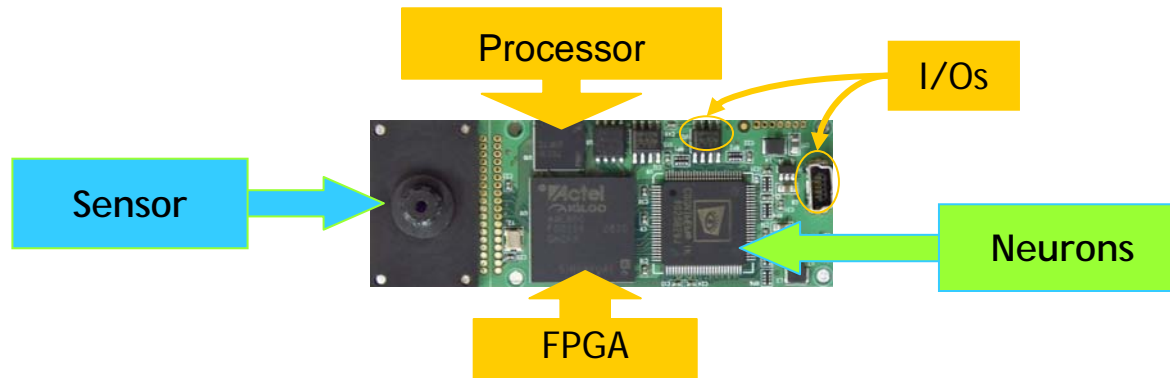


V1KU, video recognition with CogniMem

smart, miniature, fast, low-power, low-cost



Industrial automation

- Presence/Absence
- Pass/Fail, Sorting
- Object identification
- Anomaly detection



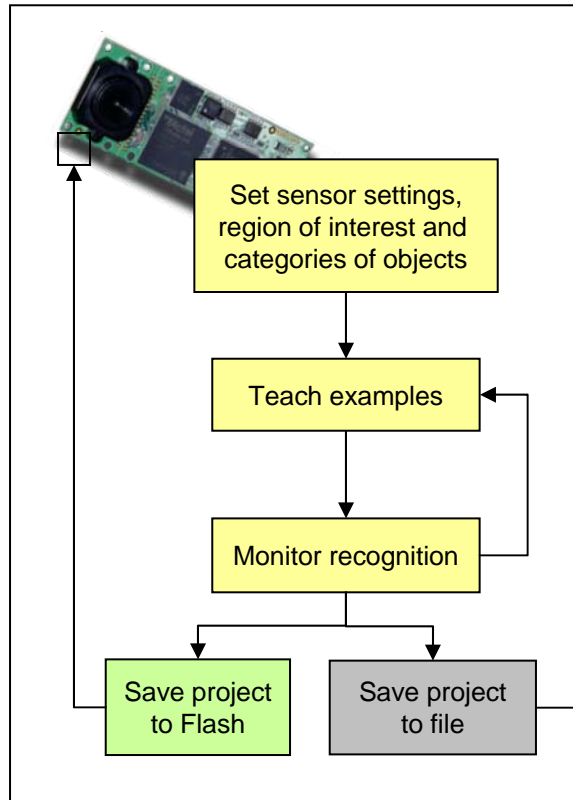
Video surveillance

- Selective recording
- Smart motion detection
- Target tracking
- Face detection

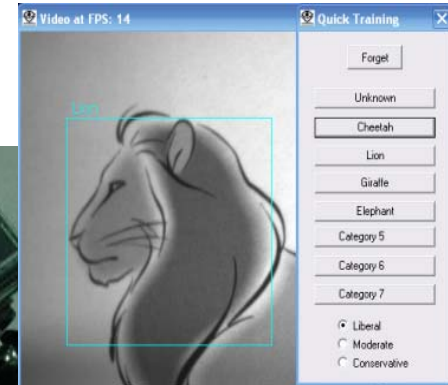


Easy Video Trainer GUI

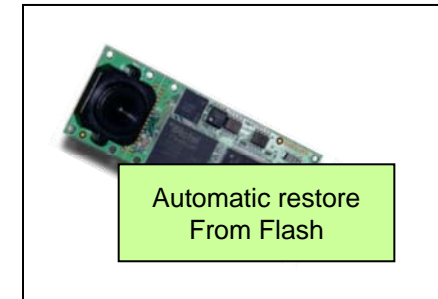
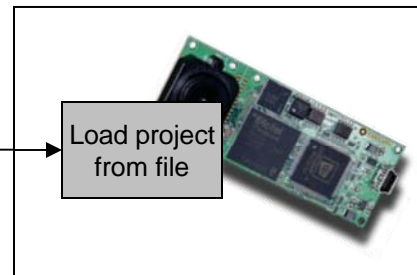
1st time...
Start a new project



Easy Video Trainer is supplied with V1KU



2nd time...
Load an existing project or autonomous start



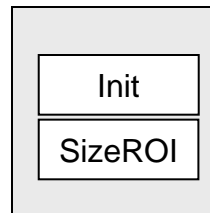
Windows SDK

- Simple function library

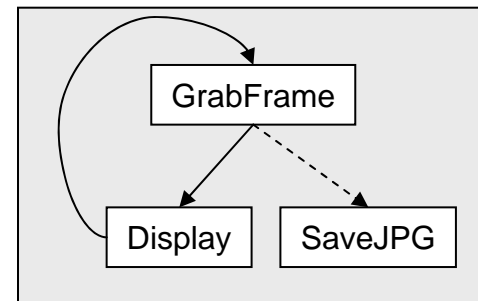
- V1KU_DLL
- C++ and .Net examples
- 30 day support



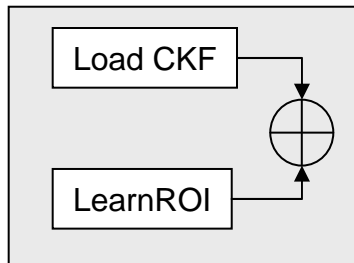
Initialization



Visualization

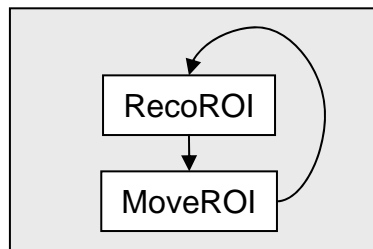


Deferred learning

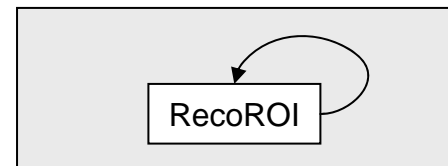


Real-time learning

Finding and Tracking



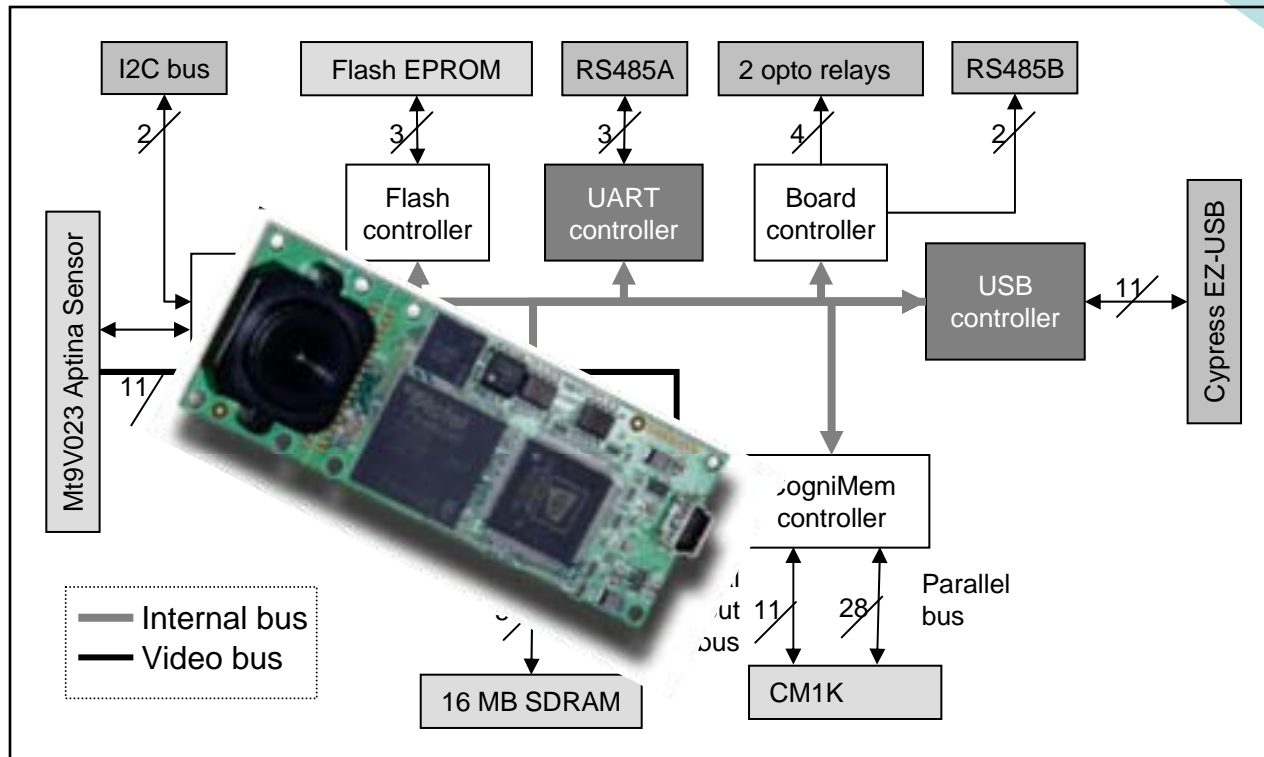
Monitoring of fixed region



FPGA SDK

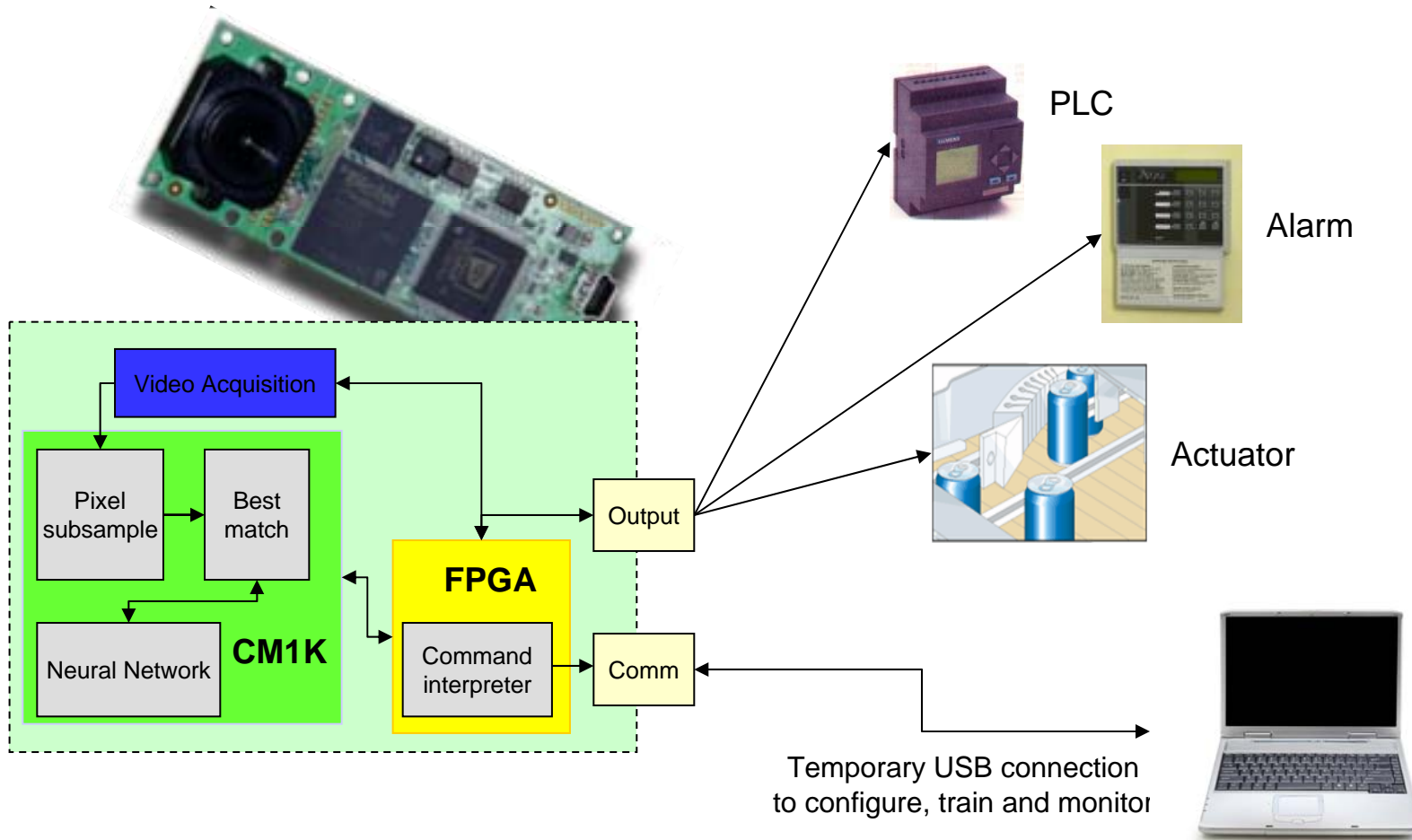
- CogniSight & CogniMem controller
- USB, UART, I2C master controller
- IO controller, SRAM controller, Flash controller

- Verilog source code
- Pin assignment
- Constraints
- Staple file



Default engine: CM1K

Recognize a region of interest at 60 frames per second



CogniSight extensions and customization



FPGA can be loaded with core modules including, but not limited to the following:

- Change the position of the region of interest (to find objects)
- Change the size of the region of interest (to recognize at different scales)
- Extract a custom signature (emphasizing color, edges, texture, etc)
- Integrate recognition results over time to reinforce accuracy
- Generate transform images
- Use multiple sub-network to reinforce robustness

