
# TMS-LITE

## Lighting Controller Training

# Introduction

1. Designed to control the lighting intensity/brightness.
2. Is a constant current controller which using the current to control the lighting intensity.
3. 2 different type of controller : Analog and Digital.
4. Consists of 3 different mode : Constant, Strobe & Trigger.
5. Consists of multiple channel with individual setting.


# Type of Controller - Analog

## ANG Series - (Constant)

**ANG-1000-CH1-24V-A1**
**ANG-1000-CH1-5V-A1**

**ANG-2000-CH2-24V-A1**
**ANG-2000-CH2-5V-A1**

**ANG-4000-CH4-24V-A1**
**ANG-4000-CH4-5V-A1**

INPUT POWER:
24V/5V
OUTPUT POWER:
24V/ 1A (MAX)

## SD Series - (Constant)

**SD-1000-D1**
INPUT POWER: 24V
OUTPUT POWER:
24V/ 2A (MAX)

**SD-1000-D1-LCO**
INPUT POWER: 24V
OUTPUT POWER:
24V/ 0.13A (MAX)

**SDH-1000-D1**
INPUT POWER: 24V
OUTPUT POWER:
5V/ 2A (MAX)

**SDX-CH1-A1**
INPUT POWER: 24V
OUTPUT POWER:
24V/ 3A (MIN)
24V/ 5A (MAX)

**SDX-CH1-A2**
INPUT POWER: 24V
OUTPUT POWER:
24V/ 5A (MIN)
24V/ 9A (MAX)

# Type of Controller - Analog

## ST Series – (Constant & Strobe)

**ST-1000-D1**
INPUT POWER: 24V
OUTPUT POWER:
24V/ 2A (MAX)

**ST-1000-A1**
INPUT POWER: 24V
OUTPUT POWER:
24V/ 2A (MAX)

**ST-1000-D1-LCO**
INPUT POWER: 24V
OUTPUT POWER:
24V/ 0.13A (MAX)

**STH-1000-D1**
INPUT POWER: 24V
OUTPUT POWER:
5V/ 2A (MAX)

# Type of Controller - Digital

## LC-11 Series

**LC-11-4CH-RGBW-A1**

INPUT POWER: 24V
OUTPUT POWER:
24V/ 1A (MAX)

## LC-18 Series

**LC-18-4CH-A1**

INPUT POWER: 24V
OUTPUT POWER:
24V/ 1A (MAX)

**LC-18-SQ-4CH-A1**

INPUT POWER: 24V
OUTPUT POWER:
24V/ 1A (MAX)

**LC-18-4CH-RGBW-A1**

INPUT POWER: 24V
OUTPUT POWER:
24V/ 1A (MAX)

**LC-18-4CH-KP1**

INPUT POWER: 24V
OUTPUT POWER:
24V/ 1A (MAX)

**LC-18-4CH-A2**

INPUT POWER: 24V
OUTPUT POWER:
24V/ 2A (MAX)

# Type of Controller - Digital

## LC-18 Series


### LC-18-2CH-A5

INPUT POWER: 24V
OUTPUT POWER:
24V/ 5A (MAX)


### LC-18-OD-4CH-A2-48V

INPUT POWER: 48V
OUTPUT POWER:
48V/ 2A (MAX)


### LC-18-1CH-A10

INPUT POWER: 24V
OUTPUT POWER:
24V/ 10A (MAX)


### LC-18-OD-2CH-A5-48V

INPUT POWER: 48V
OUTPUT POWER:
48V/ 5A (MAX)


### LC-18-OD-1CH-A10-48V

INPUT POWER: 48V
OUTPUT POWER:
48V/ 10A (MAX)

## LC-20 Series


### LC-20-SQ-16CH-A1

INPUT POWER: 24V
OUTPUT POWER:
24V/ 0.48A (MAX)

TMS LITE
since 2004
www.tms-lite.com

# Advantage

Analog

- Easy to install
- Small & Compact (SD/ST)
- ANG series can easily connected by power plug
- Easily adjust intensity via current dip switch/ VR knob
- Have selectable mode (constant & strobe)
- Support high current lighting (SDX)

Digital

- Plug and play
- Small & Compact
- Selectable modes
- Programmability
- Individual intensity control for every channel
- Support high current lighting
- Support high speed application with strobe and overdrive function
- Support photometric application (SQ)
- Support color application (RGBW)

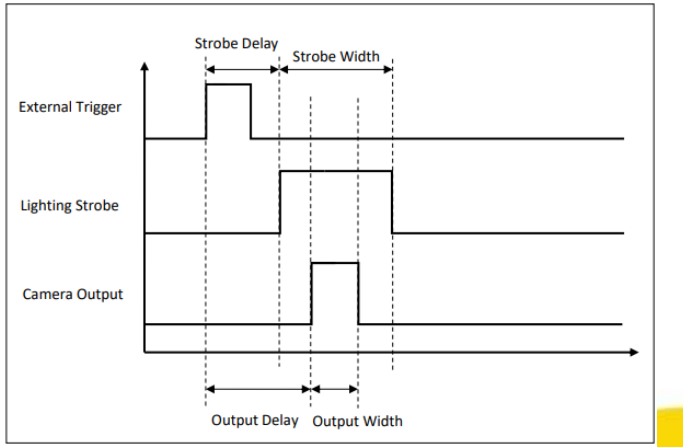
# Mode Explanation

## Constant

- Lighting will turn on constantly
- Application: Static inspection or slow moving systems

## Strobe (Digital Only)

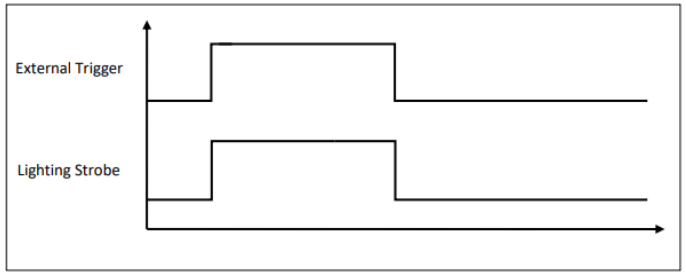
- Lighting will turn on based on the strobe width of the controller that can be setting through the software.
- Controller can received input signal to turn the lighting and send output signal to trigger other devices (camera).
- Strobe parameter - strobe width, strobe delay, output width & output delay.
- Application: High intensity and high precision.



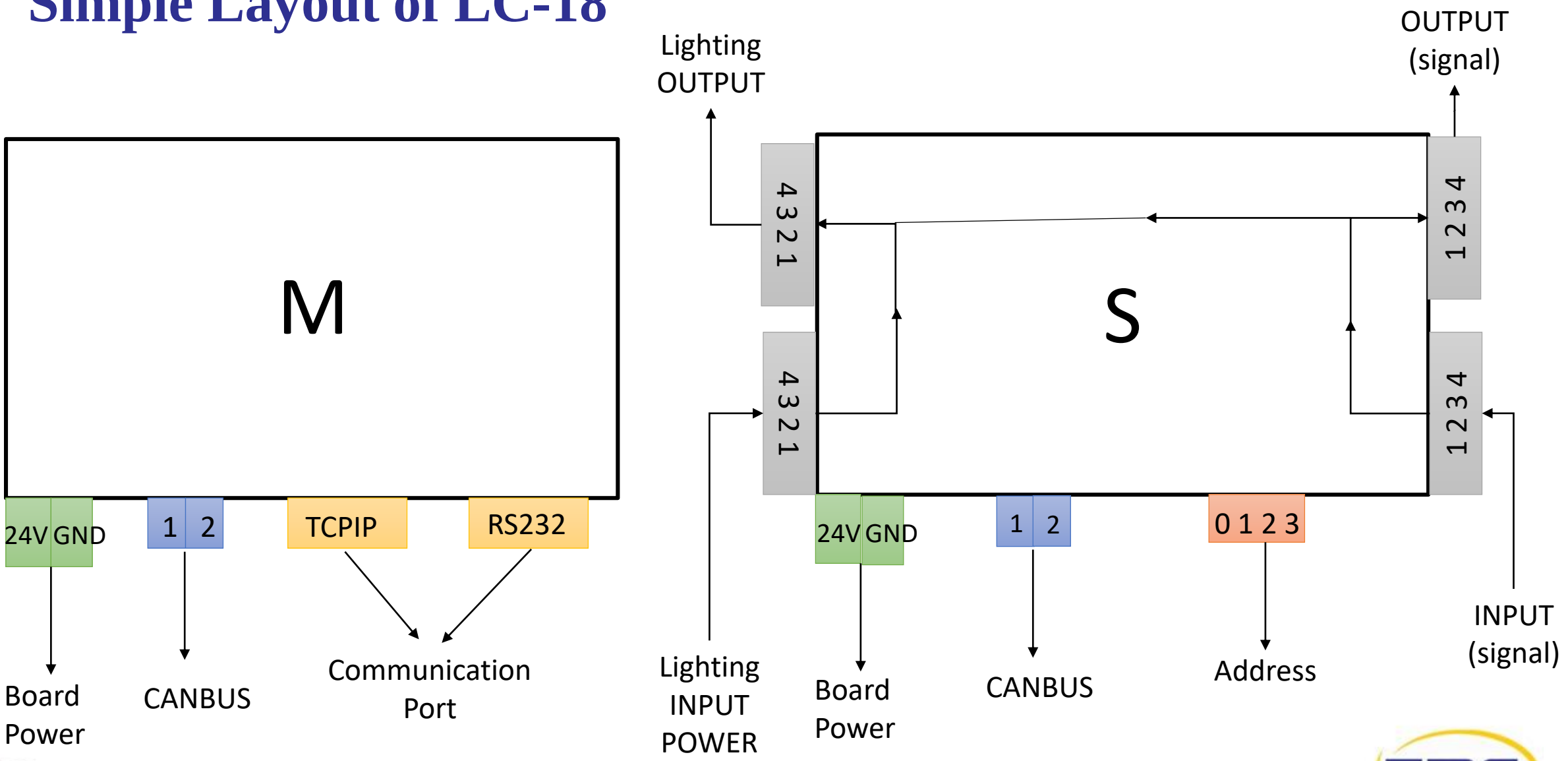

## Trigger

- Trigger mode provides most flexibility for variable timing light output.
- Lighting will turn ON when input trigger signal received and OFF when no input signal
- Digital controller output signal will not sending signal
- Application: Line scan application

Note: Analog controller strobe mode function will be the same with trigger mode



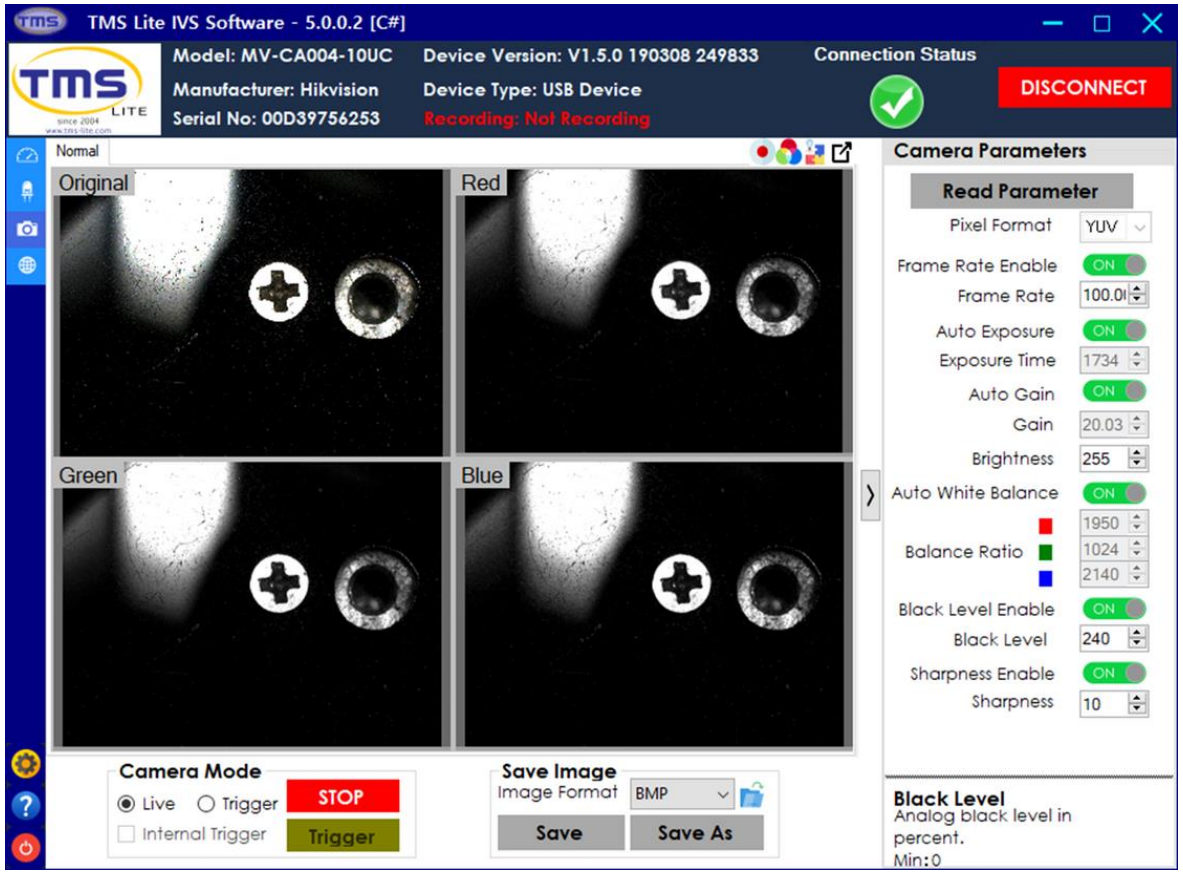
# Simple Layout of LC-18



# Software

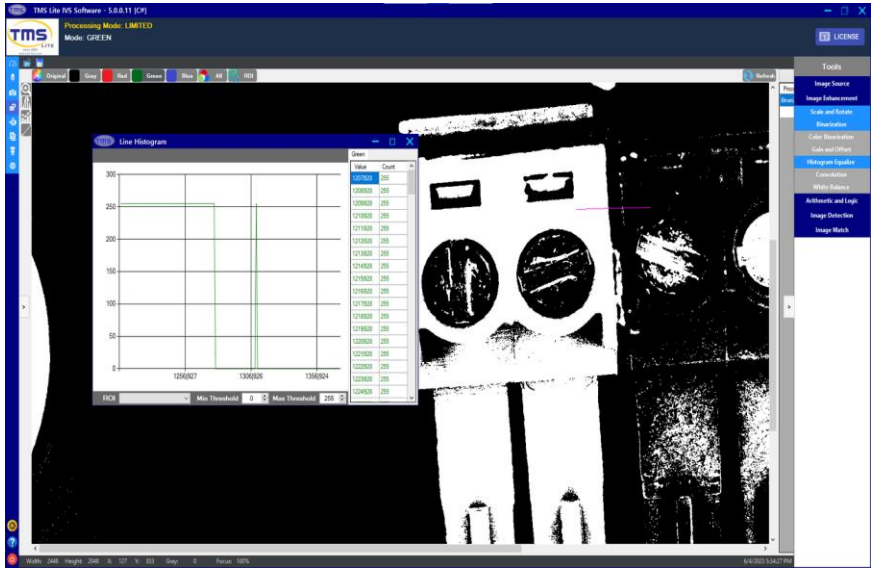
## Lighting Controller Module

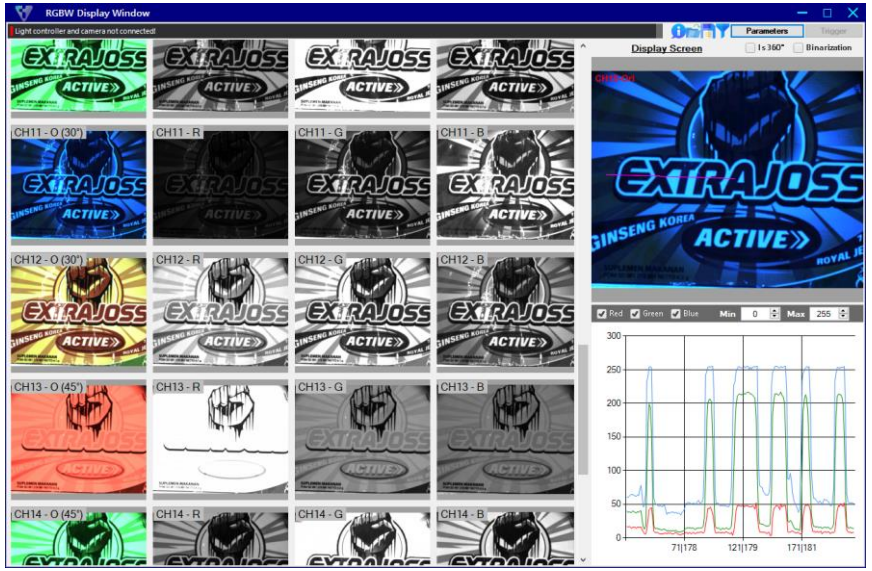

## Camera Module

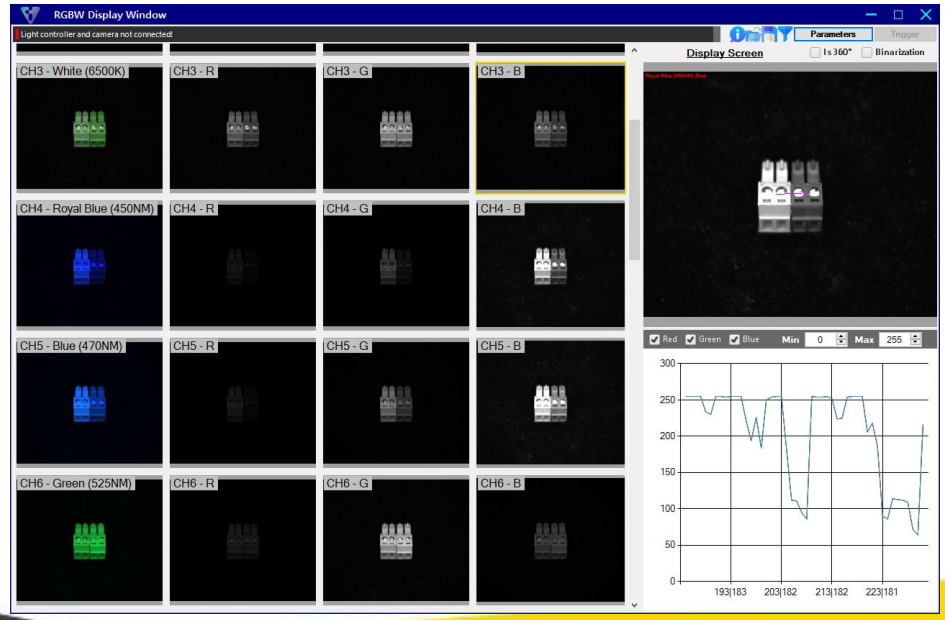


# Software

## Simple Image Processing Module



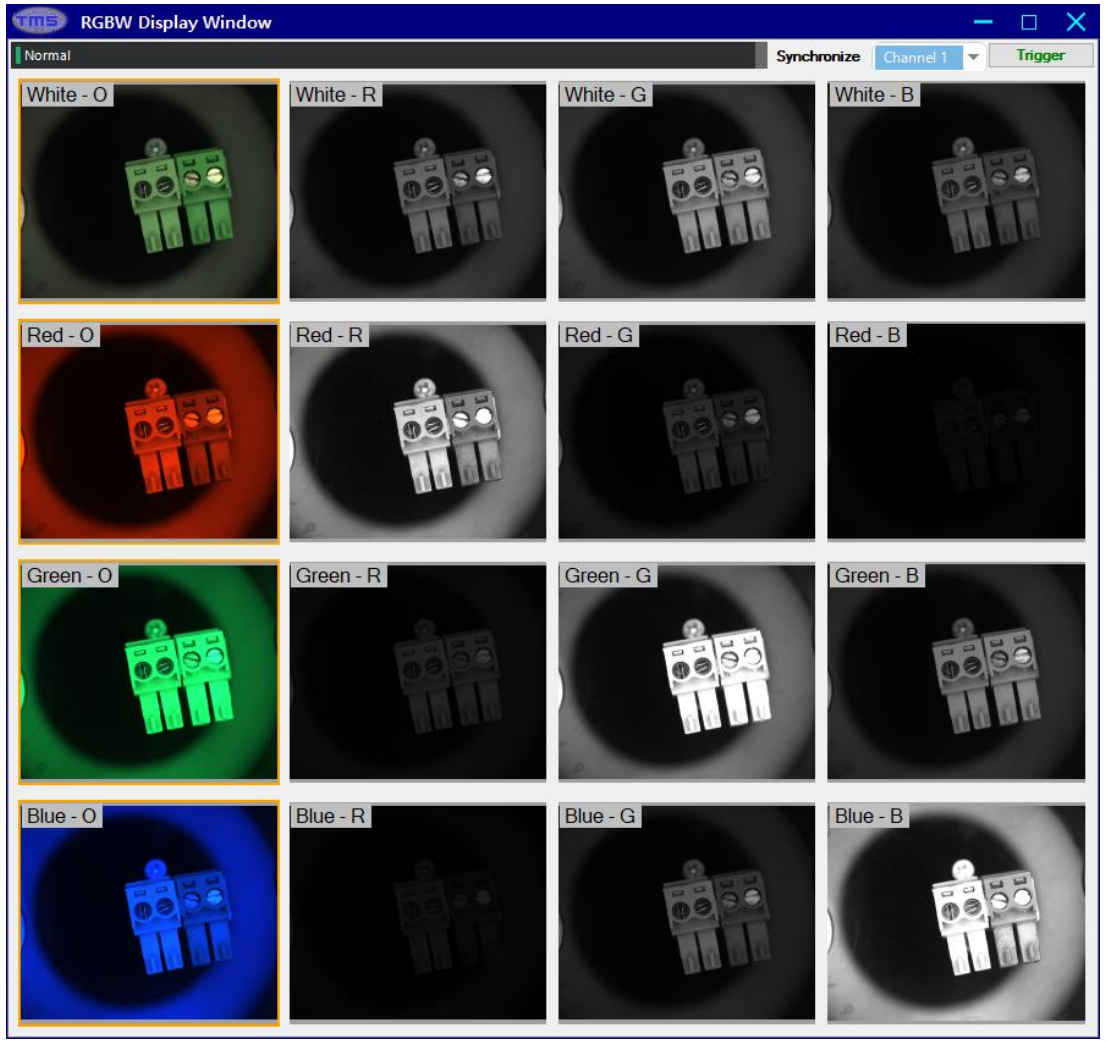



# Application - RGBW


Color Application – Inspect the different between 2 green color using RGBW lighting

This application is perform by **LC-18-4CH-RGBW-A1** controller



# Application - Overdriving

Overdrive Application – The controller will overdrive the lighting to get a clear image

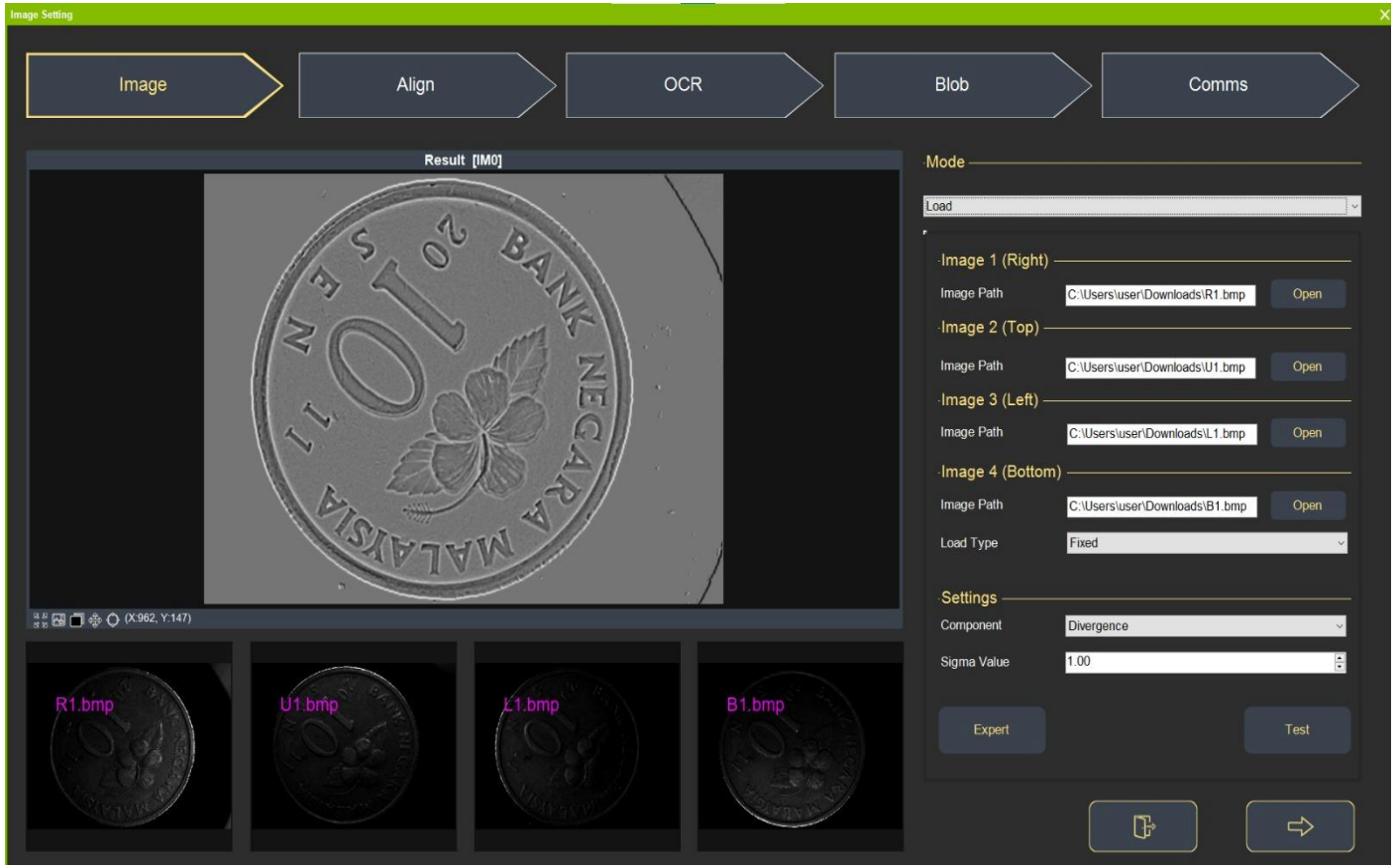
This application is perform by **LC-18-OD-4CH-X2-48V** controller

| Parameter | Normal | Overdrive |
|---|---|---|
| |  |  |
| Camera Exposure Time | 300 | |
| Strobe Width | 1ms | |

# Application - Photometric

Photometric Application – Inspect for uneven surface.

This application is perform by **LC-18-SQ-4CH-A1** controller



# Application - Photometric

- By using the sequence function of the controller and 4 section lighting, we will get the section effect.
- The sequence function can help to get the effect by 1 strobing.
- It will increase the efficiency of the whole process to get a clear/good image.

Left

Top

Right

Bottom

# CONTACT US


+604-6468428

sales@tms-lite.com

No. 2A-2, Tingkat Kenari 5, Desaria, Sungai Ara
11900 Bayan Lepas, Penang, Malaysia

# THANK YOU

TMS LITE

since 2004

www.tms-lite.com