



PROPHESSEE

METAVISION FOR MACHINES

PRODUCTS

P R O D U C T S

END TO END SOLUTION

METAVISION® SENSING



METAVISION® INTELLIGENCE

THE WORLD'S MOST ADVANCED EVENT-BASED VISION SENSING TECHNOLOGY.

Prophesee successfully built **4 sensor generations**. The last one co-developed with **SONY** reaches HD resolution through advanced 3D stacked 4.86 μm process.

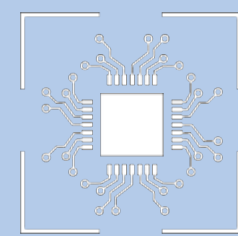
Inspired by the human retina, Prophesee's patented Event-Based Vision sensor features a new class of pixels, each powered by its **own embedded intelligent processing**, allowing them to **activate independently**.



THE MOST COMPREHENSIVE EVENT- BASED VISION SOFTWARE SUITE AVAILABLE TO DATE.

Covering every step of your development process, from **first discovery** to fast **prototyping** to **end-application development**.

Download your **free evaluation version** and experiment with more than **62 algorithms**, **54 code samples** and **11 ready-to-use applications** in total.

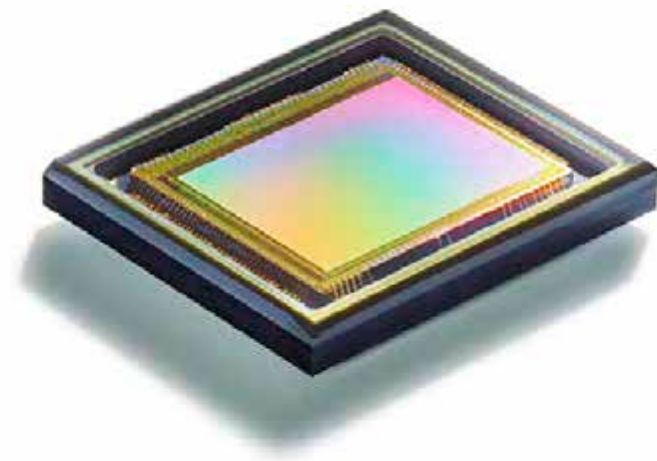


DEVELOPMENT TOOLS

P R O D U C T S

SENSORS

PROPHESÉE



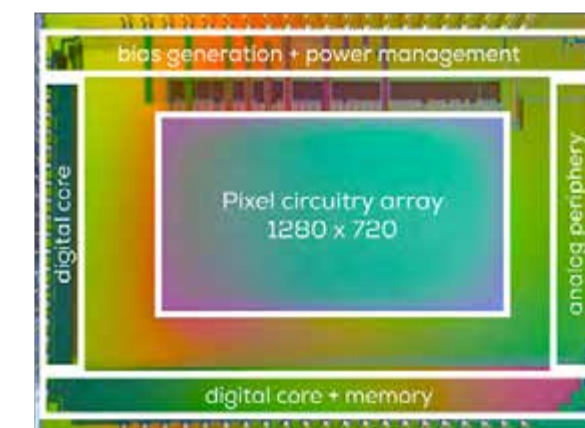
GEN3.1 - VGA

Fully qualified, packaged (mini pbga) Metavision® sensor, ready for mass production deployment in your hardware.

KEY FEATURES

- 640x480 VGA
- Optical format: 3/4"
- Latency at 10kLux: 200µs
- Dynamic Range >120dB
- Min contrast sensitivity 25%
- Die Power Consumption 26-176mW
- Pixel size 15 x 15µm

PROPHESÉE | SONY



GEN4.1 - HD (Engineering Sample)

Early access to stacked Event-Based Vision sensor jointly developed with Sony. Featuring the industry's smallest pixels and highest HDR performance

KEY FEATURES*

- 1280x720 HD
- Optical format: 1/2.5"
- Latency at 10kLux: 310µs
- Dynamic Range >120dB
- Min contrast sensitivity 15%
- Die Power Consumption 60-120mW
- Pixel size 4.86 x 4.86µm
- Event Signal Processing embedded

**disclaimer: results from preliminary tests*

PROPHESÉE | SONY

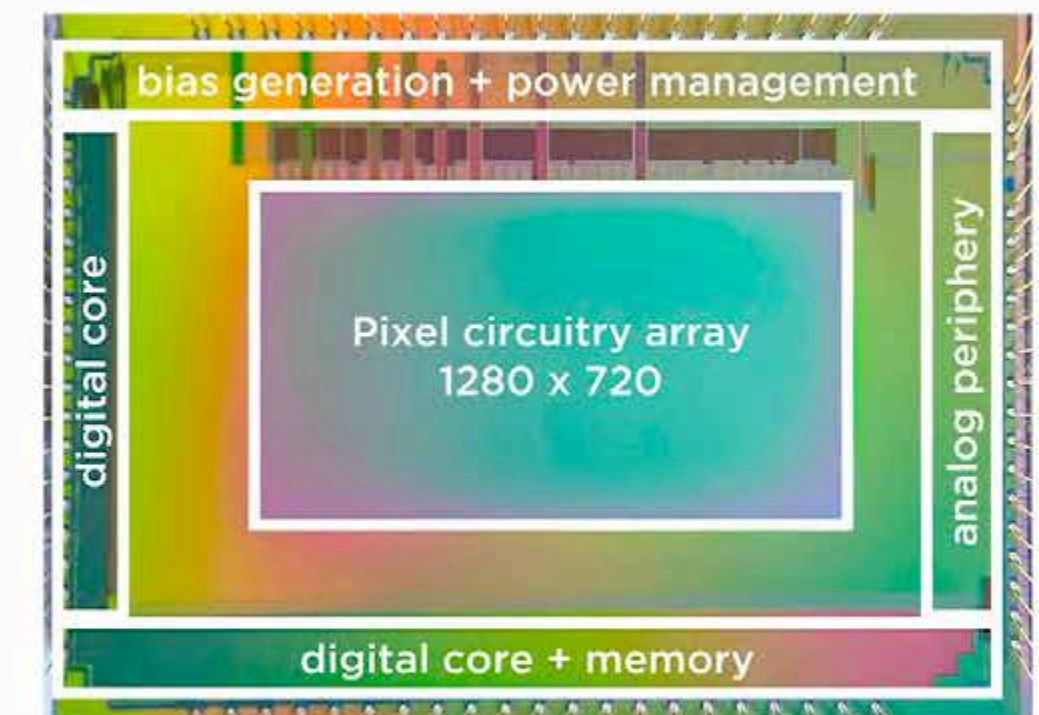
- Prophesee and Sony Announced during ISSCC 2020 they developed a
 - Stacked Event-Based Vision Sensor
 - with the Industry's Smallest Pixels and
 - Highest HDR Performance.
- Joint collaboration started in 2017 leading to a partnership in sensor development, production and commercial activities.

[READ MORE](https://bit.ly/2KHHydf)

<https://bit.ly/2KHHydf>



Micrograph of bottom part



Micrograph of top part

METAVISION® INTELLIGENCE OFFERING

ESSENTIALS

A free evaluation version of Metavision Intelligence suite, including all key features

- Free Evaluation License
- Access to software tools: Player, Designer, SDK
- Access to public online documentation
- Access to advanced modules: High-Speed Counting, Spatter Monitoring, Vibration Monitoring, Object Tracking, Optical Flow, Ultra-Slow Motion, Visualization tools, Jet Monitoring, Particle Size Monitoring, Edgelet Tracking, Machine Learning Detection Inference and KPI
- ~~Access to source code~~
- ~~Commercial rights~~

DOWNLOAD FREE

PROFESSIONAL

Get the full experience with a licensing plan designed to support your business strategy

- Paid Commercial License
- Access to **extended software tools**: Player, Designer, SDK + **additional software add-ons**
- Access to public online documentation + **Prophesee Knowledge Center + advanced support packages + training workshops**
- Access to advanced modules: High-Speed Counting, Spatter Monitoring, Vibration Monitoring, Object Tracking, Optical Flow, Ultra-Slow Motion, Visualization tools, Jet Monitoring, Particle Size Monitoring, Edgelet Tracking, Machine Learning Detection Inference and KPI + **Detection Training + Event Simulator + Optical Flow Inference + Optical Flow Training**
- Access to source code
- Commercial rights

CONTACT US



PROPHESÉE

METAVISION FOR MACHINES





THE MOST COMPREHENSIVE EVENT-BASED VISION SOFTWARE SUITE

95 algorithms, 67 code samples and 11 ready-to-use applications in total so you can either start your discovery or build your [Event-Based Vision](#) product.



LEADING EVENT-BASED MACHINE LEARNING TOOLKIT

Build your advanced Event-Based ML network leveraging

- The most performant object detector to date spotlighted at NeurIPS 2021,
- The largest HD dataset,
- Image-to-event simulation module,
- Training,
- Inference,
- Grading features [and more.](#)



6 EXTENSIVE MODULE FAMILIES

With a wide range of machine vision fields covered: **Machine Learning, Computer Vision, camera calibration, high-performance applications** and more, the tool you are looking for is here.



OpenEB

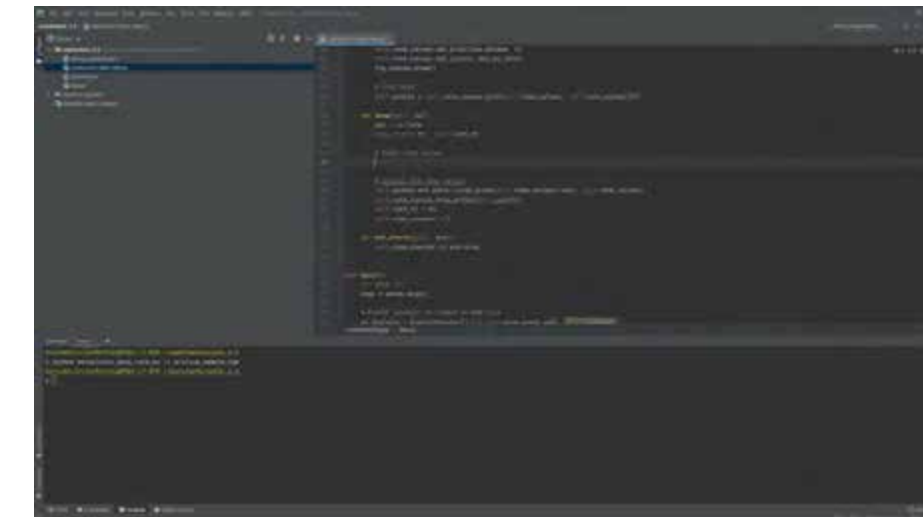
OPEN SOURCE ARCHITECTURE

Metavision Intelligence Suite is based on an [open source architecture](#), unlocking full interoperability between our software and hardware devices and enabling a fast-growing Event-Based community.



EXTENSIVE DOCUMENTATION

With **270+ pages** of regularly updated content on [docs.prophesee.ai](#), more than **20 Jupyter notebooks**, **reference data** and **extensive guidelines**, get a head start on your product development.



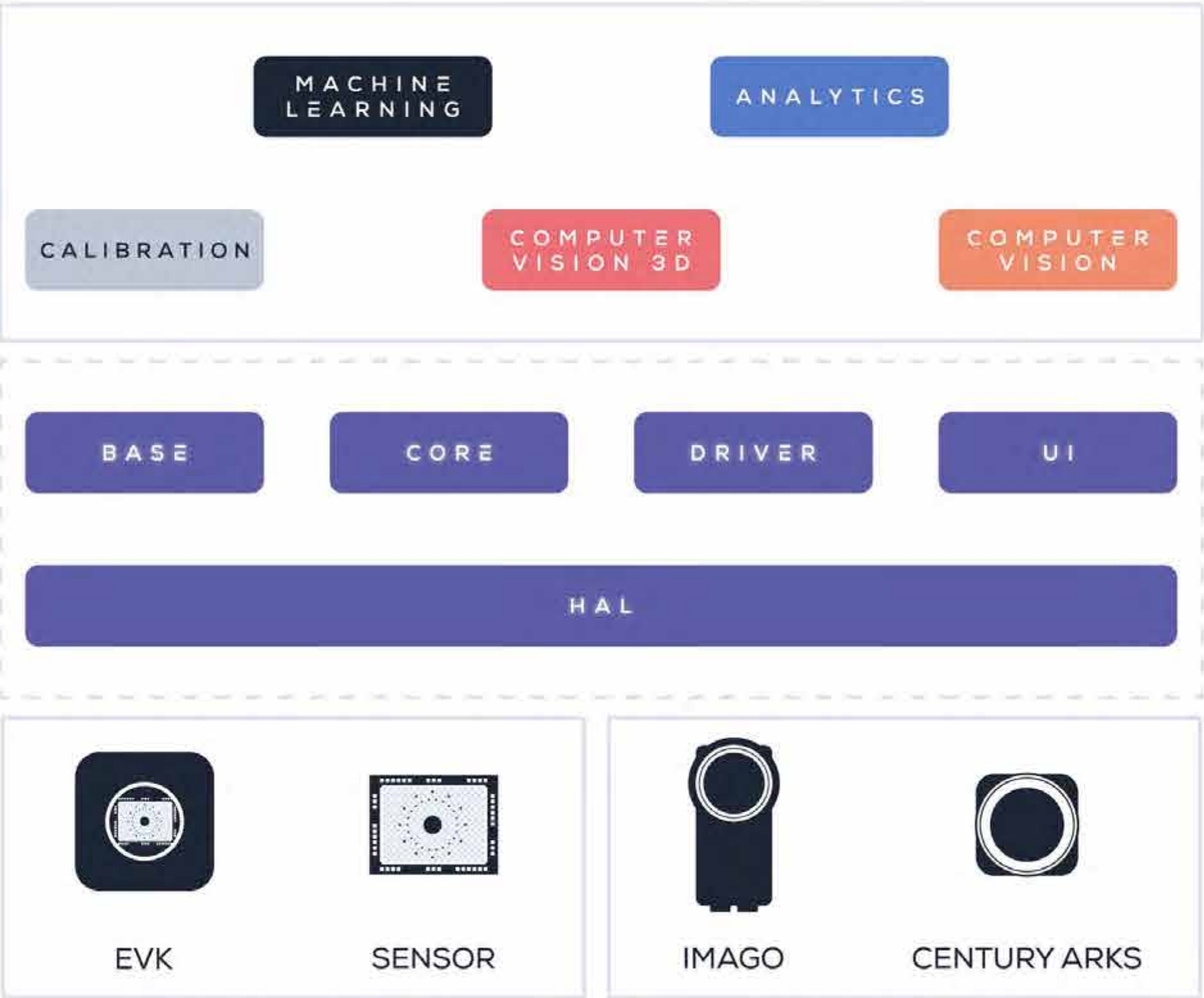
6 EXTENSIVE MODULE FAMILIES

We took over **6 years** to perfect the largest collection of **pre-built pipelines**, **extensive datasets**, **code samples**, **GUI tools** and more, so you could get results in **minutes**.

METAVISION INTELLIGENCE 2.2 - MODULES & APPS

MODULES

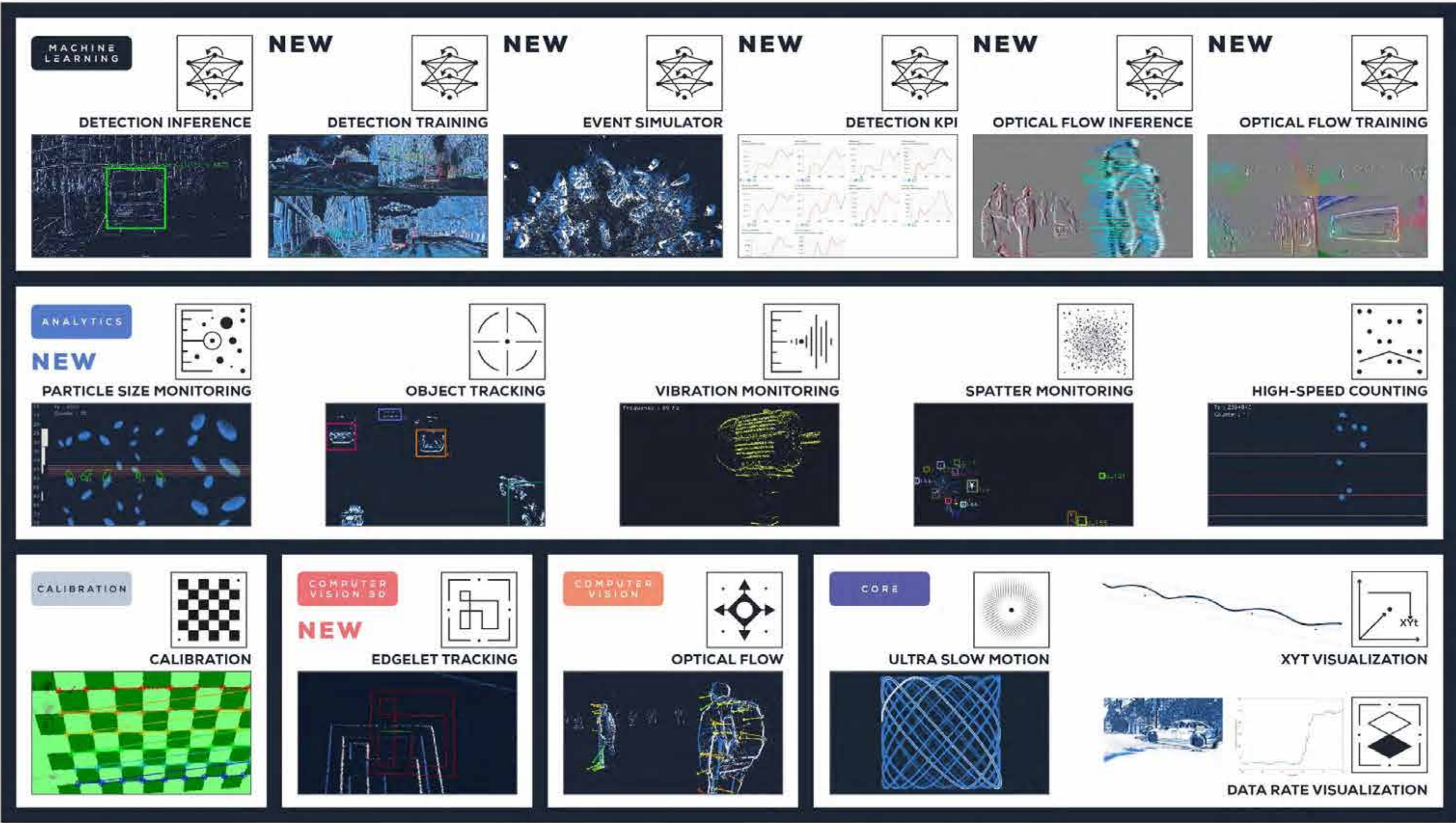
OpenEB



PROPHESEE

ECOSYSTEM

APPS



METAVISION INTELLIGENCE 2.2 - TOOLS

The release of Prophesee Metavision® Intelligence Suite is the culmination of the pioneering work led by a team of **20+** engineers over the past **5** years.

This is the most extensive Event-Based Vision toolkit to date with more than **95** algorithms, **67** code samples and **11** ready-to-use applications

PLAYER

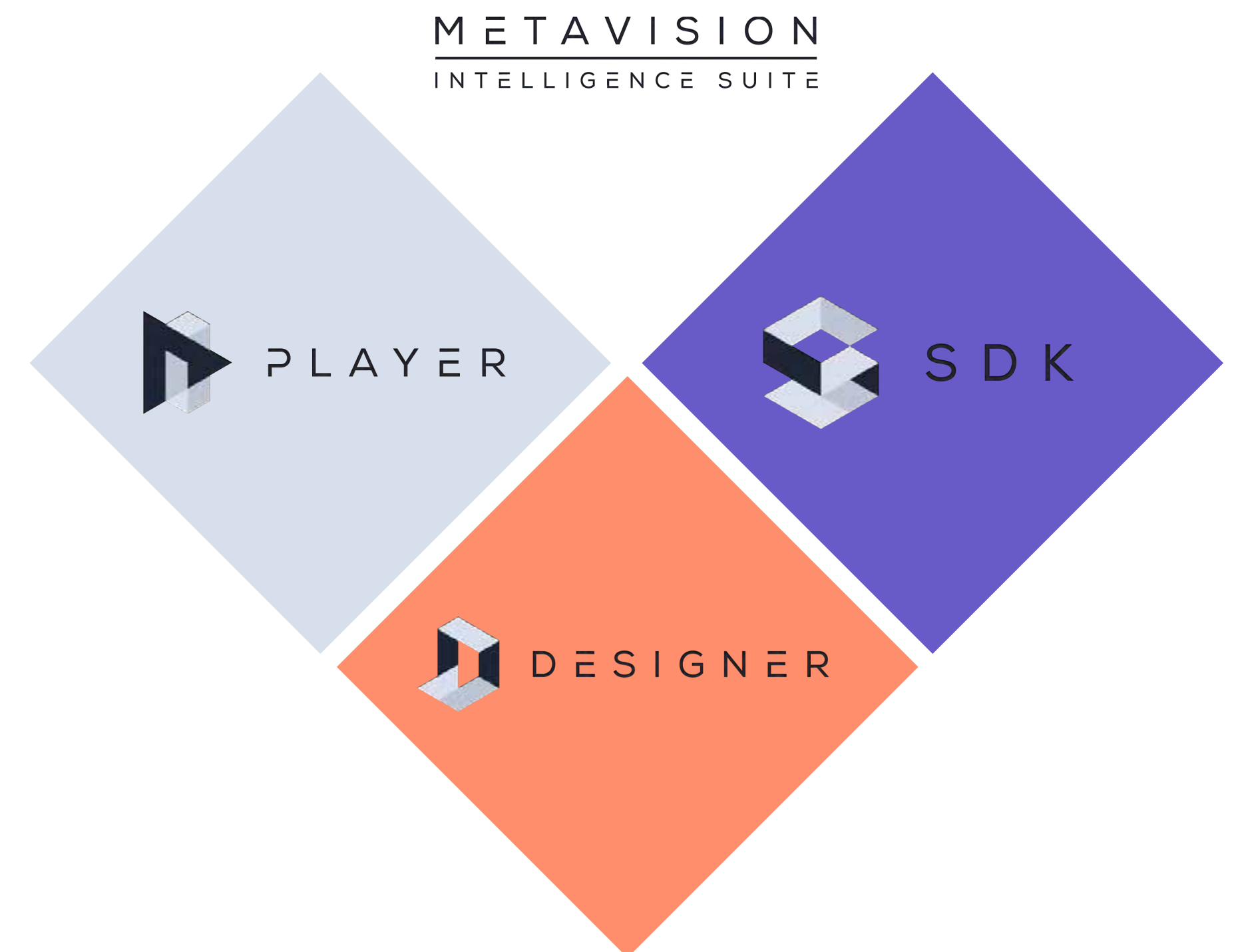
Metavision Player provides a Graphical User Interface allowing anyone to visualize, record and interact with data coming from an event-Based Vision system

DESIGNER

Metavision Designer is a set of libraries and Python APIs that allows engineers to interconnect components very easily for fast prototyping of Event-Based Vision applications

SDK

Metavision SDK is a set of C++ algorithms accessible via APIs, ready to go to production in Event-Based Vision applications

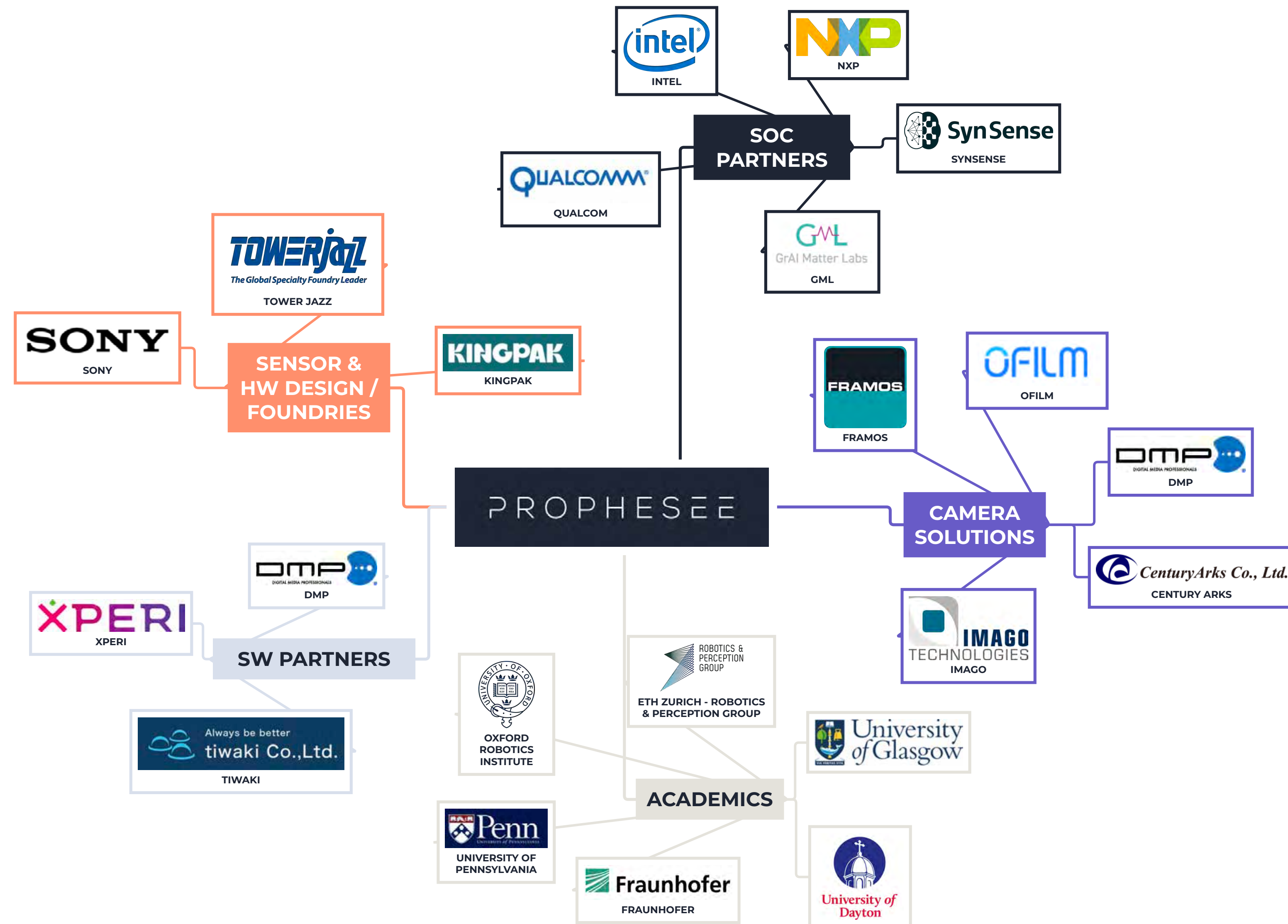


ECOSYSTEM

BECOME PART OF A POWERFUL INTERNATIONAL NETWORK

Success stems from solid partnerships

Over the years we have surrounded ourselves with a strong network of partners that we wish to interconnect even more so you can succeed in bringing your Event-Based Vision product to market.



POWERED BY PROPHESEE PARTNER'S PRODUCTS



CENTURY ARKS - SILKYEVCAM

Industrial-grade USB3.0 camera featuring Prophesee Metavision Gen3.1 sensor and full compatibility with Metavision® Intelligence

KEY FEATURES

- Universal USB C connectivity
- Ultra-compact

SUPPORTED SENSORS

- 3.1

SERVICES

- Century Arks



IMAGO



IMAGO – VISIONCAM EB

Industrial-grade embedded Event-Based Vision system featuring Prophesee Metavision Gen3.1 sensor and full compatibility with Metavision® Intelligence

KEY FEATURES

- Run applications at the edge: Dual Core ARM Cortex-A15 1.5 GHz CPU (Texas Instruments AM5726)

SUPPORTED SENSORS

- 3.1

SERVICES

- Imago



DEVELOPMENT TOOLS

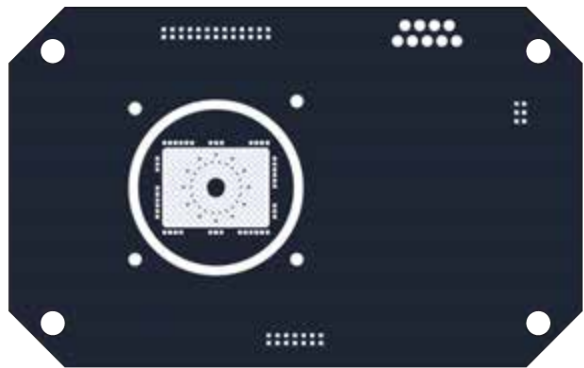
METAVISION® SOLUTION FLOW



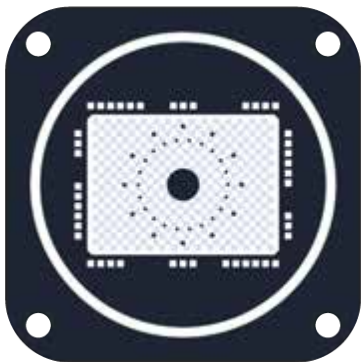
HW & SYSTEM



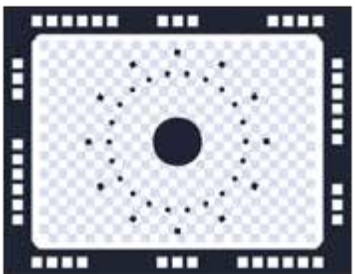
EVALUATION
KITS



DEVELOPMENT
KIT

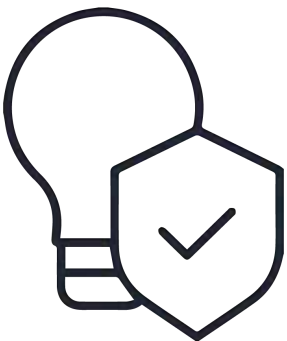


SENSOR
MODULE



SENSORS

SW & TOOLS

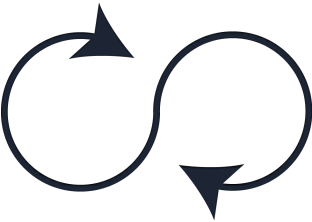


IP

SERVICES



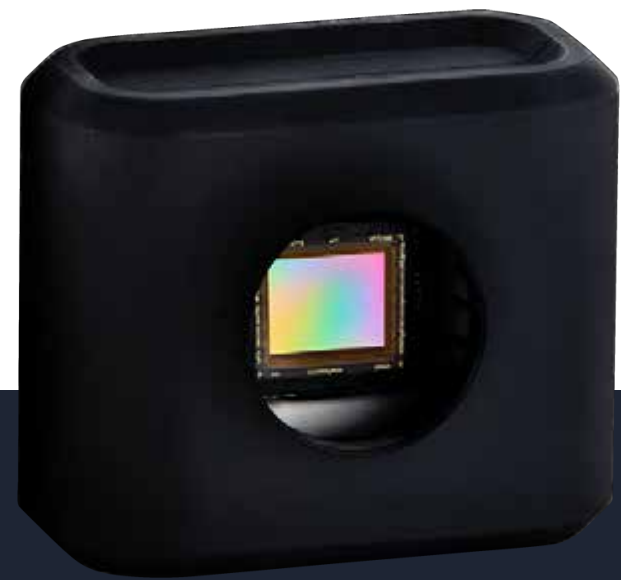
SUPPORT



CONSULTING

YOUR
PRODUCT

EVALUATE - EVALUATION KITS



EVALUATION KIT V1

Ideal for first “hands on” evaluation

KEY FEATURES

- Compact casing
- Easy to use USB3 connectivity

SUPPORTED SENSORS

- Gen3.1
- Gen4.0

USB 3 INTERFACE

- Maximum bandwidth: 1.6 Gbps



EVALUATION KIT V2

Ideal for full performance evaluation

KEY FEATURES

- Comprehensive sensor control including digital pipeline (ESP)
- Full sensor bandwidth

SUPPORTED SENSORS

- Gen4.1 (coming soon EO April)

USB 3 INTERFACE

- Maximum bandwidth: 3 Gbps



EVALUATION KIT V3

Ideal for first “hands on” evaluation

KEY FEATURES

- Cypress Denebola CX3 Development board
- Cost effective
- Easy to use USB3 connectivity
- Same architecture as EVK V3 for a smooth transition from evaluation to development stage

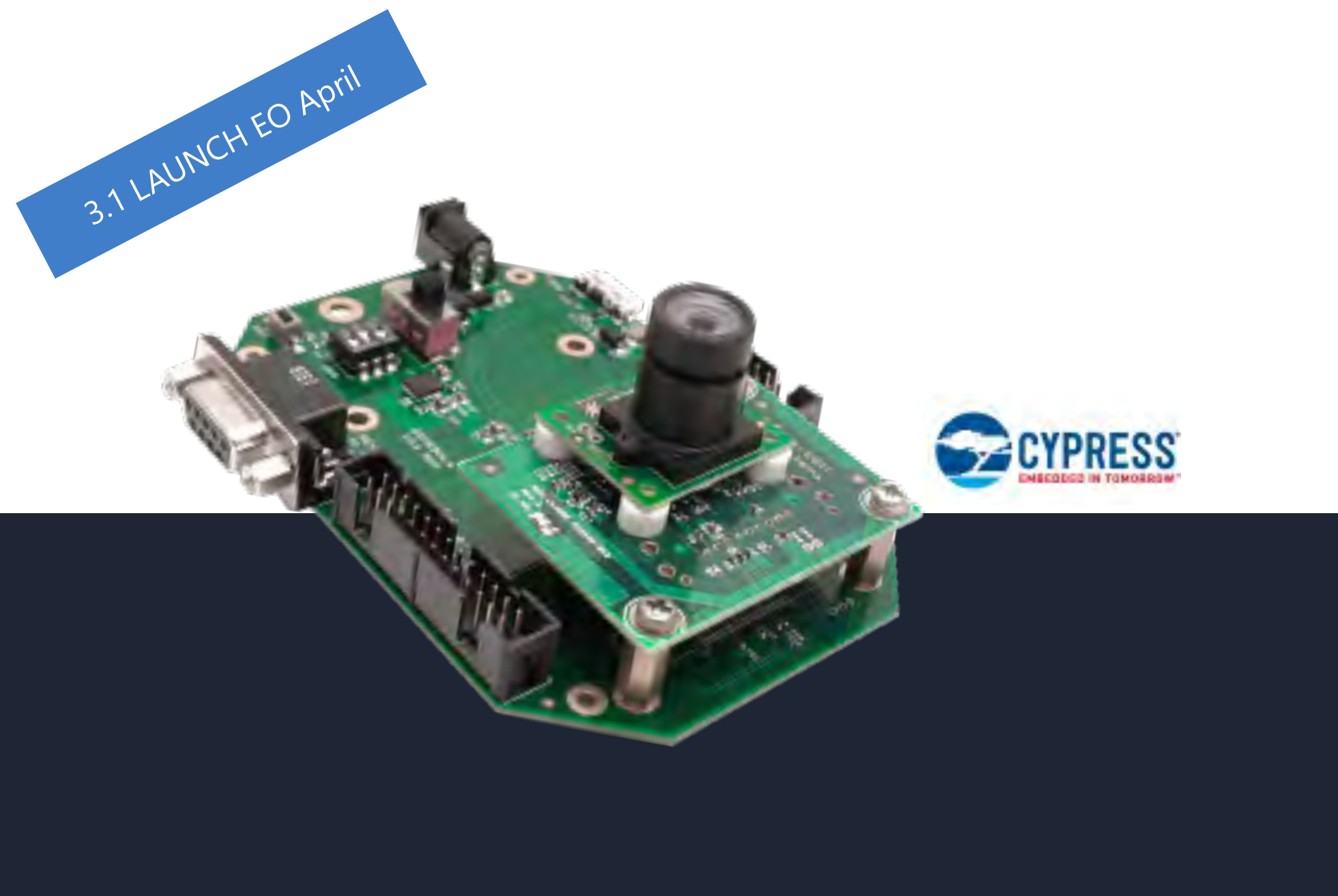
SUPPORTED SENSORS

- Gen3.1 (EO April)
- Gen 4.1 (coming soon EO August)

USB 3 INTERFACE

- Maximum bandwidth: 1.6 Gbps

DEVELOP – DEVELOPMENT KITS



DK ATLAS

Accelerate your custom development to build your own USB camera

KEY FEATURES

- Cypress Denebola CX3 Development board
- Easy to use USB3 connectivity
- Same architecture as EVK V3 for a smooth transition from evaluation to development stage

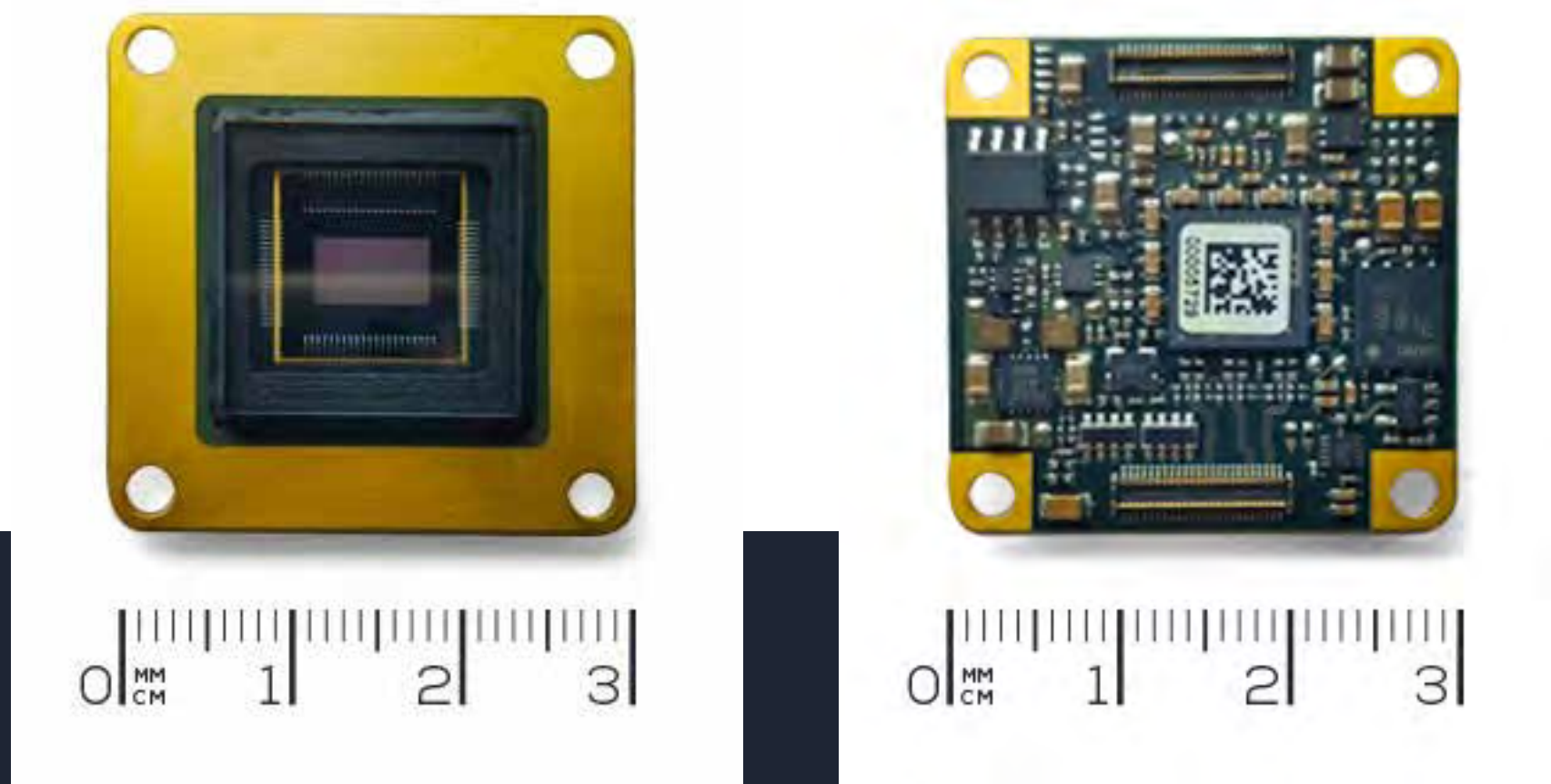
SUPPORTED SENSORS

- Gen 3.1 (Launch EO April)
- Gen 4.1 (coming EO August)

DEVELOPMENT PACKAGE

- Dev Package (Layout / BOM / TRM / HAL Source code / Schematics / FPGA RTL / Application Note)

DEVELOP – CAMERA MODULE



CAMERA MODULE

Reference design for Metavision® sensor module to integrate EBV into an existing platform.

KEY FEATURES

- MIPI sensor module
- 30mm x 30mm

SUPPORTED SENSORS

- Gen 3.1
- Gen 4.1* (coming EO June)

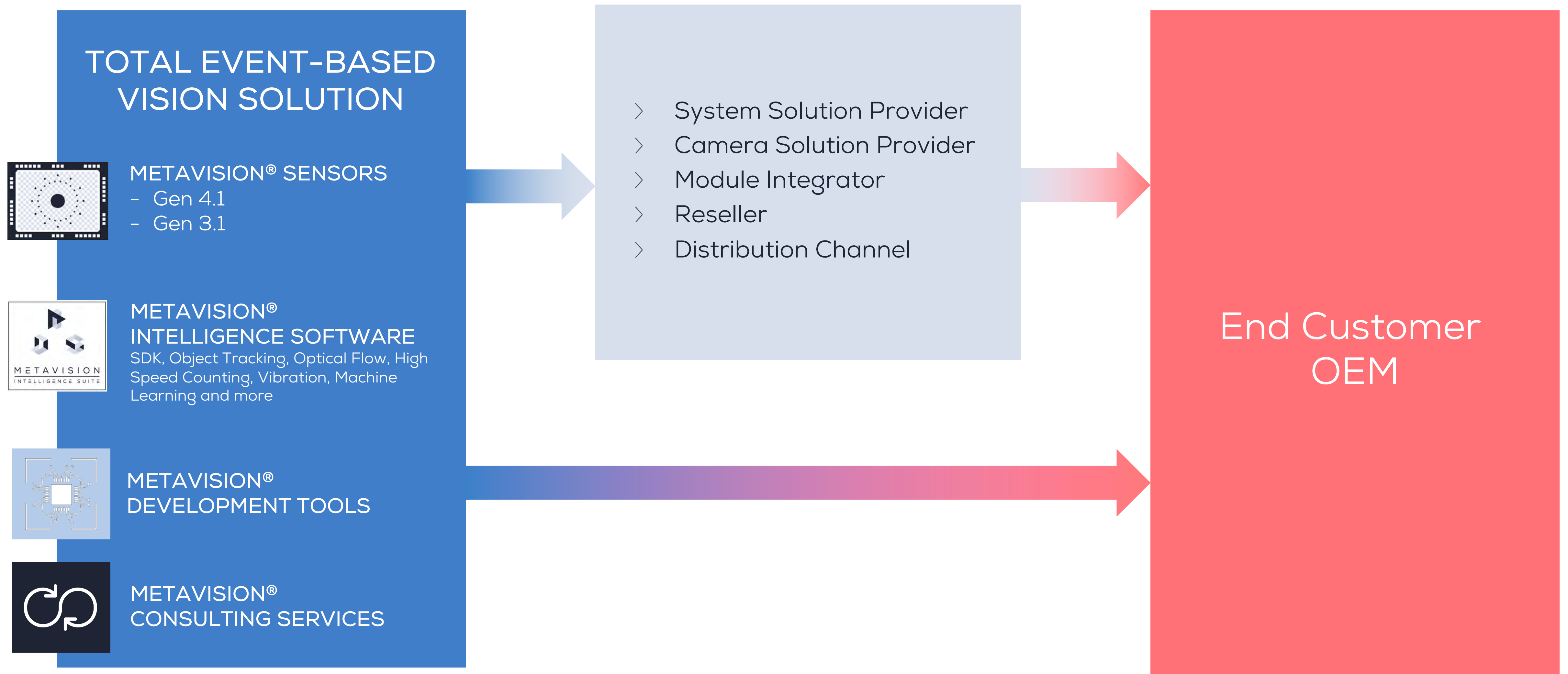
DEVELOPMENT PACKAGE

- Dev Package: Sensor & datasheet / Sensor module with ref lens / TRM / Layout / BOM / FPGA RTL (variable/variable, EVT3)

WORKING TOGETHER

WORKING TOGETHER

PROPHESSEE ENGAGEMENT AND SERVICE



WORKING TOGETHER

PROPHESEE GLOBAL PRESENCE & PARTNERS



PROPHESEE

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-  **RESTAR** • Solution provider – Distributor / WOLRDWIDE
-  **FRAMOS** • Solution provider – Distributor / US - EU
-  **EDOM** • Distributor / CHINA - TAIWAN
-  **MACNICA** • Distributor / US - EU
-  **CENTURY ARKS** • Camera solution / JAPAN
-  **IMAGO** • Camera solution / EU
-  **OKAYA** • Solution provider – Distributor / JAPAN

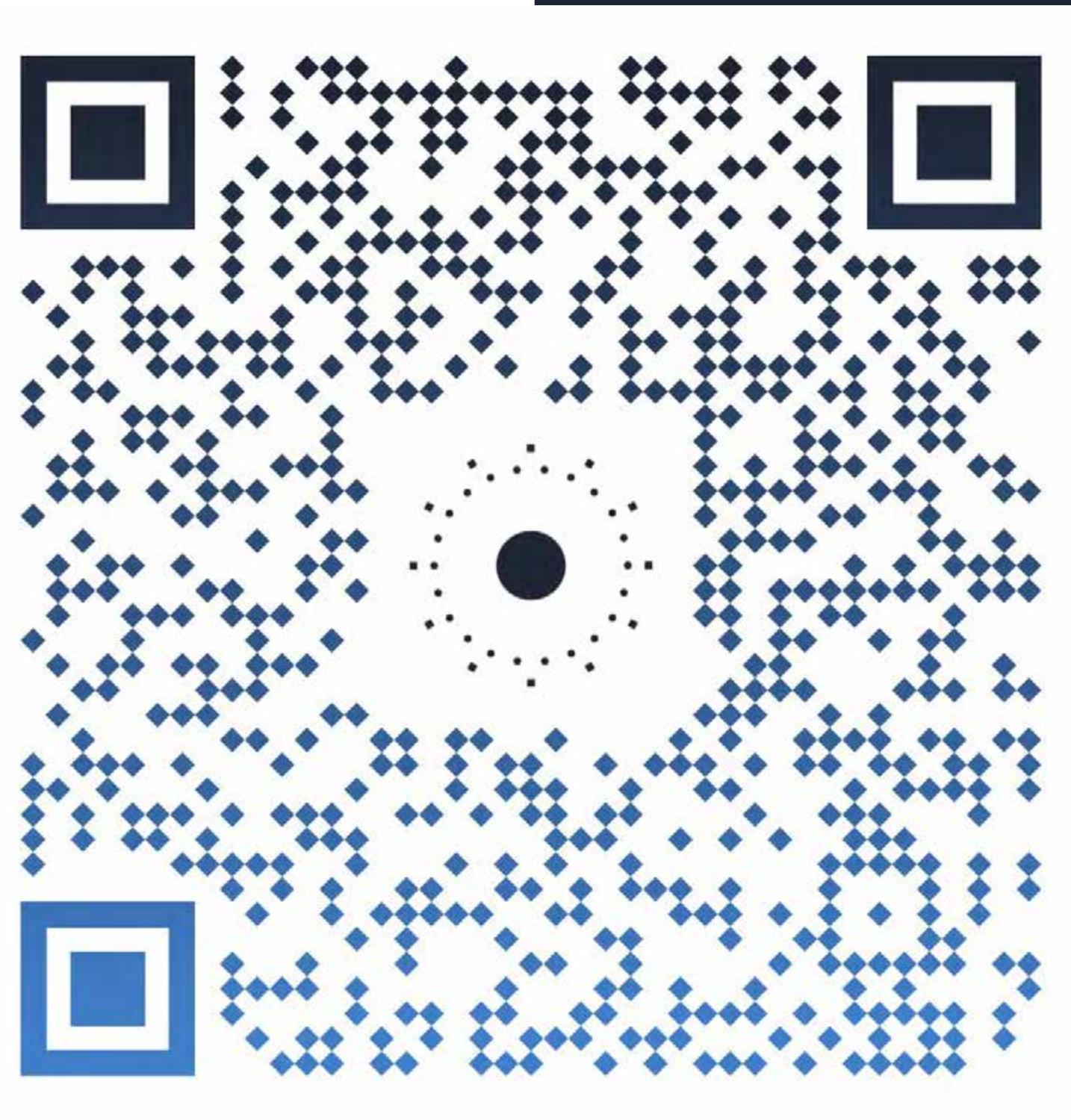
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