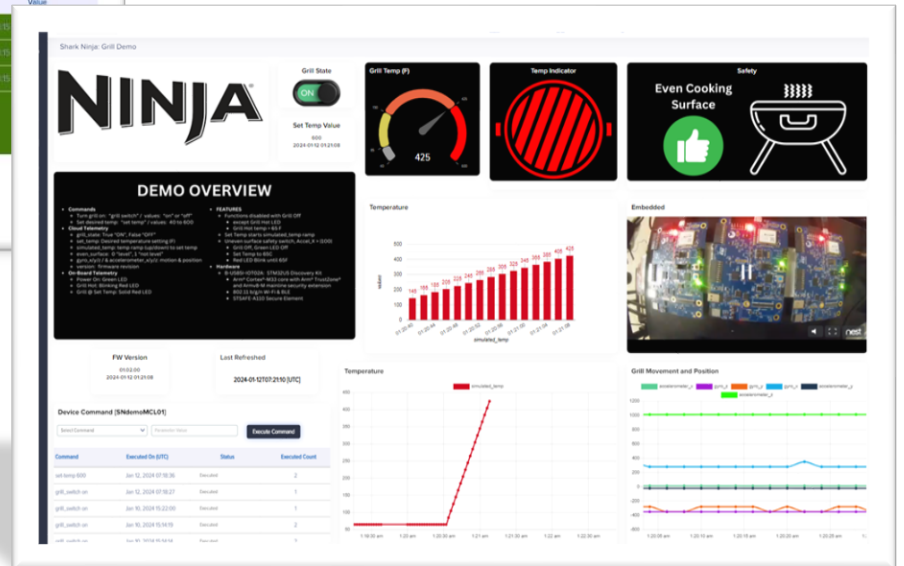
AVNET



AI/ML Audio Classification



Edge ML Voice and Motion Detection



Consumer Indoor Grill