

Versatile SDK for Machine Vision

500+ FPS @ 4K

Image delivery for AI

- Machine vision cameras
- Color pre-processing
- 1080p at 2000+ FPS
- 4K at 500+ FPS

20 ms G2G latency

Low latency streaming

- H.264 / H.265 encoding
- RTSP / WebRTC streaming
- Less than 20 ms for 1080p
- Less than 50 ms for 4K

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
- 10 API functions
- Lots of usage examples on GitHub
- Detailed online documentation

MRTech **IFF SDK** (Image Flow Framework 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

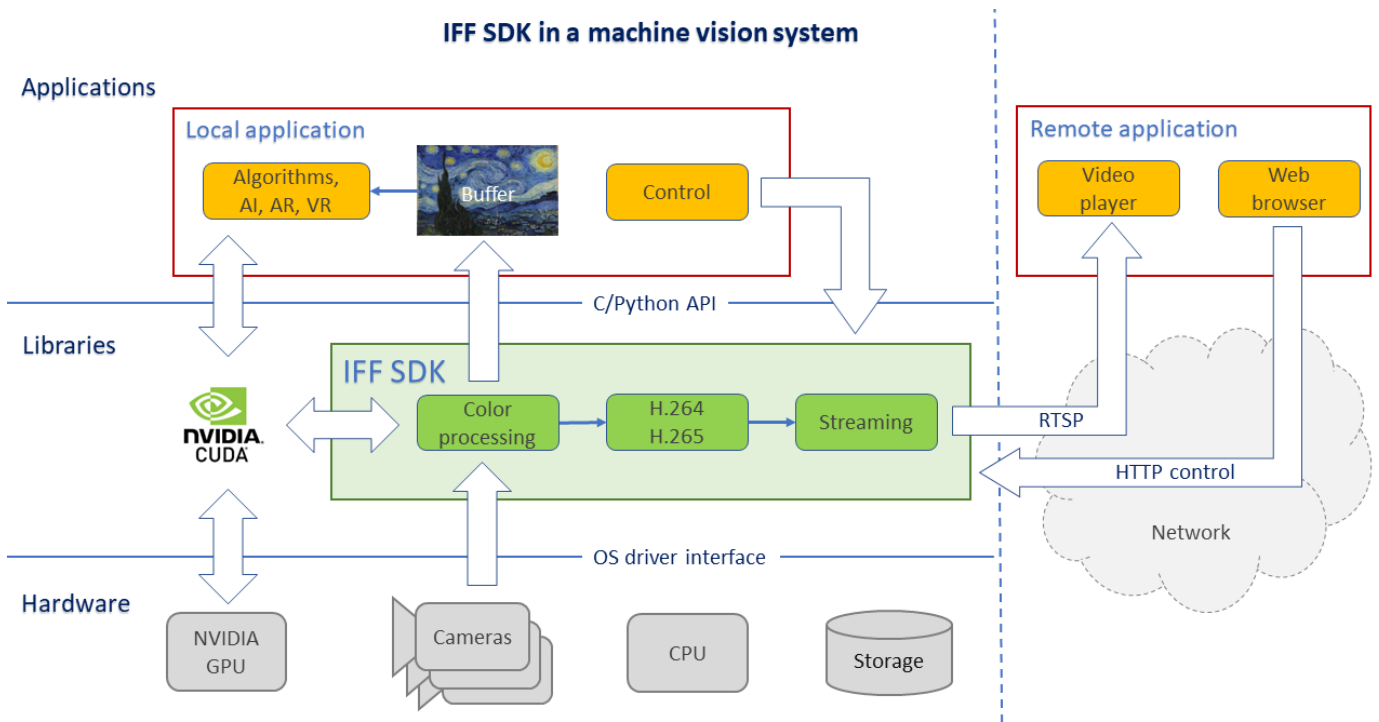
- Production-ready, high-quality code, field-proven in multiple real-life projects
- High-performance image processing with low latency and low overhead
- SDK architecture that simplifies development and customization of the target application
- Technical support, consulting services and implementation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



MRTech IFF SDK
GitHub account
MRTech support

<https://mr-te.ch/sdk>
<https://github.com/mr-technologies>
support@mr-technologies.com

IFF SDK in a machine vision system



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

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 and Qualcomm SoCs
- Platforms and operating systems:
 - 64-bit Intel x86, Linux and Windows
 - 64-bit ARM, Linux, Qualcomm SoCs, NVIDIA Jetson family, 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