



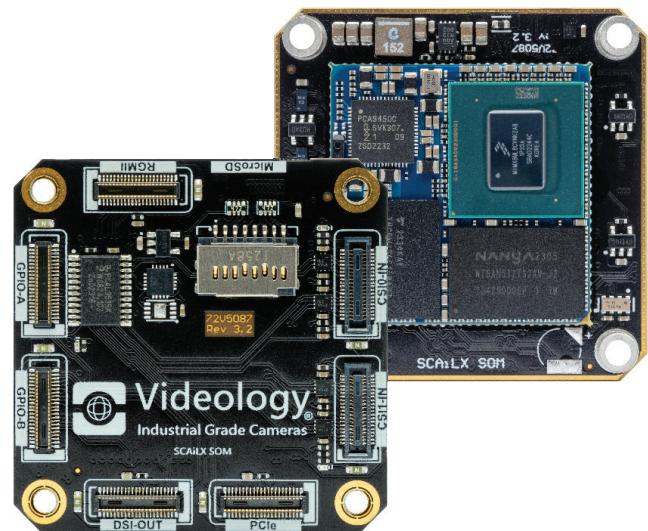
# Videology®

Industrial-Grade Cameras

an inTEST Company



INDUSTRIAL IMAGING WITH AI ON THE EDGE



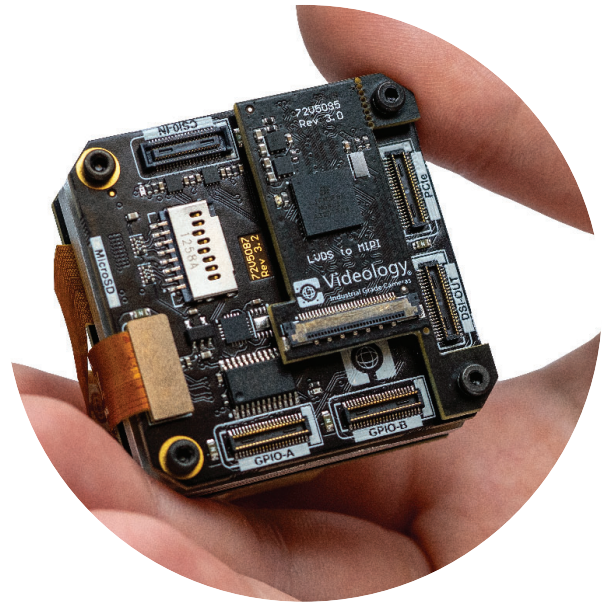
## Embedded Edge AI Solution with Modular Cameras, Adapters and Output Boards

*Excellence. Every day. Every time.*



## THIS IS SCAiLX BY VIDEOLOGY

### The Edge AI Modular Platform



Designed, developed and manufactured by Videology, **SCAiLX** is a modular device platform with a powerful AI engine. Users can connect a selection of peripherals such as cameras, adapters and output boards to the **SCAiLX** Edge AI platform.

**SCAiLX** is a compact, lightweight, flexible, and secure solution for Edge AI vision. Whether you are a vision system developer, integrator, software vendor, or OEM; **SCAiLX** is the platform to build and run your vision AI inference models on the Edge.



### Key Facts About SCAiLX

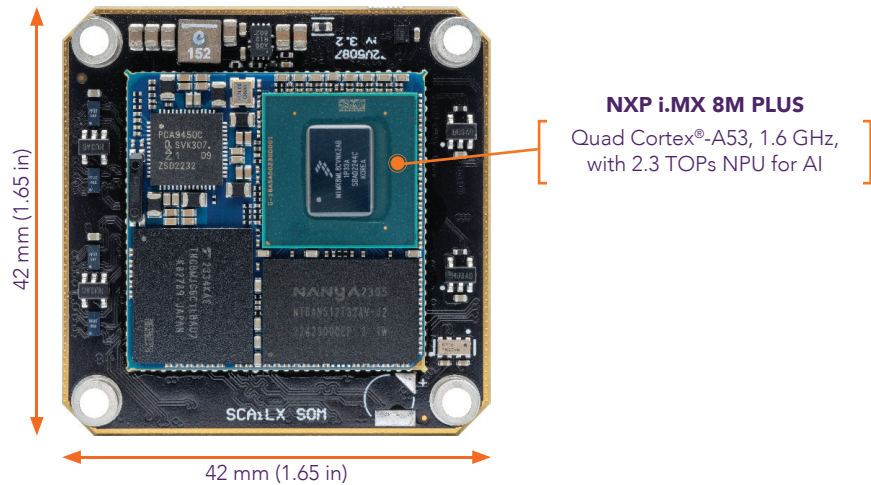
The **SCAiLX** Edge AI modular platform is based on the NXP i.MX 8M Plus processor with a board size of 42x42 mm. This universal SoM board can connect to various add-on boards for multiple types of connectivity or sensors.

- All **SCAiLX** platform interface boards have the same size of 42x42 mm
- The SCAiLX SoM board can be connected to
  - A Videology board level camera board or,
  - A block camera (Videology, Sony, Tamron)
- The **SCAiLX** platform can be powered with PoE or DC

**A modular and open device platform for intelligent image and video analytics.**

# THE BRAIN OF THE SCAiLX PLATFORM

## A 42x42 mm SoM Board for Edge AI Vision



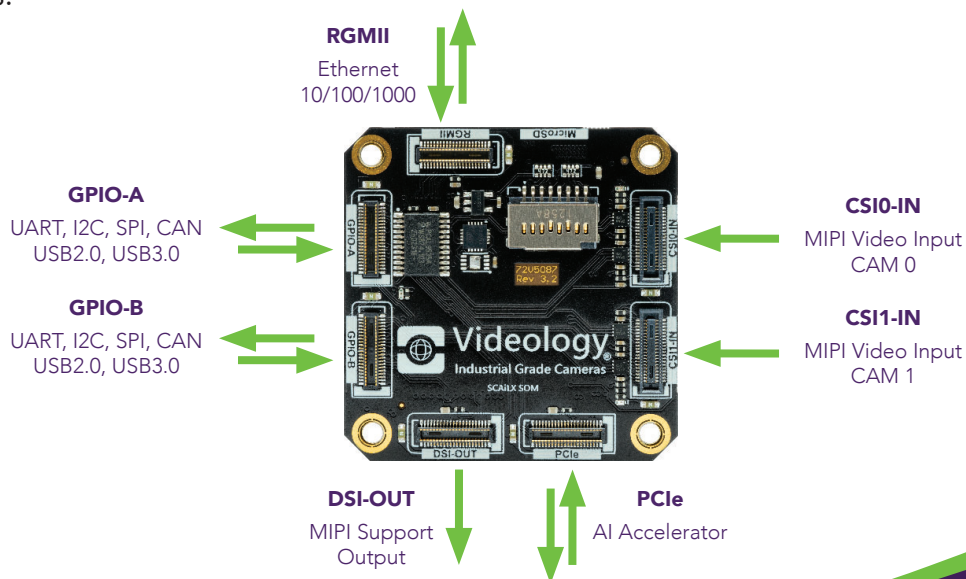
The flagship SoM board of the SCAiLX platform is built on an NXP i.MX 8M Plus processor with an integrated Neural Processing Unit (NPU). The i.MX 8M Plus processors are designed to excel in AI machine learning and vision applications.

This SoM board forms the core of the modular SCAiLX Edge AI platform, enabling real-time data processing and analysis at the Edge. Reducing the need for constant cloud connectivity.

SCAiLX-SOM-AI module contains CPU, RAM, FLASH memory. It also has built-in hardware H.264 / H.265 encoder and decoder for accelerated video streaming. Based on an embedded Linux operating system, the SoM board supports Yocto development environment.

The SoM board also features a standardized connector interface, allowing direct connections to other SCAiLX boards or cameras, either directly (board-to-board) or via flex cables (board-to-wire).

This modularity in the design ensures error free connection and enhanced flexibility for various configurations.



## SCAiLX BOARD LEVEL CAMERAS

### High Performance Modular Board Cameras Designed for SCAiLX

Equipped with a 2 MP global shutter and a 1/2.6" Onsemi sensor, this first SCAiLX board level camera comes with an onboard Image Signal Processor (ISP). The SCAiLX-2GS234-xY camera is available in monochrome or color versions.

Delivering a resolution of 1920x1200 @ 60 fps, the board level camera ensures exceptionally clear and sharp digital images. The native MIPI video output interface seamlessly integrates with the SCAiLX platform, providing high-quality video for direct AI processing.

We continue to enhance our SCAiLX board camera lineup to meet the growing demands of Edge AI applications\*.

The above image is an example of how SCAiLX and a Videology board level camera can be combined.

- SCAiLX camera board (2GS234-xY)
- SCAiLX processor board (SCAiLX-SOM-AI)
- SCAiLX Ethernet PoE or DC power adapter board (SCAiLX-ETH-POE / SCAiLX-ETH-DC)



## DUAL CAMERA CAPTURE

### For AI-powered stereo vision

The SCAiLX SoM processor board is designed to support dual camera streaming with up to 1080p @ 60 fps. With two identical MIPI CSI-2 camera ports, the SCAiLX-SOM-AI board supports 2x SCAiLX-2GS234-xY camera modules.

High resolution stereo vision applications with dual Videology cameras enable depth perception and distance recognition. Solving the core of 3d problems.



\* Please contact Videology for availability

# INTEGRATION WITH ZOOM BLOCK CAMERAS

## Get Videology, Sony and Tamron Block Cameras Edge-AI Ready



Broaden the functionality of the **SCAiLX** platform by integrating Videology Zoom Block cameras using the SCAiLX-LVDS-2-MIPI board.

The LVDS-2-MIPI board interfaces between the SCAiLX-SOM-AI board and all Videology Zoom Block cameras with LVDS output.

The MIPI ports on the SCAiLX-SOM-AI board support video resolutions up to 1920 x 1080p @ 60 fps.

A typical **SCAiLX** and zoom block camera assembly would combine:

- 2 MP LVDS block camera (Videology, Sony, or Tamron)
- SCAiLX adapter board (SCAiLX-LVDS-2-MIPI)
- SCAiLX SoM processor board (SCAiLX-SOM-AI)
- SCAiLX Ethernet PoE or DC power adapter board (SCAiLX-ETH-POE / SCAiLX-ETH-DC)

Another key feature of the LVDS-2-MIPI is the automatic FPGA firmware download. When the SCAiLX-SOM-AI module boots up, the necessary firmware is automatically loaded onto the interface board.

The SCAiLX-LVDS-2-MIPI supports zoom blocks from various manufacturers with LVDS output. Offering resolutions up to 1920x1080p @ 25, 30, 50, and 60 fps. This includes 2 MP LVDS block cameras from Sony and Tamron. Enhancing your existing camera networks with AI-powered intelligence.

**SCAiLX** platform supported block camera models include, but are not limited to\*:

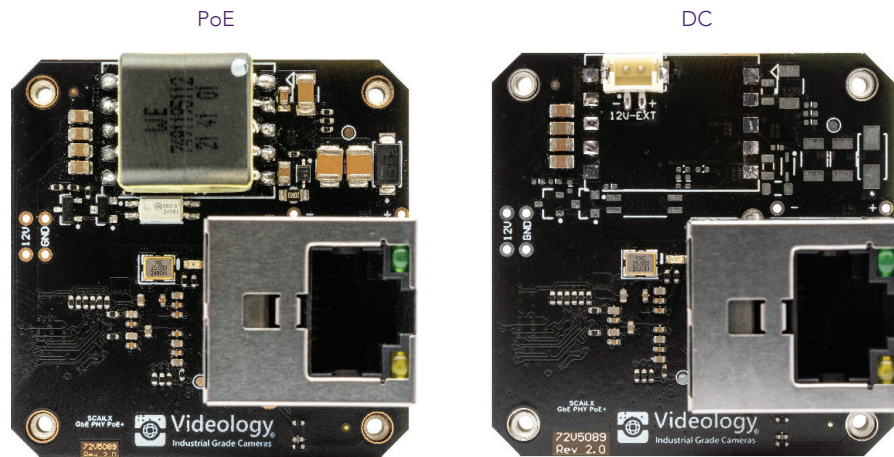
- All Videology Zoom Blocks
- Select Tamron Zoom Blocks
- Select Sony Zoom Blocks



\* Please contact Videology for availability

## MODULAR INTERFACE

### Versatile Connectivity and Power Solutions

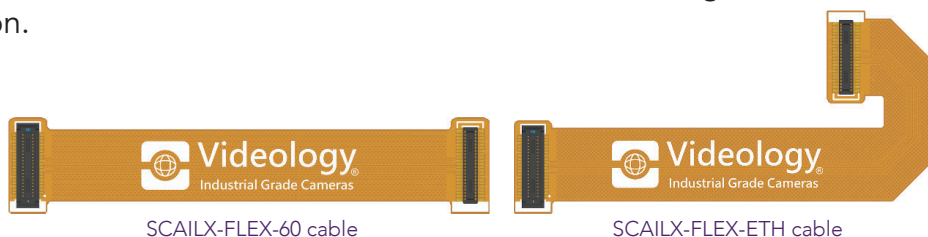


Enhance your **SCAiLX** Edge AI modular platform with our connectivity and power boards. Both the Power over Ethernet (PoE) and DC powered Ethernet boards measure 42x42 mm, perfectly matching the dimensions of other **SCAiLX** modular platform boards. These Ethernet interface boards facilitate fast and easy camera powering and connectivity.

- PoE Board (SCAiLX-ETH-POE): Delivers power and data to the **SCAiLX** unit through a standard Ethernet cable.
- DC Power Board (SCAiLX-ETH-DC): Supplies power via a 12 VDC connector while transmitting data through a separate Ethernet cable.

Both boards interface to the SCAiLX-SOM-AI board via:

- A flexible cable via the SCAiLX-FLEX-ETH flexible cable or,
- SCAiLX-FLEX-60 for board-to-board connection with mating connectors for errorless connection.



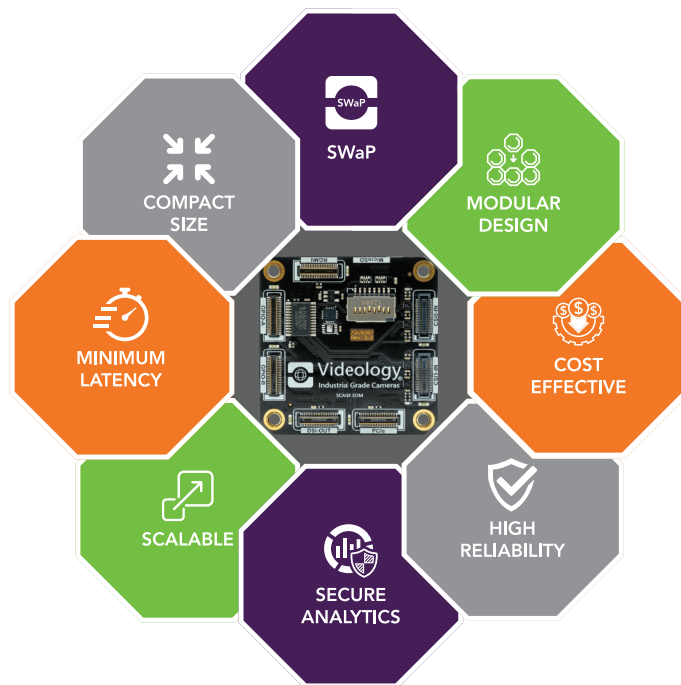
Choose the right power solution for your needs and streamline your camera management with the **SCAiLX** Ethernet interface boards.

# A BREAKTHROUGH IN CAMERA DESIGN AND ARCHITECTURE

We have elevated our core expertise in custom embedded cameras to become the “eye” and beyond for vision AI applications with **SCAiLX**.

Leveraging our 25+ years of experience in image capture design and development, the **SCAiLX** Edge AI modular platform offers unparalleled capabilities in vision AI and camera technology.

Built with modularity in mind, the **SCAiLX** platform delivers a range of advanced features and benefits designed to enhance vision AI applications and redefine Edge AI camera technology standards.



## Size Weight and Power



**SCAiLX** is a very small NXP based System-on-Module (SoM) only 42x42mm with low power draw.

## Modular Design



**SCAiLX** is a versatile open platform. It can be combined with a variety of inputs and outputs (MIPI, LVDS, Ethernet, PoE, etc.).

## Cost Effective



Design with a simple component count. Dedicated SoM without unneeded interfaces and connectors.

## High Reliability



**SCAiLX** is based on a platform with Embedded Linux OS.

## Secure Analytics



Embedded Linux based platform supporting market renowned security solutions. Secure updates via over the air (OTA).

## Scalable



On the Edge AI solution that can grow using easy to attach hardware accelerators for future expansion.

## Minimum Latency



Using hardware video pipeline and dedicated hardware video compression.

## Compact Size



Stackable design with an efficient thermal solution result in a reduced built-in space.



## More Than One Million Embedded Cameras Designed and Delivered Since 1995.

### Our Brand Difference

Our deep commitment to the customer experience delivers performance excellence throughout the entire customer journey. This is Videology's brand difference and it's our company's most important priority in serving the needs of our customers across the globe.

### Our Brand Promise

How do we support our brand difference? We do so with a sincere promise we make to every Videology customer as follows: We provide competence, attention to detail and personal care with a level of excellence that will delight every customer in every interaction. This is Videology's brand promise and it's been the key to our growth and success – from a small start-up more than 25 years ago to a global leader in today's imaging industry.



# Videology®

Industrial-Grade Cameras

an inTEST Company

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Every day. Every time.*