

# “DynaFlash” projector the highest speed level in the world

Joint Patent Pending

## DynaFlash outline

High-speed 8-bit projector at 1000fps with 3ms delay called “DynaFlash” is realized by Texas Instruments DLP® technology and controlling high luminance LED.

TED developed high speed control logic into FPGA for both digital micromirror device (DMD) and LED to achieved high speed frame rate with 8bit depth and to achieve 3ms(min) ultra low latency we implemented high speed transfer logics between PC.

\*This product was made on the basis of the jointly Development with Ishikawa Watanabe Lab, the University of Tokyo. And these technologies are being applied for patents.



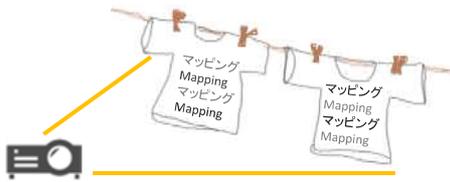
\* Image for illustration purposes

## Applications

Project the patterns to the objects (space coded, phase shifting method) to recognize in three-dimensional shape. With using DynaFlash can be projected the patterns in 1000fps means possibly recognized “Moving Objects” in real-time.

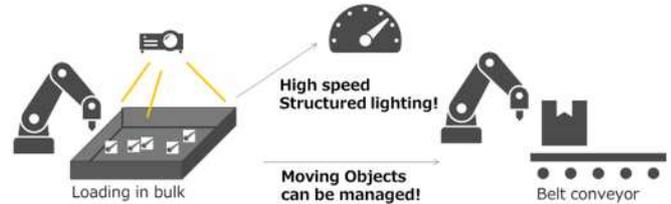
### ◆ Dynamic Projection Mapping

- be able to project “moving object” with appropriate images
- Reducing complex predicted computing process



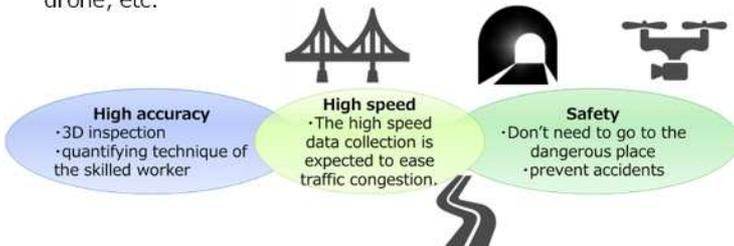
### ◆ 3D measurement

- Structured-light 3D scanner (Gray code & Phase shift)
- Higher speed & for “moving object”



### ◆ Infrastructure inspection

- Inspection for the crack of bridge, tunnel, road and rail
- be able to inspect while moving by be loaded on vehicle and train, drone, etc.



### ◆ Augmented Reality

- Very Comfortable AR with real-time display
- Real-time dead angle indication!
- Real-time drive assist information!



### ◆ Others, medical, entertainment, communication

### ◆ Smart Headlight

- Glare-free High beam
- Projects additional info and personalization on the road (road marking and direction pointing)



## Specification

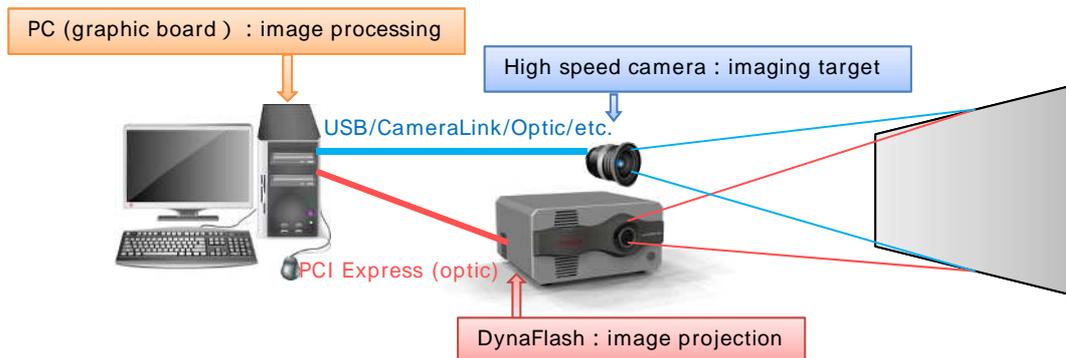
- Projection : Single DLP® projector
- Panel : 0.7" DMD 1024x768(XGA)
- FR and depth : 1000fps, 8bit
- Latency : 3ms projection latency
- Host I/F : PCI Express I/F (optic)
- Luminance : 330 ANSI lumen (1000fps)
- Offset : 125%
- Throw Ratio : 1.8 – 2.1
- Chassis size : 260 x 270 x 120mm



## Applications

Dynamic projection mapping,  
Real-time 3D measurement  
Real-time scanning, Inspection, robotics vision,  
Argument reality (AR), High-speed gesture UI, etc.

## System configuration example



(example) System configuration for projection mapping

1. Take an objection image by high speed camera
2. Image processing by PC (graphic board)
3. High speed image projection by DynaFlash

## Ordering Information

Part number	TB-UK-DYNAFLASH
Deliverables	*The specification and its design may change without notice.

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