

#sophon-stream

[English](README_EN.md) | Simplified Chinese

1 Introduction

sophon-stream is a data stream processing tool for the Suanfeng development platform. This software is based on the idea of plug-in and uses C++11 to develop a pipeline framework that supports concurrent processing of multiple data streams. Based on the existing interface, sophon-stream has the advantages of ease of use and secondary development for users, and can greatly simplify the complexity of user configuration projects or adding plug-ins. Sophon-stream is based on SophonSDK, which can give full play to the encoding and decoding capabilities of Suanfeng hardware and the reasoning capabilities of deep learning algorithms, thereby achieving higher performance.

Main directory structure and module description:

Catalog	Module	Function Description
[framework](./framework)	[framework](./framework)	Frame
[element](./element)	[yolov5](./element/algorithm/yolov5)	yolov5 plug-in
	[yolox](./element/algorithm/yolox)	yolox plug-in
	[bytetrack](./element/algorithm/bytetrack)	bytetrack plug-in
	[resnet](./element/algorithm/resnet)	resnet plug-in
	[openpose](./element/algorithm/openpose)	openpose plugin
	[retinaface](./element/algorithm/retinaface)	retinaface plug-in
	[lprnet](./element/algorithm/lprnet)	lprnet plug-in
	[decode](./element/multimedia/decode)	Decoding plug-in
	[encode](./element/multimedia/encode)	Encoding plug-in
	[osd](./element/multimedia/osd)	Algorithm result visualization plug-in
	[distributor](./element/tools/distributor)	Data distribution plug-in
	[converger](./element/tools/converger)	Data aggregation plug-in
	[faiss](./element/tools/faiss)	faiss database plug-in
	[blank](./element/tools/blank)	Blank plug-in
[samples](./samples)	[yolov5](./samples/yolov5)	yolov5 demo
	[yolox](./samples/yolox)	yolox demo
	[bytetrack](./samples/bytetrack)	bytetrack demo
	[resnet](./samples/resnet)	resnet demo
	[openpose](./samples/openpose)	openpose demo
	[retinaface](./samples/retinaface)	retinaface demo
	[yolox_bytetrack_osd_encode](./samples/yolox_bytetrack_osd_encode)	Target detection-tracking-algorithm result push demo (detect-track-encode demo)
	[yolov5_bytetrack_distributor_resnet_converger](./samples/yolov5_bytetrack_distributor_resnet_converger)	Target detection-tracking-distribution-attribute identification demo
	[retinaface_distributor_resnet_faiss_converger](./samples/retinaface_distributor_resnet_faiss_converger)	Face detection-distribution-face recognition demo
	[license_plate_recognition](./samples/license_plate_recognition/)	Vehicle detection-license plate recognition demo
[tools](./tools)	[web_visualize](./tools/web_visualize)	web visualization tools

2 Quick Start

Please refer to [sophon-stream user documentation](./docs/Sophon_Stream_User_Guide.md)

3 FAQ

Please refer to [sophon-stream FAQ](./docs/FAQ.md)

