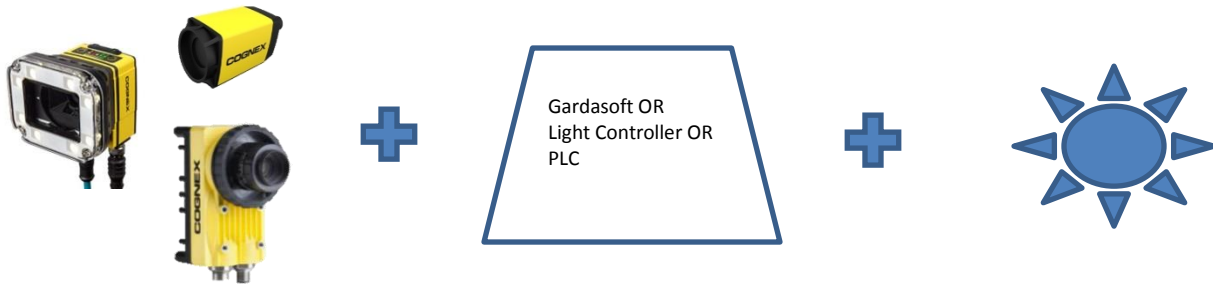


SurfaceFX SLAVE Externally controlled light



The In-Sight SLAVE jobs work with the 7000G2 series, IS8000 Series and IS5705.

The In-Sight is triggered by an external source such as a PLC or Controller (Gardasoft, CCS LSS-2404, etc). The light is also triggered via an external source and in sync with the In-Sight trigger. In-Sight only responds to the input triggers and saves the images (it does not self-trigger). Therefore, the trigger rate from the controller should be adjusted according to the frame rate of the camera model used. The goal is to not use buffering but trigger the camera as fast as possible without buffering the images. For example:

IS7800 can acquire a 640x480 image in 6ms. Therefore the total time between triggers should be 6ms + exposure.

IS5705 can acquire a 5MP image in 66ms. Therefore the total time between triggers should be 66ms+exposure.

There is a test mode which you can issue a HSOUT to test the control. This is not needed for deployment but very useful for setup and debug.

Setup

- For testing only: Hook up HSOUT 0 from In-Sight to the controller of choice. This HSOUT 0 will trigger the controller, and the controller should start the trigger sequence of 4 triggers + 4 light pulses.
- Set the HSOUT 0 to Pulse.
- Load job
- Adjust the Gain and Offset (these jobs were created on the 8000 platform therefore the gain and offset is **DRASTICALLY** different on the 5705. Please adjust these accordingly in A0)
- Go online and trigger the system.
 - Observe that each light is turned on and note which Discrete Output turns on each light direction.

- Once you verified what each discrete output matches each quadrant, correct the image references in SurfaceFX as necessary.
- Save the job for your setup.

Deployment

- Enable all cells based on Cell A31.
- Use the SurfaceFX image in cell A30, or any of the other images captured to complete your application setup.

Example: HW Setup

IS7802 using CCS LSS-2404 controller and HSOUT 0 for testing.

On the CCS LSS-2404 control box:

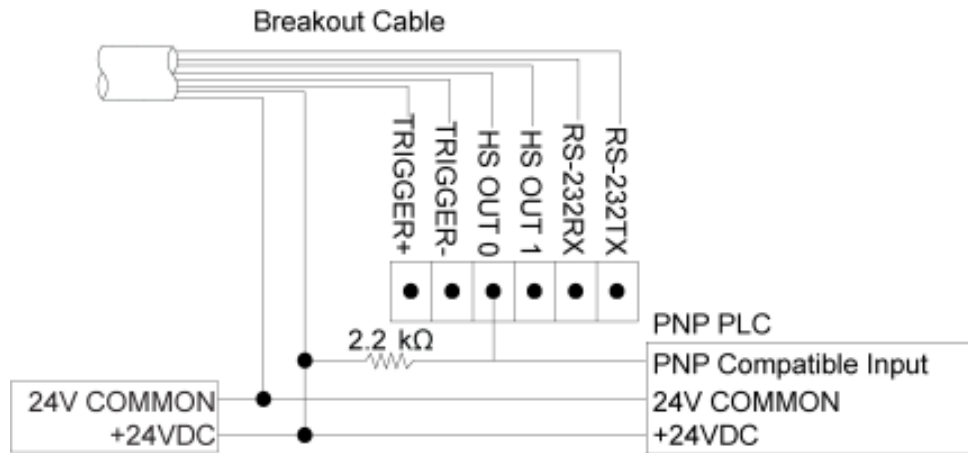
- Connect:
 - Trigger In + on LSS-2404 to the HSOUT 0 (blue) wire on the 7802.
 - Trigger In – on Lss-2404 is connected(jumper) to the -24VDC on the LSS-2404
 - HSOUT Common (Green) is connected to +24
 - Trigger OUT + on the LSS-2404 is connected to Trigger + (Orange) on the 7802
 - Trigger OUT – on the LSS-2404 is connected to Input Common (Purple/White) on the 7802
- Set the HSOUT 0 to Pulse.
- Load job
- Go online
- Press button in cell A27 to test the connection.

➤ To connect an IS8000 to the LSS-2404:

- HSOUT Common (grey) should be connected to +24V on ControlBox.
- HSOUT0 (brown) should be connected to Trigger In + on ControlBox
- Trigger In – on the ControlBox , jumper to 24VDC – on the ControlBox
- Camera Trigger + (Blue)/ Camera Trigger -(Black) should be connected to the CCS ControlBox Trigger Out + and Trigger Out - .

➤ To connect an IS5705 to the LSS-2404:

- Pull the Trigger in + up to +24 via a 2.2K resister.
 - One side of the resister is connected to 24V
 - Other side of resister is connected to HSOUT 0
 - Both HSOUT 0/ resister are connected to Trigger in + on LSS-2404.



- Trigger in – is connected (jumper) to 24VDC- on the ControlBox
- Trigger out + /Trigger out – on the control box are connected to the Cam Trigger + / Cam Trigger – on the 5705

➤ To connect the 7802 flying leads to the CCS LSS-2404

- Common OUT (GREEN) should be connected to +24V on ControlBox.
- HSOUT0 (blue) should be connected to Trigger In + on ControlBox
- Trigger In – on the ControlBox, jumper to 24VDC – on the ControlBox
- Camera Trigger + (Orange) and Common In (White Violet) should be connected to the ControlBox Trigger Out + and Trigger Out -.

When using the CCS quadrant controlled ring light, align the cable out the back with the cables out the back of the 7802. This will align the quadrants correctly for this job.

Trigger Rate on the LSS-2404: You do not want to buffer images so the trigger rate should be set according to the acquisition time needed for the camera used. For example – the 5705 takes approximately 66ms + exposure time to acquire an image. Therefore the controller should trigger every 66ms+ exposure time.

- When using the LSS-2404, the default trigger rate is 25ms. When using larger format cameras – increase this trigger rate accordingly (5705, increase to 80ms and strobe to 60ms).
- The trigger rate can also be decreased for faster acquisition cameras like the VGA IS8000 or IS7800/IS7600. The trigger rate can be changed to 10ms with 8ms strobe.

