# **Leaper IB-AI Platform**

**Realistic Feature Generation** 

#### Low-requirement High-quality Feature Generation for Industrial Needs

LEAPER IntelliBlink<sup>™</sup>-AI (IB-AI) is comprehensive and reliable deep learning system, integrating efficient and fast feature generation. It does not rely on a large volume of feature samples nor require continuous investment. Focusing on the complex and urgent application scenarios of industrial clients, and quickly provides defect detection solutions.

# Integrate Intelliblink™ Vision Tools for Complete Solutions

LEAPER IB-AI strengthens the integration of deep learning and traditional vision algorithms, establishing a smooth data path. Without extensive sample collection and annotation, it can quickly adapt to changing detection standards and occasional detection issues. It eliminates the need for long-term custom development, reducing research and development costs while improving the cost-effectiveness of products.





#### **Cold Start from One Image**



Generate a massive amount of trainable features with only a few original samples.

#### **Suitable for Multiple Industrial Sectors**



The breakthrough feature generation algorithm can be applied in various industrial products.

#### **Significantly Improve Accuracy**



Generated results are realistic, leading to higher accuracy of deep learning models.

#### **Seamless Algorithm Integration**



Flexibly combines deep learning with traditional algorithms, aggregating efforts to facilitate solution implementation.



## Technology Comparison

	Leaper Feature Generation	Traditional Data Augmentation	Pre-training Data Augmentation			
Description	Only a very small number of samples are needed.It takes into account the specificity of industrial products and product defects, generates results with high realistic appearance.	Basic image operations: panning, scaling, cropping, distortion, brightness, flipping, etc. Images do not change intrinsically and are of limited use for the training results.	Sample generation using adversarial neural networks. The images need to be pre-trained with a public gallery such as Microsoft Coco.Generated results are not suitable for industrial use.			
Reality	High	Low	Meaningless			
Increment	10,000*	10*	1,000*			

## **Diversity of Generated Results**



## Authenticity of Feature Generation

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## Augmentation : Use what you see

 Further increasing the diversity of training samples based on feature generation.



## 2. Visual display of training pictures to improve the controllability of training results.

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### Integration of Traditional and Deep Learning Algorithms



### Application of the Leaper IB-AI Integretion in the Detection Workflow



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