MR TECH IFF SDK

Versatile SDK for Machine Vision

1000+ FPS @ 4K

Image delivery for AI

- Machine vision cameras
- Color pre-processing
- 4K at 1000+ FPS with Blackwell
- 8K at 250+ FPS with Blackwell

25 ms G2G latency

Low latency streaming

- H.264 / H.265 encoding
- RTSP / WebRTC streaming
- Less than 25 ms for 4K
- Less than 50 ms for 8K

10+ GB/s bandwidth

High-speed image recording

- Multiple cameras
- More than 10 GB/s bandwidth
- No frame loss
- Live preview
- High quality post-processing

5 lines of code

to get you started

- C library interface
- 13 API functions
- Lots of usage examples on GitHub
- Detailed online documentation

MRTech **IFF** SDK (**I**mage **F**low **F**ramework SDK) is a powerful cross-platform toolkit that facilitates the development of high-performance machine vision and image processing applications. The core of IFF SDK was initially developed by MRTech in 2016 and has been continuously improved and used in many projects ever since.

The main feature of IFF SDK is delivering images to the customer's application code in the most efficient way. The toolkit helps achieve maximum performance for any configuration of the customer's image processing system.

IFF SDK highlights

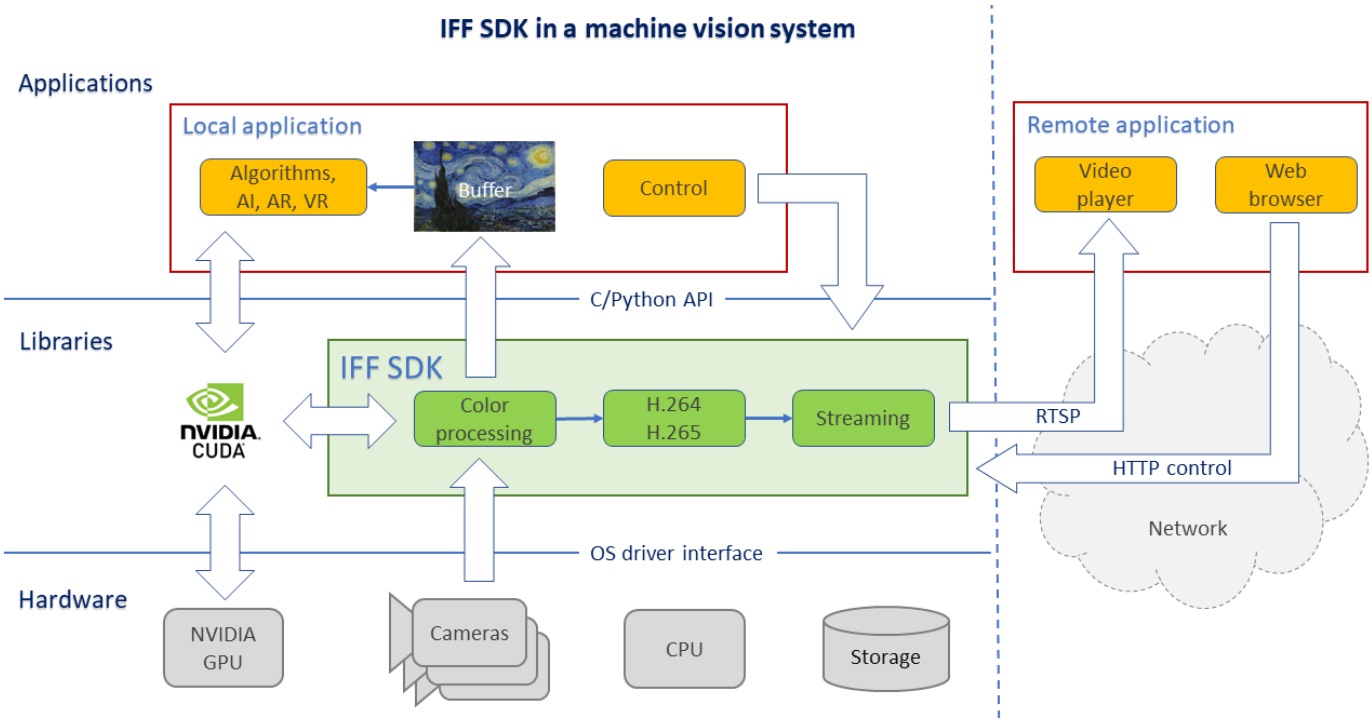
- Production-ready, high-quality code, field-proven in multiple real-life projects
- High-performance image processing with low latency and low overhead
- SDK architecture that simplifies development and customization of the target application
- Technical support, consulting services and implementation assistance from MRTech team

IFF SDK

MRTech IFF SDK	https://mr-te.ch/sdk
GitHub account	https://github.com/mr-technologies
MRTech support	support@mr-technologies.com

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IFF SDK makes images flow, so you can focus on your ultimate goal!



Basic Functionality

- Textual descriptions of pipeline configurations to build image processing workflows of any complexity
- Exporting and importing images from the SDK pipeline to the customer application
- Controlling pipeline parameters at runtime
- Seamless integration with the target application using C/C++ or Python API as well as HTTP-based interface to control image processing
- Performing accelerated image processing on dedicated and embedded NVIDIA GPUs
- Providing compatibility with most machine vision cameras and standards (GenICam, Video4Linux, etc.)

Processing modules:

- FFC, white balance, histogram
- Auto exposure and white balance
- Gamma correction, LUT
- DFPD, MG, HQLI, L7 demosaicing
- Denoise and RAW denoise
- Image crop and resize
- Color space transformation
- Color correction
- Lens correction

Control interfaces:

- JSON pipeline configuration
- C/C++ and Python API
- HTTP API

Compression and decompression:

- H.264, H.265
- JPEG
- JPEG2000

Input capabilities:

- Most machine vision cameras
- RTSP
- File input
- Import from user application

Output capabilities:

- TIFF, DNG, EXR file formats
- RTSP, WebRTC
- Export to user application

Supported Hardware

- Cameras:
  - Machine vision cameras from XIMEA, Basler, LUCID and other vendors
  - MIPI on NVIDIA Jetson, Qualcomm and NXP SoCs
- Platforms and operating systems:
  - 64-bit Intel x86, Linux and Windows
  - 64-bit ARM, Linux, NVIDIA Jetson family, Qualcomm and NXP SoCs, etc.
- Acceleration devices:
  - CUDA-accelerated processing on NVIDIA GPUs, including the Jetson platform
  - Hardware video encoding/decoding on NVIDIA GPUs, Jetson platform and Qualcomm SoCs
  - Vulkan-based processing on any GPU