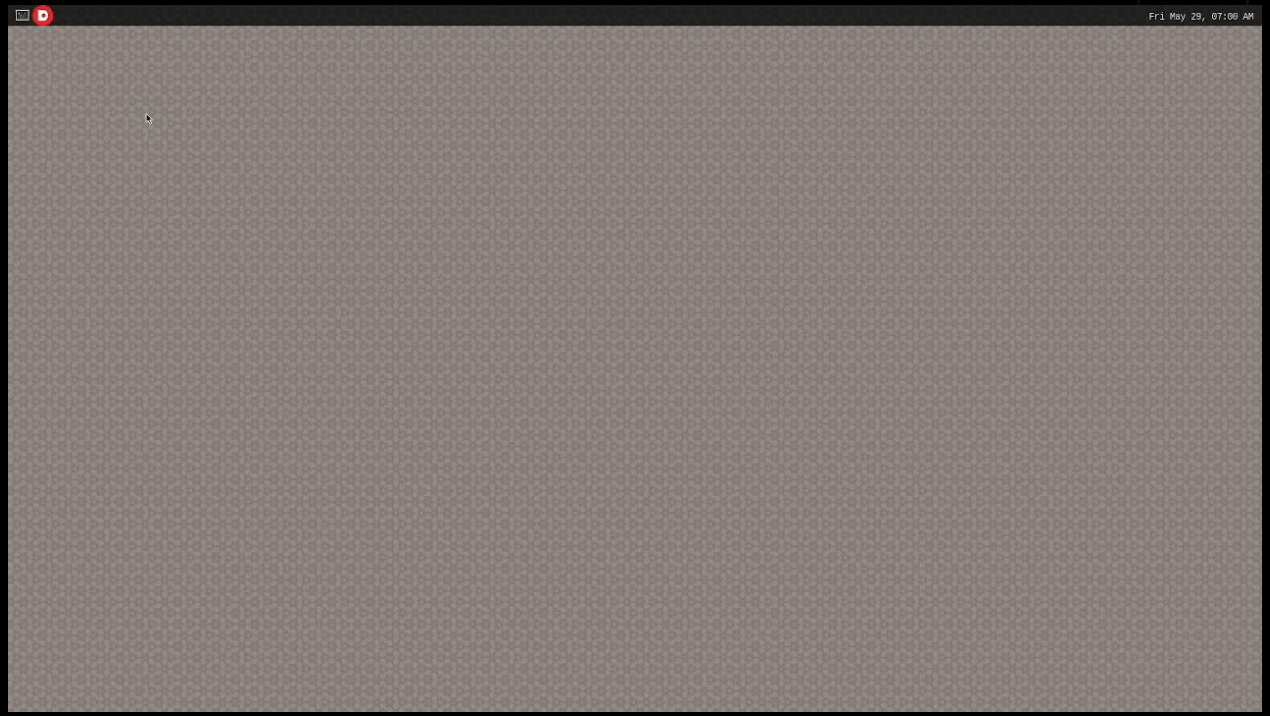
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iQ-Studio

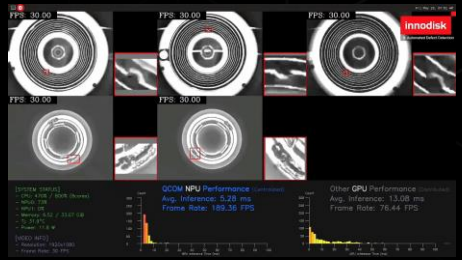
黃誌祥 | 智能周邊應用事業處 軟體研發三部 經理 · 2026-10-14

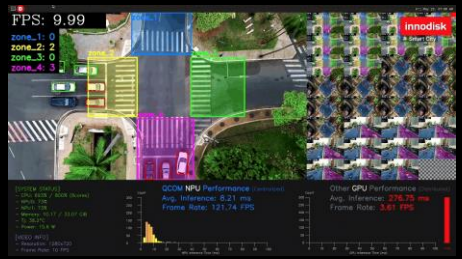
innodisk

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Show Performance, Spark Imagination.

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A Studio, Not a Showroom.

Show Performance, Spark Imagination.

01

EXPLORE

Discover the platform
through working applications.

02

IMAGINE

Combine cameras, AI models
and real customer scenarios.

03

CREATE

Adapt configurations
and build your own prototype.

A place to explore, experiment, and turn capability into possibility.

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The Real Challenge Begins After the Demo.

Silicon enables AI. Real products depend on the connections between systems.

INNODISK SYSTEM INTEGRATION

PLATFORM INPUT

Qualcomm

Silicon · SDK · QLI

THE INTEGRATION GAP

Peripherals / BSP & drivers

AI runtime / end-to-end validation

CUSTOMER OUTCOME

Prototype

Application · Product







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From First Demo to Your Own Application.

A developer journey designed to make platform capabilities usable.

EXPLORE

01

Run a working example

See platform behavior

APPLICATIONS

CUSTOMIZE

02

Adapt to your own needs

Swap models, inputs and configs

SDKs / MODEL DEPLOY

VALIDATE

03

Measure before scaling

Document real workloads

BENCHMARKS

GOAL **Less repetitive integration work. More time on customer-specific development.**

Time to Market is an objective. Validate the time saved with comparative evidence.

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Beyond Examples. Built on Engineering.

Three engineering disciplines connect to make a working AI system.

END-TO-END ENGINEERING

01

PLATFORM ENABLEMENT

BSP + PERIPHERALS

Yocto · Linux drivers
MIPI / GMSL camera

→

02

AI INTEGRATION

MODELS + RUNTIME

Conversion · quantization
On-device validation

→

03

SYSTEM EVIDENCE

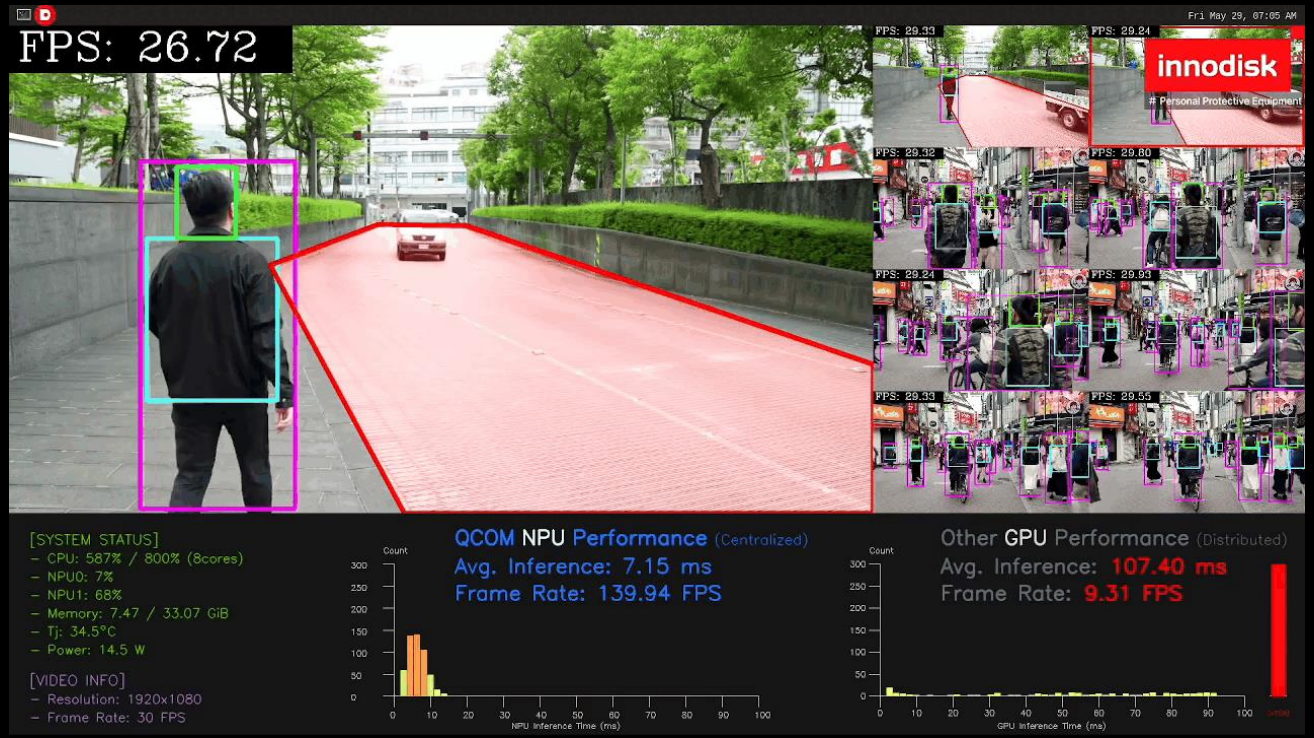
PIPELINE + PERFORMANCE

Multi-stream throughput
CPU load · E2E FPS

Integration is the differentiator — not simply the number of examples.

These capabilities span Innodisk engineering and related projects: meta-iQ · iQ-Cam · iQ-Foundry · iQ-Studio.

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EXEC-Q911



1080p@30FPS

9 CH H.264 Streaming

YOLOv10n INT8 / CH

PPE Model with 6 Classes

CPU Loading 93% w/o zero-cpy

Mem Loading < 1GB

Power Consumption < 30W

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We benchmark systems, not just AI models.

EXEC-Q911 / QCS9075 / YOLOv10n INT8

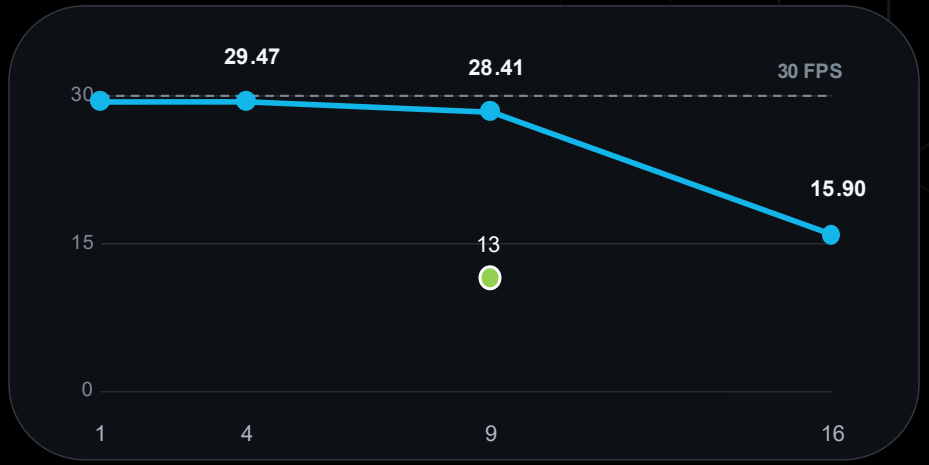
28.41

FPS / CHANNEL

at 9 simultaneous video streams

93.6% CPU utilization at 9 streams W/O zero-copy

E2E PERFORMANCE VS. STREAM COUNT



123% higher multi-stream throughput than the tested competing **GPU** platform. ***https://www.qualcomm.com/support/partner/content-hub/innodisk-iq9***

Source: iQ-Studio Streampipe benchmark. Recorded 1080p / 30 FPS H.264 videos; stream count is not the number of physical cameras.

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Bring Your Model.

A repeatable workflow from model conversion to on-device inference.

BRING YOUR OWN MODEL WORKFLOW

01 INPUT

YOUR MODEL

Compatible YOLO .pt weights

YOLOv10 / v11 / v26

›

02 CONVERT

QUANTIZE + COMPILE

Create an inference artifact

qc · .tflite / .onnx / .bin

›

03 VALIDATE

MODEL QUALITY

Compare source and converted model mAP

mAP · mAP@0.5

›

04 RUN

ON DEVICE

Execute and inspect inference results

test · EXEC-Q911

SUPPORTED RUNTIMES LiteRT / ONNX Runtime / QAIRT

Dragonwing Series TARGET

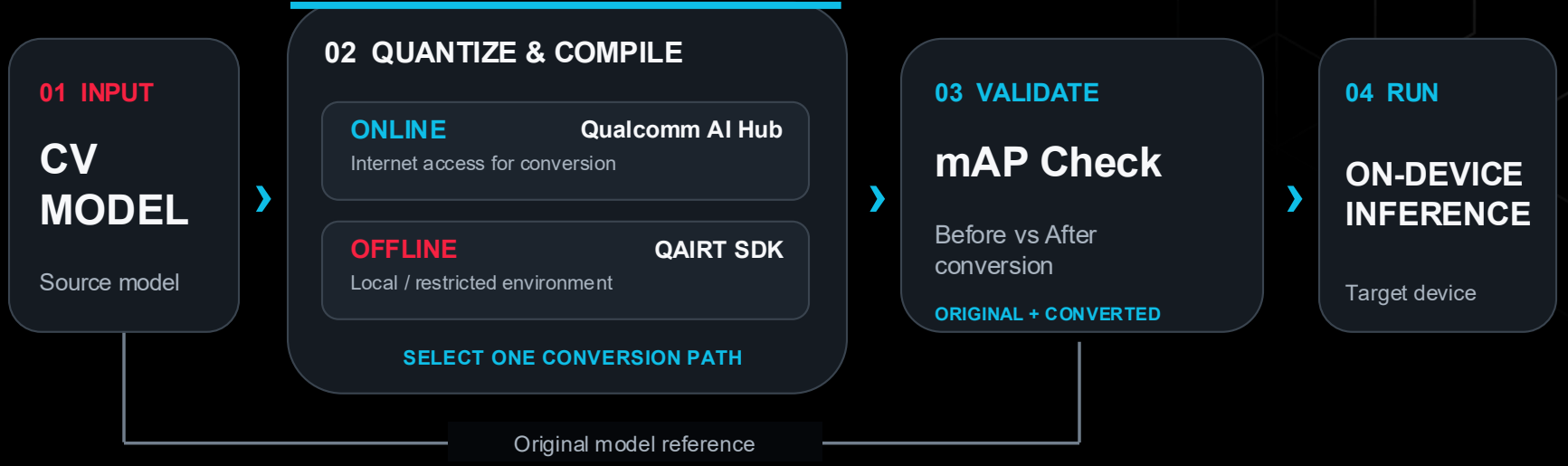
Source: github.com/InnoIPA/iQ-Foundry (README, Oct 2026). Compatible YOLO models / EXMP-Q911; related tool, not bundled with iQ-Studio.

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Choose Your Model Conversion Path.

One BYOM workflow, two conversion routes — both validated before on-device inference.

MODEL CONVERSION · CHOOSE BASED ON YOUR DEVELOPMENT ENVIRONMENT



DECISION POINT: Conversion method changes. Quality validation and the inference target remain shared.

Source: supplied BYOM architecture diagram. Online: Qualcomm AI Hub; Offline: QAIRT SDK. Paths describe conversion, not inference connectivity.

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EXFC-Q911-00A1-W1



1080p@30FPS

9 CH YUV Streaming: EV3F-ZSM1

YOLOv10n INT8 / CH

PPE Model with 6 Classes

CPU Loading 70% w/o zero-cpy

Mem Loading < 1GB

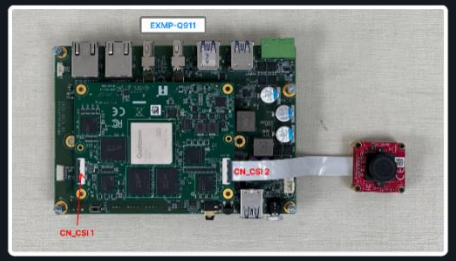
Power Consummation < 30W

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Validated Camera Options. Fewer Unknowns.

Start with tested camera modules — then confirm the exact platform configuration.

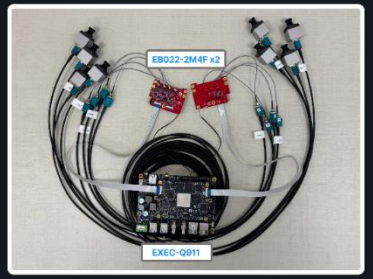
MIPI CSI-2



Embedded vision

EVDM-OOM1 · 1920 × 1080 · 30 FPS
EV2M-OOM3 · 1920 × 1080 · 30 FPS
EV8M-OOM1 · 1920 × 1080 · 30 FPS

GMSL2



Remote camera

EVDF-OOM1 · 1920 × 1080 · 30 FPS
EV3F-ZSM1 · 1920 × 1080 · 30 FPS
EB022-2M4F · Adapter Board

WHAT AVL ACTUALLY MEANS

Tested as a system

- MODULE
- ADAPTER / BOARD
- BSP + RELEASE

SCHEMATIC HARDWARE ILLUSTRATIONS

Example modules documented in iQ-Cam. Validation depends on camera, adapter, board, BSP and iQ-Cam release.

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Beyond Cameras. Connected to the Real World.

Edge AI products also depend on networking, industrial communication, and control interfaces.

NETWORKING

04 MODULES

GbE / 10GbE

Connect the edge system to industrial networks.

EGPL-G401 · G201
EGPL-G104 · T102

SERIAL

02 MODULES

RS-232 / 422 / 485

Interface with industrial equipment and devices.

EGP2-X401 · X403

CAN BUS

03 MODULES

CAN 2.0B / CAN FD

Connect machine and control networks.

EGPC-B201 · B1S1
EGUC-F2S3

VISION + CONNECTIVITY + CONTROL = BROADER SYSTEM INTEGRATION

Listed module specifications are not proof of validation on a specific board/BSP; verify interface, driver, release and test results.

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Embedded Peripheral Module Inventory

9 module options · 4 Networking / 2 Serial / 3 CAN

MODEL	FORM FACTOR	TYPE	KEY FUNCTION	CONTROLLER
EGPL-G401	M.2 2280	LAN module	Four isolated GbE LAN	Intel I350
EGPL-G201	M.2	LAN module	Dual isolated GbE LAN	Intel I226
EGPL-G104	M.2 2230	LAN module	Single isolated GbE LAN	Intel I210
EGPL-T102	M.2 2280	10GbE LAN module	Single 10GbE LAN	Marvell AQC113
EGP2-X401	M.2	Serial module	Four RS-232 / 422 / 485 ports	MaxLinear XR17V354
EGP2-X403	M.2 2242	Serial module	Four RS-232 ports	Fintek F81437N
EGPC-B201	M.2 2260/2280	CAN Bus module	Dual isolated CAN Bus 2.0B / J1939	Microchip PIC32MX
EGPC-B1S1	M.2 2242	CAN Bus module	Single isolated CAN Bus 2.0B / J1939 / CANopen	Fintek F81601N
EGUC-F2S3	M.2 2280	CAN FD module	Dual isolated CAN FD	Nuvoton M467

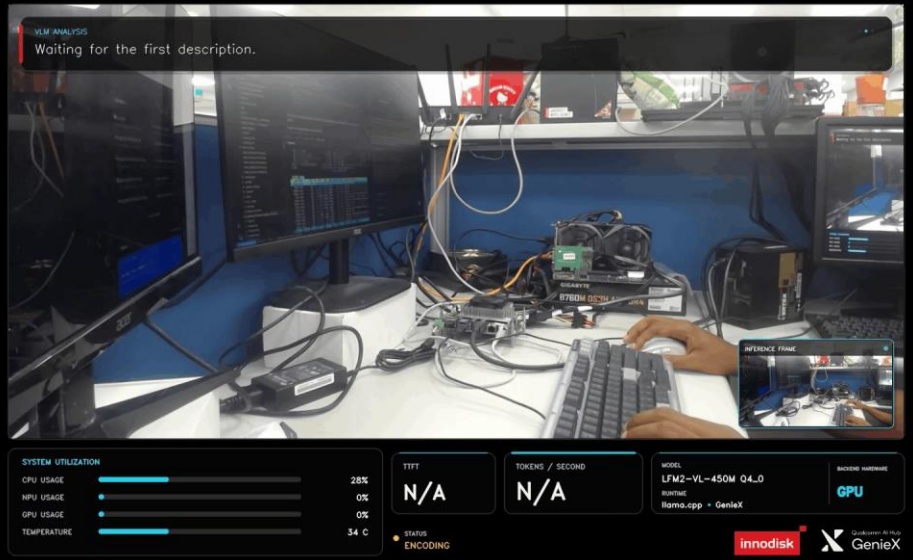
Specifications describe listed modules; deployment compatibility and validation are platform-specific.

Source: provided peripheral module inventory. Validate platform, BSP, driver, protocol stack and test status before making AVL claims.

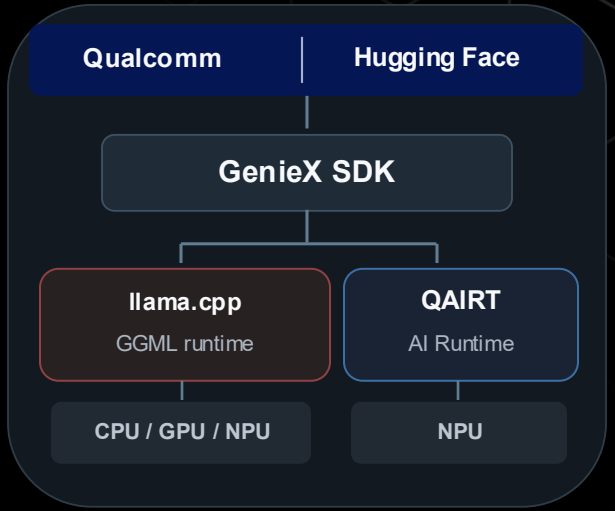
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A Working GenAI Demo, Built with GenieX.

A live-camera VLM demonstration, with GenieX runtime options for Edge AI.



GENIEX SOFTWARE STACK



iQ-VLM DEMO 2.0

Live camera → VLM analysis

RUNTIME

GenieX + llama.cpp / GPU

ECOSYSTEM

GGML / QAIRT pathways

Demo capture: Innodisk. Stack reference: github.com/qualcomm/geniex. Alternative backend paths shown; no performance claim.

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From Qualcomm Linux to Working AI Applications.

Platform foundation and developer-facing assets are different layers of the same journey.

04	APPLICATION EXPERIENCE	iQS-VLM / Streampipe / Benchmark / Qualcomm AI Hub	iQ-STUDIO
03	EXECUTION WORKFLOW	iqs-launcher / packages / AI runtime container / iQ-Foundry	TOOLS + SDK
02	SYSTEM INTEGRATION	Yocto BSP / Ubuntu / Linux drivers / iQ-Cam / AVL	INNODISK
01	PLATFORM FOUNDATION	Qualcomm Linux (QLI) / Qualcomm Dragonwing Series	QUALCOMM

LOWER LAYERS ENABLE THE UPPER LAYERS

Ownership is simplified for presentation: QLI from Qualcomm; Innodisk BSP/driver integration; iQ-Studio developer resources.

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From First Boot to Your Own Prototype.

A repeatable workflow: prepare once, explore quickly, then customize and evaluate.

GET IT RUNNING

MAKE IT YOURS

01	02	03	04	05
BOOT	**INSTALL**	**RUN**	**CUSTOMIZE**	**VALIDATE**
Flash a supported BSP image	Prepare the environment	Launch a working AI app	Change inputs, models, config	Capture workload and performance
Starting Guides	**./install.sh**	**iqs-launcher**	**SDKs · Deploy**	**Benchmarks**

Deliverable: a working, inspectable prototype backed by guides and test evidence.

Using a custom model may involve separate tools such as iQ-Foundry. Prototype readiness does not imply production qualification.

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One Studio. From Platform to Prototype.

A developer journey backed by reusable engineering assets.

DEVELOPER JOURNEY EXPLORE → CUSTOMIZE → VALIDATE

iQ-STUDIO CONTENT & EVIDENCE

APPLICATIONS	MODEL DEPLOY	BENCHMARKS	AVL	GUIDES
Working demos	Custom models	Real workloads	Camera + I/O	Repeatable steps

PLATFORM & RELATED ENGINEERING ASSETS Qualcomm Linux · Innodisk BSP · iQ-Cam · iQ-Foundry

Scope: iQ-Studio contains applications, documentation, tests and integration guides. iQ-Cam / iQ-Foundry are related projects, not bundled modules.

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From AI Evaluation to Production-Ready Solutions

Expanding from evaluation tools to reusable development workflows and deployable solution kits.



Explore & Evaluate

Ready-to-run AI demos
Computer vision workflows
Camera & peripheral support
Reproducible benchmarks

Customize & Integrate

AI-assisted development with Skills
iQ-Studio MCP Server
Generative AI workflows
Enhanced developer experience
Guided hands-on labs

Build & Deploy

Vertical Solution Kits
Reusable source & configurations
Deployment templates
Validation & test assets

EVALUATION → DEVELOPMENT → DEPLOYMENT

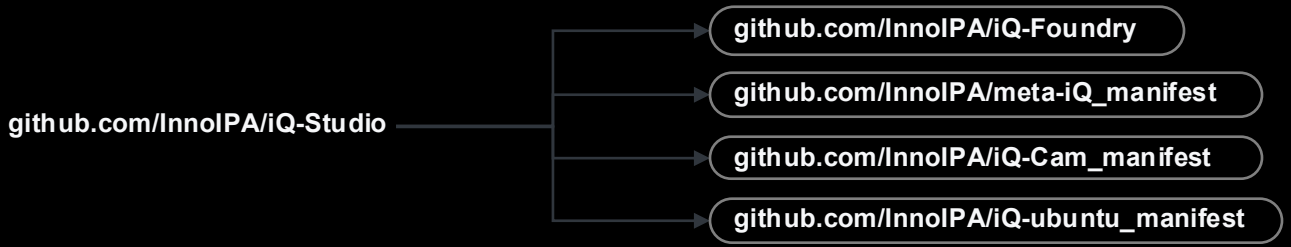
NEXT and FUTURE are directional proposals, not committed releases or dates.

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Your Application.
Our Engineering Experience.

Let’s build.

Explore. Imagine. Create.



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innodisk

ARCHITECT INTELLIGENCE