



## Using a Fastec HiSpec 2 High-Speed Camera with MiDAS DA

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### Abstract

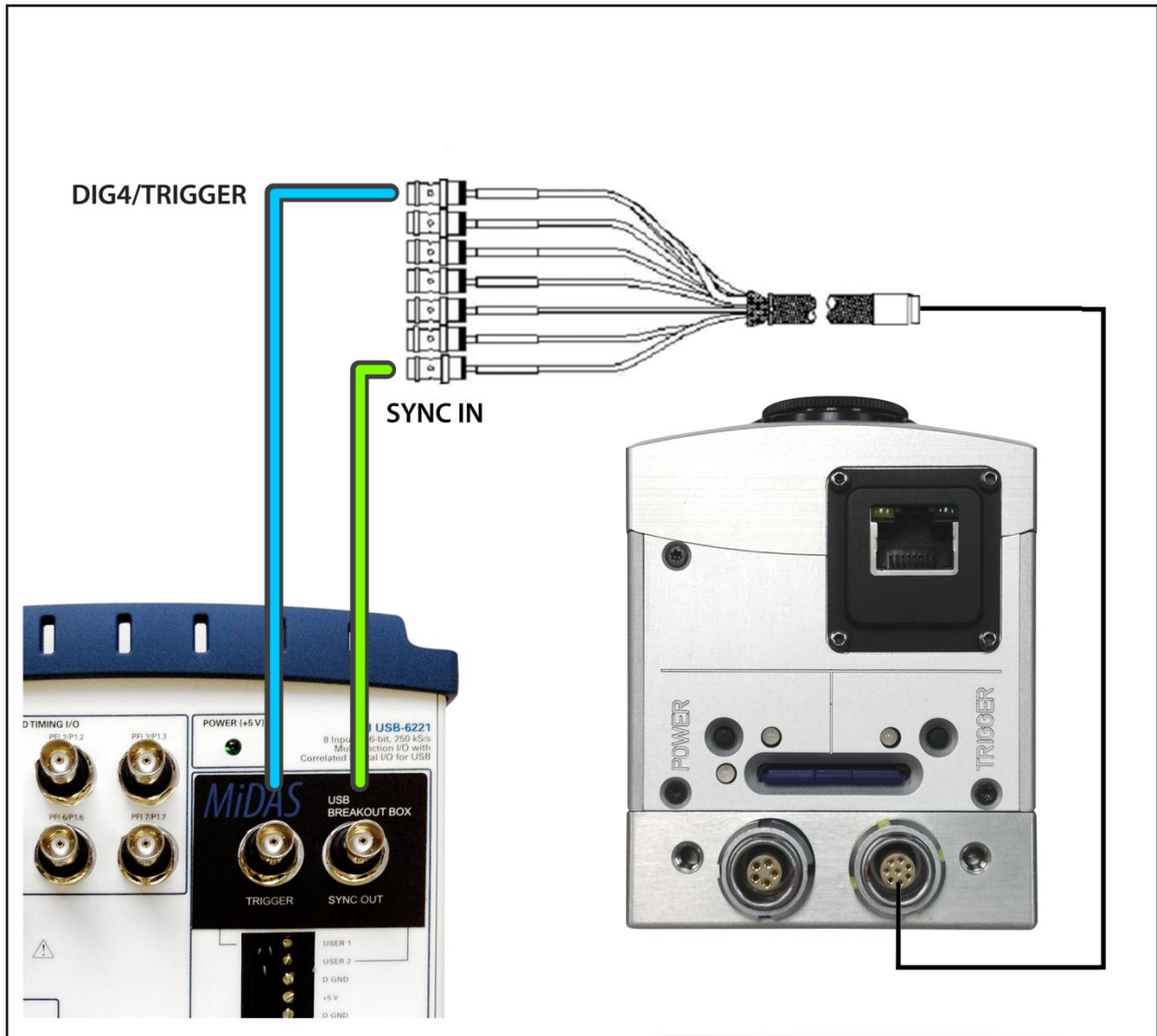
This camera connection guide describes the hardware connections and software settings for using MiDAS DA software with a Fastec HiSpec 2 model high-speed video camera running HiSpec Director 2 camera control software. This document includes the settings for putting the camera into Slave/External Sync mode.

### Instructions

*Note: Before connecting your camera, install your data acquisition hardware, MiDAS DA, and HiSpec Director 2 software. Turn the camera power on. If this is the first time you are using the camera, try it first with the HiSpec Director 2 software before attempting to use the camera with MiDAS DA.*

*Decide your measurement settings in advance, including the video frame rate, data samples/frame (or total data rate), record length and trigger percentage.*

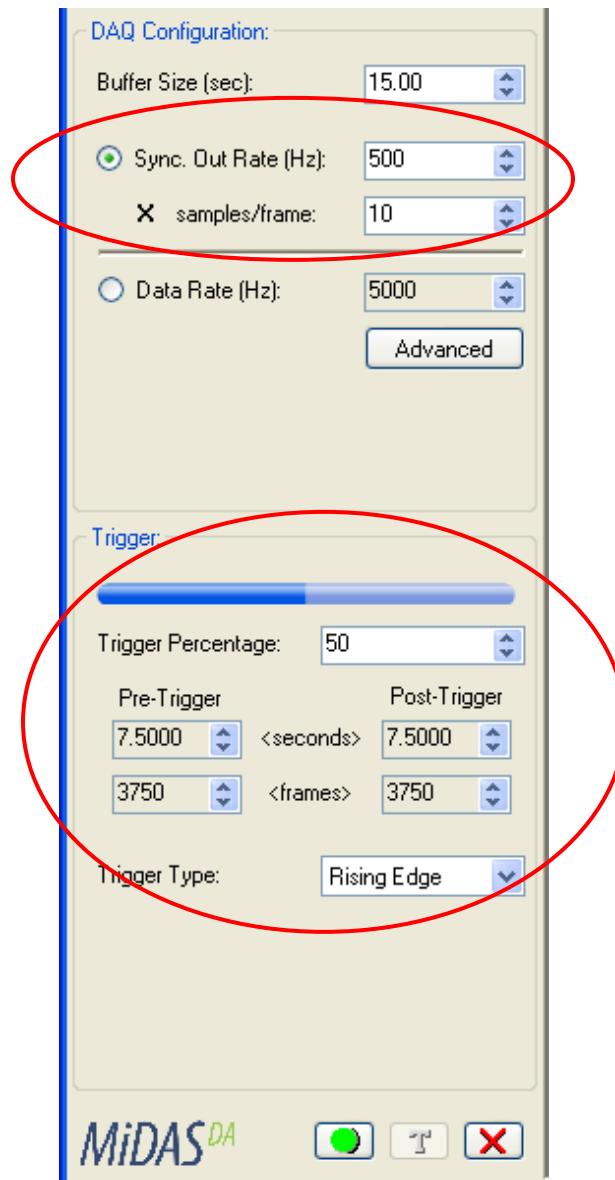
1. Connect the Fastec HiSpec 2 camera cable to the back of the camera. Locate the MiDAS DA breakout box connector labeled **Sync Out**. Connect **Sync Out** to the camera cable connector labeled **Sync In**. Locate the MiDAS DA breakout box connector labeled **Trigger**. Connect **Trigger** to the camera cable connector labeled **Dig4/Trigger**, as shown on the following page.




2. Launch MiDAS DA and configure the number and type of sensor input channels.

*Note: For more information on configuring data channels, please refer to the MiDAS DA User Guide.*

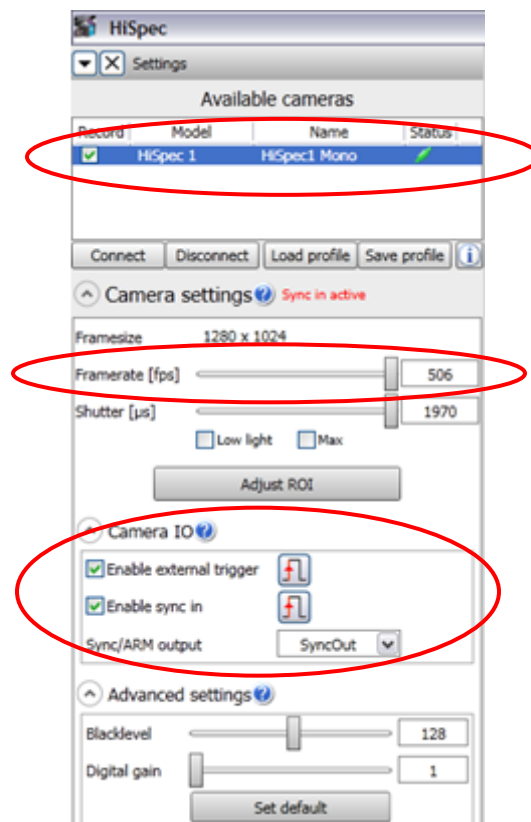
3. In MiDAS DA, enter the video rate into the Sync Out Rate (Hz) field, and the samples per frame in the samples/frame field. Next, use the slider bar or the Trigger Percentage field to set your trigger percentage. Select a Trigger Type from the dropdown menu. In this example, the Sync Out Rate is set to **500**, a few frames lower than in HiSpec Director 2.





4. Click the green **Record**  button at the bottom of the window. MiDAS DA will start the data acquisition and also begin sending sync pulses to the camera.
5. Launch the HiSpec Director 2 software. On the left side of the screen under Available Cameras, double-click on the camera name to connect.
6. Under Camera Settings, select the frame rate for the camera.


*Note: The HiSpec camera frame rate must be at least **2 fps higher** than the Sync Out rate in MiDAS DA.*

7. Expand the choices under Camera IO. Check the boxes for **Enable external trigger** and **Enable sync in**, as shown below.



8. Click the red **Record**  button at the bottom of the window to start recording video.
9. In MiDAS DA, trigger your data recording either by clicking the **Trigger**  button in MiDAS DA or by using an external trigger.

*Note: For more information on triggering in MiDAS DA, consult the MiDAS DA User Guide.*

10. After recording, use the HiSpec Director 2 software to trim the video to the specific frames that you wish to use with MiDAS DA. Save the video to a hard drive.
11. Import your video into MiDAS DA either by dragging and dropping it into the MiDAS DA workspace or by clicking **Project ► Add Video** from the menu bar. Once your video is imported, the Playback window will appear. Click the **Play**  button to simultaneously play your synchronized video and data.

*Note: When importing the video, MiDAS DA will display an error message indicating incorrect frame rate settings. Click **Yes** to adjust the frame rate to the correct setting.*

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