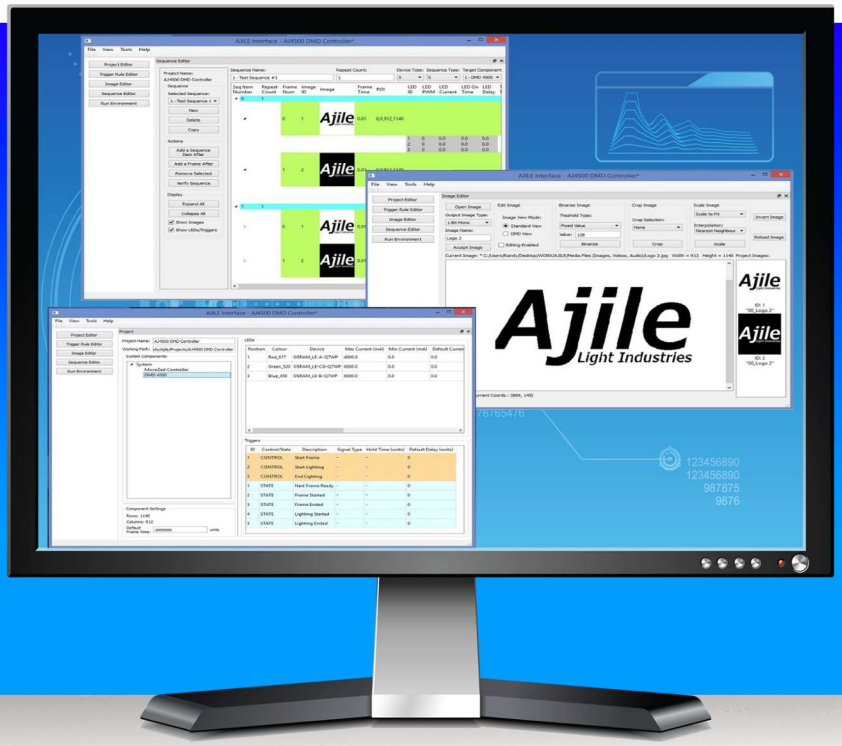
AjileWare Software Suite

fast, accurate, simple imaging solutions

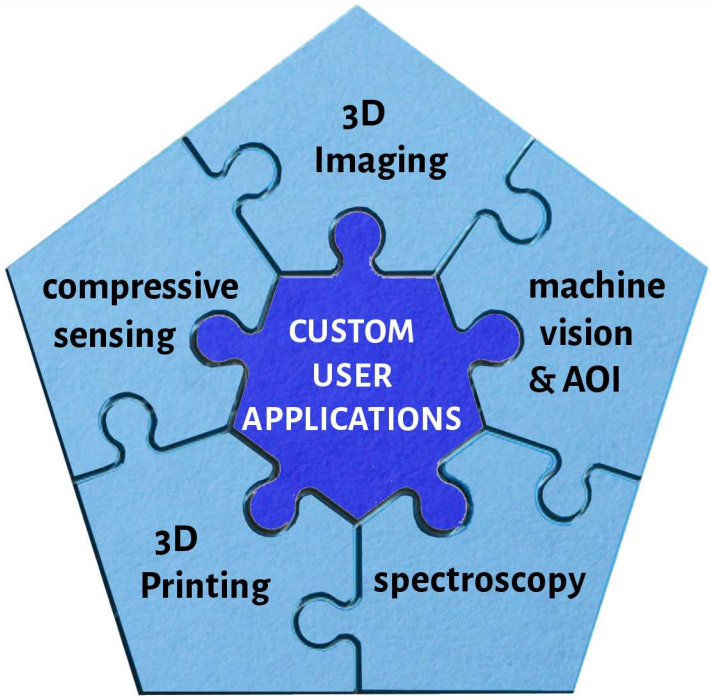


Exceptional control and flexibility

The AjileWare suite simplifies the fine control of high performance imaging devices to achieve the full potential of DMDs and cameras. For applications that need accurate synchronization of high-speed lighting and imaging, you can benefit from the AjileWare suite.

KEY FEATURES

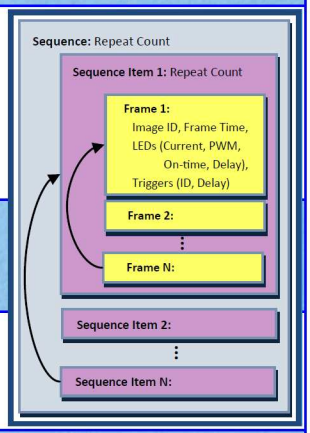
- Non-video frame by frame control of any image display or capture parameter
- Tight synchronization and low-latency triggering between cameras, DMDs and external devices
- Create sequences of frames, each with its own timing, lighting and ROI
- Continuously stream images from a PC via USB, Gig-E and PCIe
- Easy to use GUI to get you up and running quickly
- Fully featured SDK in Python/C++ for complete control of the suite
- Support for embedded system allows local processing to accelerate applications

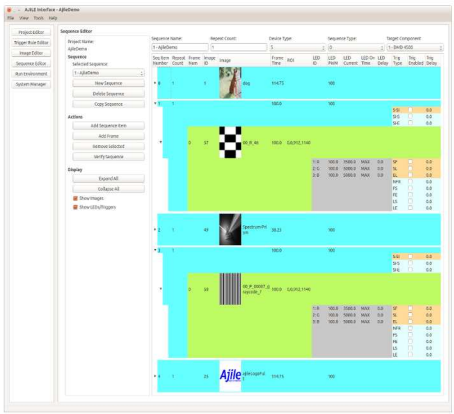


Using The AjileWare Software Suite

AjileWare supports project structures which can accomodate sequences of arbitrary complexity.
Easily import images of any format and adapt them to your project needs for pixel level control
Create trigger rules to control and synchronize multiple components and external devices
Manage lighting timing, power and delays on a per frame basis

Sequences Control	Create complex nested series of sequences with settable repeat counts Sequences and sequence items can have repeat counts (up to 4bn) or can loop Unlimited sequence lengths supported (queued in the controller)
Lighting Control	Specify per frame for each LED: PWM percentage LED on time in microseconds Drive current Delay time (in microseconds from frame start)
Trigger Control	Specify: Trigger type (rising/falling edge, active high/low) Hold time (in nanoseconds) Delay time (in nanoseconds from trigger event)
Trigger Rules	Software configurable, low-latency hardware triggers which: Map internal device states to external output pins Map external input pins to internal control inputs
Image Management	Import any standard format (e.g. PNG, JPG, BMP, etc.) Micro-mirror level editor with correct DMD presentation Generate images on the fly and stream from a PC, or on the embedded controller
Grayscale & Color Image Optimization	Automated Grayscale Display Optimizer: Adjusts timing and lighting for optimal frame rate and grayscale linearity Displays images with arbitrary bit-depth (e.g. 4, 8, 10 or 16 bit)
Run Modes	*Store and go*: preload to memory and run sequences at full speed *Streaming*: send a continuous stream of images and frame instructions from a PC *On-board Generation*: combination of embedded ARM and FPGA for high speed imaging
Embedded Control	On-board Zynq with embedded Linux available to run user applications locally Embedded development kit (EDK) allows customization of both the ARM Linux and FPGA Custom development is available to speed up time to market





AjileWare GUI

```
myProject = Project()
sequenceID = 1
sequence = Sequence
    (sequenceID)
myProject.AddSesequence)
seqItem = SequenceItem
    (sequenceID, 1)
myProject.AddSequenceItem
    (seqItem)
frame1 = Frame(sequenceID)
myProject.AddFrame(frame1)
frame2 = Frame(sequenceID)
myProject.AddFrame(frame2)
```

Python / C++ SDK

Structured Light Projection

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