

Qualcomm

Qualcomm® IQ Series Processors & Qualcomm® IoT Solutions Framework

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@qualcomm



Qualcomm

At the forefront of industrial intelligence

All end points are getting **connected**

Connected endpoints are becoming more **intelligent** at the **edge**

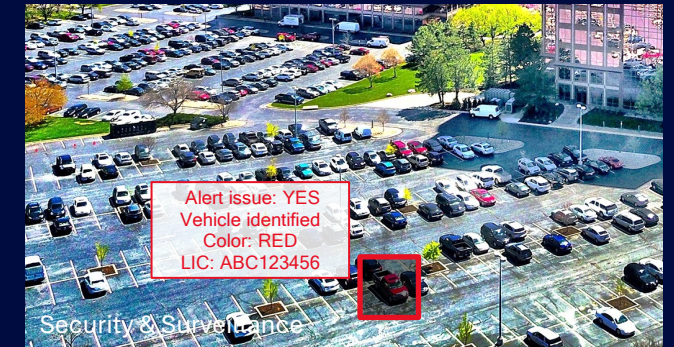
The intelligent edge offers more **insights** through **sensing, analyzing, actuation**

Solutions offer the ability to **scale across** verticals and market segments

Dash Camera, Vehicle Gateway



Public Safety, Law Enforcement, Traffic Control



Collaboration, Live Broadcasting



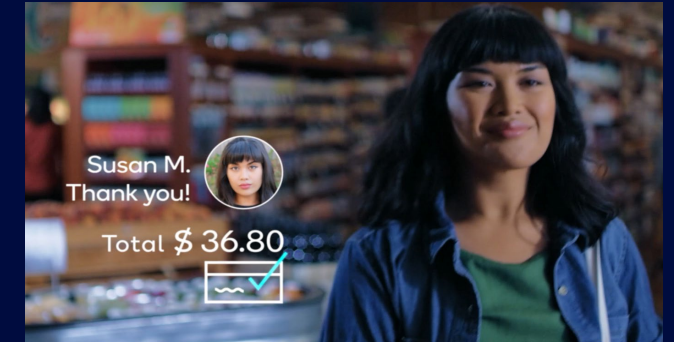
Integrated Physical Security, Video Surveillance



Drones, Robotics



Frictionless Retail, Loss Prevention



A new family of industrial-grade platforms

Qualcomm

IQ9 Series

Qualcomm

IQ8 Series

Qualcomm

IQ6 Series

A solution framework designed for powerful solution building



Industrial worker assistance



Security and monitoring



Incident response and asset inspection

Cutting-edge technologies and innovations driving the era of industrial intelligence

Introducing:

Qualcomm

IQ9 Series

Qualcomm

IQ8 Series

Qualcomm

IQ6 Series

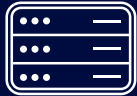
IQ Series – Industrial-grade platforms designed for the most demanding and heaviest industrial workloads



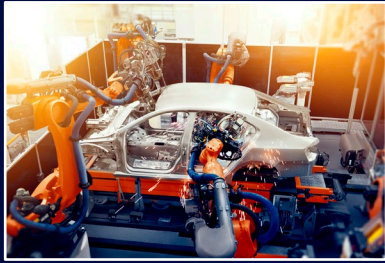
Industrial Machine Vision



Factory automation



Automatic data capture



Industrial Automation



Smart Manufacturing



Smart Warehousing



Low Speed Autonomy



Off-highway vehicles



First mile, last mile



Inspection & Monitoring



Asset inspection



Industrial monitoring



Industrial Edge



Compute platforms



Industrial controllers



Industrial-grade safety across demanding temperature environments

System and equipment support to increase uptime and reliability across construction sites, factories, warehouses, and substations



Dedicated Safety Island

An independent system with its own compute, memory, and input/output resources to manage and monitor safety-related tasks such as error detection, with recovery mechanisms for enhanced reliability

Error Correction Code Memory

Detects and corrects single-bit errors and detects double-bit errors in memory to prevent data corruption and system crashes, ensuring data integrity, reliability, and uptime of devices




100 TOPS

Supports Llama2
Runs 13B parameter models
Generates 12 tokens/sec



Qualcomm® Kryo™
Gen 6 CPU

8 high-performance
cores
up to
2.55 GHz



Qualcomm® Adreno™
663 GPU

Qualcomm



IQ9 Series



**ECC Memory
& Dedicated
Safety Island or
Real-time
Subsystem**

**Expanded operating
temperature range**

- 40°C **+ 115°C**



4k
**170 fps encode
275 fps decode**

Support for up to
16 concurrent
cameras

Qualcomm

IQ-9075

Qualcomm

IQ-9100


10+ years
Product longevity period



**High ball
pitch design**



Software stack



Support for
Qualcomm® Linux™ software
stack and Ubuntu

Industry-leading connectivity

Reliable and
exceptional speed
bandwidth, and
peripheral support
powering a wide range
of wireless applications








40 TOPS

Supports Llama2
Runs 13B parameter models
Generates 9 tokens/sec


**Qualcomm® Kryo™
Gen 6 CPU**



4 high-performance
cores
+4 efficiency
cores
up to
2.35 GHz



**Qualcomm® Adreno™
623 GPU**




Qualcomm

IQ8 Series



**ECC Memory
& Dedicated
Safety Island or
Real-time
Subsystem**


**Extreme operating
temperature range**



- 40°C **+ 125°C**

4k

85 fps encode
135 fps decode







Support for up to
12 concurrent
cameras

Qualcomm

IQ-8275

Qualcomm

IQ-8300

<p>10+ years Product longevity period</p> 	<p>High ball pitch design</p> 	<p>Software stack</p>  <p>Support for Qualcomm® Linux™ software stack and Ubuntu</p>	<p>Industry-leading connectivity</p> <p>Reliable and exceptional speed bandwidth, and peripheral support powering a wide range of wireless applications</p> 
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Qualcomm® Kryo™ Gen 4 CPU

2 high-performance
cores
+6 efficiency
cores
up to
1.9 GHz



Qualcomm® Adreno™ **612 GPU**



On-device AI
workload processing



Qualcomm

IQ6 Series

Rich I/O Interfaces

- Wi-Fi
- PCIe
- Ethernet
- USB



Wide operating
temperature range

- 40°C

+ 105°C



Decode in

4k at 60fps
1080p at 60fps encode

Support for up to

6 concurrent
cameras



Qualcomm

IQ-615

10+ years

Product longevity period



High ball
pitch design



Software stack



Support for
Qualcomm® Linux™ software
stack and Ubuntu

Industry-leading connectivity

Reliable and
exceptional speed
bandwidth, and
peripheral support
powering a wide range
of wireless applications



Developer friendly: Multi-OS

Qualcomm® Linux®

Qualcomm® Linux® offering for IoT development with LTS Kernel, multi-SoCs support & focused upstream compliance.

Ubuntu

Qualcomm Linux uses the open-source Ubuntu operating system (OS) to sync, build, and flash the Qualcomm Linux software, and helping add to the ease of use, support longevity, and cloud scalability potential of these chipsets.



Qualcomm® AI Hub

Model
Selection



Qualcomm
AI Stack



Target
Platforms

New:

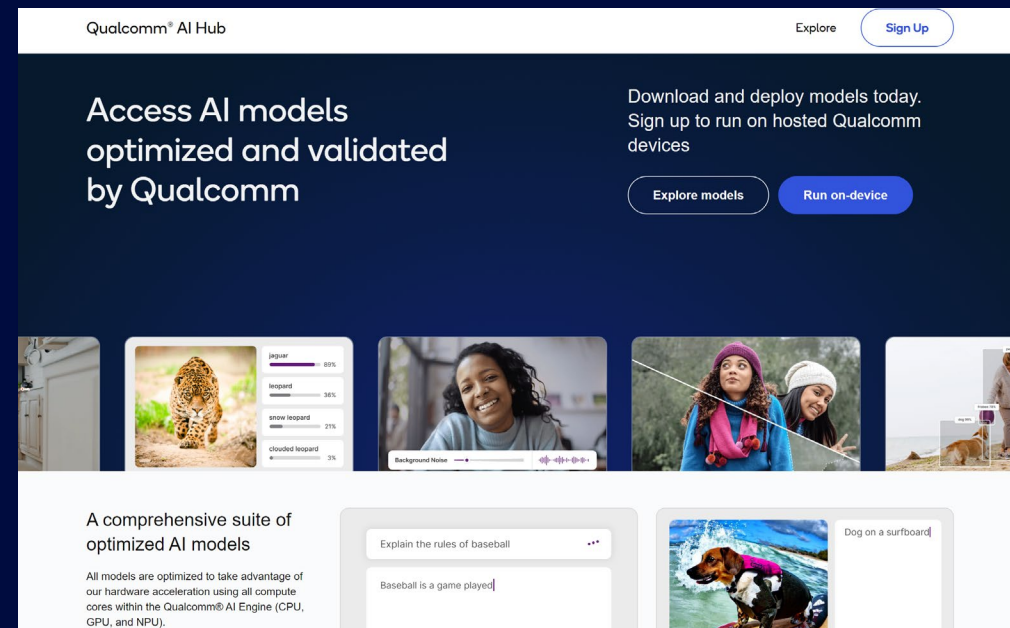


Deployment

```
import qai_hub as hub
# select device

device = hub.get_device("qualcomm-snapdragon-8gen2")
# produce model
job = hub.submit_compile_and_profile_job(force_model_name="MyDetector", device=device, input_shapes=[(3, 720, 1024)])

# deploy to device
model = job.download_target_model()
```



Qualcomm® IoT Solutions Framework





Retail



Smart Home



Enterprise & Buildings



Industrial Automation



Energy



Worker assistance



Payment and Vending



Smart Cart



Picking efficiency



Self Checkout



Task Automation



Personal Concierge



Scheduling



Health Monitoring



Fitness & Education



Intelligent traffic Systems



Driver Monitoring



Asset Tracking



Video Collaboration



Surveillance



Smart Manufacturing



Smart Warehousing



Off-highway vehicles



Asset inspection



Predictive maintenance



EV Charger



Home Energy Manager



Smart panel



Battery Storage controller

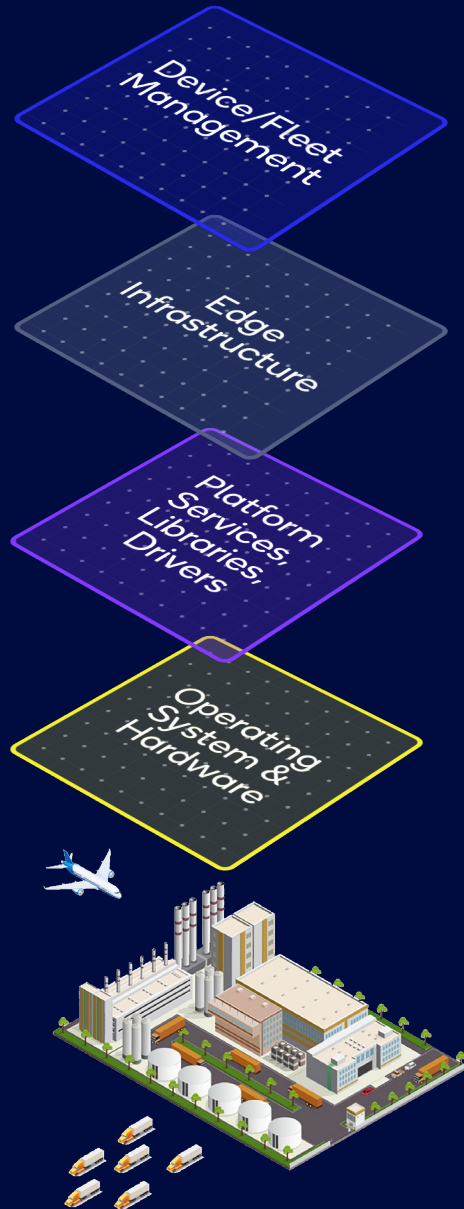


Smart sensors with AI

Qualcomm IoT Solutions Framework

Offers developer tools, reference blueprints, and a partner ecosystem to help build ready to deploy solutions that address industry challenges

- Enables easy development
- Reduces time to implementation



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Workflows designed for powerful solutions

Device/fleet management

FoundriesFactory™

Edge infrastructure

Qualcomm® AI Hub: Model selection, model optimization, and model tuning

Robotics SDK / ROS 2 Nodes

Container Orchestrator

Microservice sampling

Vision AI Microservice

People Counting

Behavior Analytics

Camera Streaming

Object Tracking

Video Storage

Product Recognition

Robotics Microservice

Navigation

Mapping

Object Detection

Depth

Manipulator

Localization

Solutions

Vision AI Solutions

Intelligent Video Recorder

Store Analytics

Surveillance

Robotics Solutions

People Counting

Behavior Analytics

Platform Services, Libraries, Drivers, SDKs

Intelligent multimedia SDK

Gstreamer plugins

Robotics SDK (ROS2)

FastCV

SNPE

PulseAudio

Codec2 / OMX

DSP, NPU

Wayland/Weston

Container RT

Storage

Hypervisor

QNN

Camx/Camara

Video

Display

GPU

Security

Connectivity

Operating system

Android

Linux

Ubuntu

Hardware

AI Box

Network Video Recorder

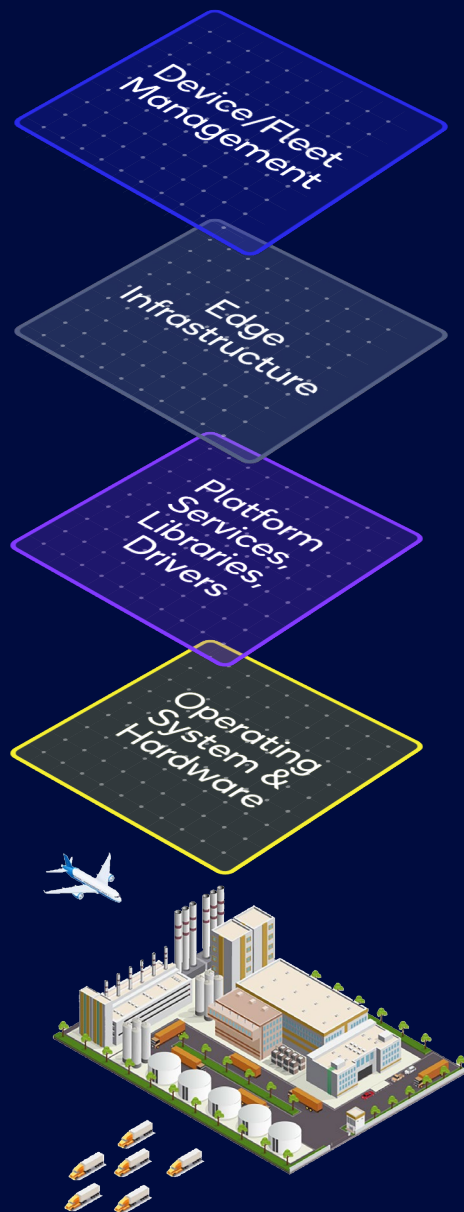
Industrial Robot (AMR, AGV)

Qualcomm Forge Framework for IoT Solutions

Offers developer tools, reference blueprints, and a partner ecosystem to help build ready to deploy solutions that address industry challenges

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Operating system

Android

Linux

Ubuntu

Hardware

AI Box

Network Video Recorder

Industrial Robot (AMR, AGV)



Solution Category: Industrial Worker Assistance

Solution Types:



Diagnostics
and Repair



Location-
Based
Guidance

WHAT:

- Ruggedized handhelds or XR glasses with AI-enabled cameras connected to the Network Edge

HOW:

- Qualcomm® AI Hub manages devices, AI model deployment, data ingestion
- Powered by Qualcomm Edge processors to manage AI modules, camera feeds, and Gen AI queries

Introducing the future of industrial maintenance



Solution Category: Security and Monitoring

Solution Types:



Worker
Safety



Site
Security

WHAT:

- Fleet of fixed and mobile AI cameras connected to the Network Edge identifying security infractions

HOW:

- Utilize on-device AI, managed by Gen AI on Network Edge
- Cameras communicate via security-focused Private 5G, continuous video sent to the Edge
- Powered by Qualcomm Edge processors



Solution Category: Incident Response and Asset Inspection

Solution Types:



Drone
as a First
Responder

WHAT:

- Fleet of drones conducting autonomous incident inspection and response

HOW:

- Qualcomm® AI Hub manages devices, AI model deployment, data ingestion
- Powered by Qualcomm Edge processors
- Visualization of people, alerts, events, etc.

Ecosystem Partner Support

From leading companies throughout the value chain



The image features a solid blue background with a large, stylized circular graphic composed of many thin, black, slightly curved lines radiating from the center. In the center of this graphic, the Qualcomm logo is displayed in white, followed by a tagline in a smaller white font.

Qualcomm

Advancing industries and
engineering human progress
through the convergence
of AI and IoT

The image features the Qualcomm logo in white, centered within a large, stylized gear or sunburst graphic. The graphic is composed of numerous thin, black lines radiating from a central point, creating a circular, sunburst-like effect. The background is a solid blue color.

Qualcomm

Welcome to the age of
industrial intelligence

Thank you

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KEY MESSAGES

Industrial & Embedded IoT Product Launches

Qualcomm Technologies is bringing its industry-leading technology and legacy of innovation to usher in the age of industrial intelligence. Through the convergence of AI and IoT, along with new hardware and solutions, developers and industry partners throughout the value chain can easily create tailored solutions to address industrial challenges.

The Qualcomm IQ9 Series, IQ8 Series, and IQ6 Series are 3 new families of industrial-grade chipsets, purpose-built to meet the demanding needs of industrial devices operating in extreme conditions.

The Qualcomm IoT Solutions Framework makes it easier for developers, enterprises, system integrators, and ecosystem partners to create, deploy and scale AI and IoT applications from the edge to the cloud.

