MRTech IFF SDK

High-performance image processing

MRTech IFF SDK is a newly released cross-platform toolkit for high-performance image processing. The core component of IFF SDK is Image Flow Framework which MRTech has been developing and using in the projects since 2016.

The main feature of IFF SDK is to deliver images to applications, user algorithms with maximum efficiency. MRTech team believes that IFF SDK allows end users reach an excellent performance in image processing systems with architecture of any complexity.

IFF SDK features

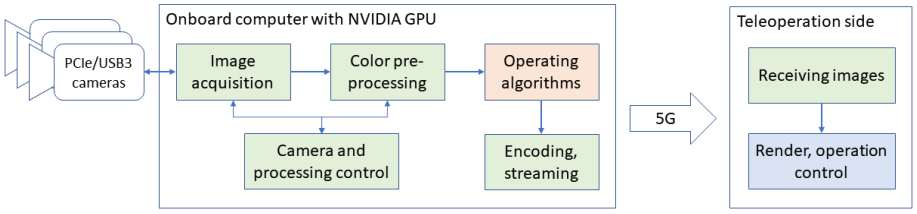
- Description language of image processing pipeline which allows building image processing pipelines of any complexity (in full or in part).
- Wide range of processing modules and algorithms.
- Efficient use of the GPU when necessary and possible.
- Internal and external software interfaces for:
  - Export/Import images,
  - Processing and input/output control.
- Examples of integration with third-party processing modules, libraries, OpenCV and AI primitives.
- Supports for various machine vision cameras such as:
  - PCIe, USB3, Ethernet cameras from XIMEA, Basler and other manufacturers,
  - MIPI cameras.

Advantages

- IFF SDK provides production quality code that has been proven in many projects.
- Our solution focuses on high performance, low overhead, low latency.
- The architecture of IFF SDK allows the user to easily build and customize the target application.
- If necessary MRTech provides support and assistance to the user with implementation that also may include project expertise, advice on equipment selection, hardware configuration.

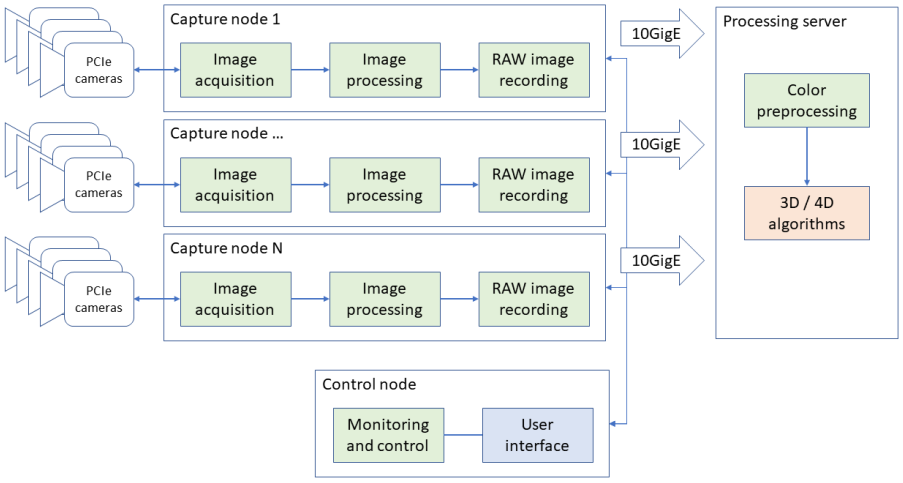
Examples of applications based on IFF SDK

Teleoperation system for autonomous machines



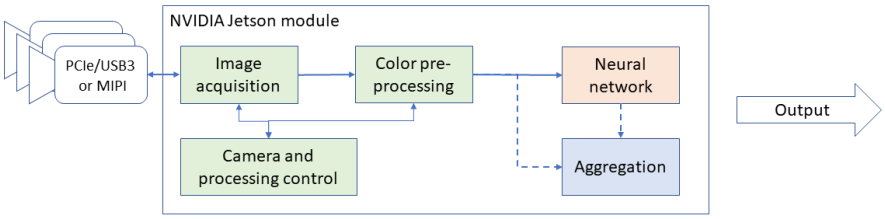
- Multi-camera system with XIMEA PCIe and USB3 cameras
- Low glass-to-glass latency acceptable for teleoperation

Argus multi-camera system



- Eight 12.4 MP PCIe XIMEA cameras per capture node with high scalability of the system
- Up to 60 FPS for each camera

Image delivery for neural network running on any NVIDIA Jetson module



- Wide selection of PCIe, USB3, Ethernet, MIPI cameras
- Flexible processing options for different Jetson modules

** IFF SDK modules are shaded green*