

Helpdesk XIMEA

Portal > Knowledgebase > Camera Features > Frame Burst Modes

Frame Burst Modes

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https://www.ximea.com/support/wiki/allprod/frame_burst_modes

Frame Burst Modes



Frame Burst Start

The **Frame Burst Start** mode allows to capture a defined number of frames in a quick succession after trigger pulse has been sent to the camera.

Feature parameters

xiApi parameters

Feature related parameters

```
XI_PRM_TRG_SOURCE = XI_TRG_SOFTWARE / XI_TRG_RISING_EDGE /  
XI_TRG_FALLING_EDGE
```

```
XI_PRM_TRG_SELECTOR = XI_TRG_SEL_FRAME_BURST_START
```

```
XI_PRM_ACQ_FRAME_BURST_COUNT = N
```

Sample code

```
// set trigger source  
xiSetParamInt(h,XI_PRM_TRG_SOURCE,XI_TRG_SOFTWARE);  
// set trigger selector  
xiSetParamInt(h,XI_PRM_TRG_SELECTOR,XI_TRG_SEL_FRAME_BURST_START);  
// set output
```

```

xiSetParamInt(h,XI_PRM_GPO_MODE,XI_GPO_EXPOSURE_PULSE);
// define and set the number of frames in a burst
#define N 3
xiSetParamInt(h,XI_PRM_ACQ_FRAME_BURST_COUNT,N);
// set the buffers queue size to at least N+1 so the images in one
burst are not overwritten
xiSetParamInt(h, XI_PRM_BUFFERS_QUEUE_SIZE, N+1);

xiStartAcquisition(h);

// endless loop

while (1)
{
    // activate trigger
    xiSetParamInt(h,XI_PRM_TRG_SOFTWARE,1);
    Sleep(1000); // wait 1 second
}

```

- The order of setting the parameters is not mandatory.
- It is possible to combine this feature with the [Frame Rate Control](#) feature.

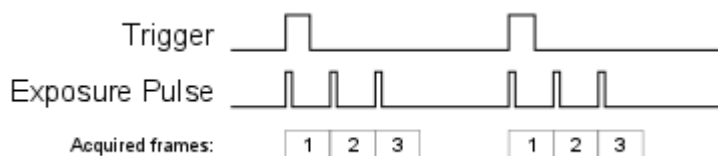
GenICam reference (SFNC)¶

TriggerSelector = FrameBurstStart

FrameBurstCount = N

Timing Diagram¶

Timing diagram of the trigger and the output signal when Frame Burst Count is set to 3 and the GPO mode is set to Exposure Pulse.



Frame Burst Active¶

In the **Frame Burst Active** mode the duration of the burst is controlled by the length of the trigger pulse.

Feature parameters¶

xiApi parameters¶

Feature related parameters

XI_PRM_TRG_SOURCE = XI_TRG_SOFTWARE / XI_TRG_RISING_EDGE /
XI_TRG_FALLING_EDGE

```
XI_PRM_TRG_SELECTOR = XI_TRG_SEL_FRAME_BURST_ACTIVE
```

- The order of setting the parameters is not mandatory.
- It is possible to combine this feature with the [Frame Rate Control](#) feature.

Sample code¶

Create application in the following way:

```
// set trigger source
xiSetParamInt(h,XI_PRM_TRG_SOURCE,XI_TRG_SOFTWARE);
// set trigger selector
xiSetParamInt(h,XI_PRM_TRG_SELECTOR,XI_TRG_SEL_FRAME_BURST_ACTIVE);
// set output
xiSetParamInt(h,XI_PRM_GPO_MODE,XI_GPO_EXPOSURE_PULSE);
// set exposure time to 20 ms
xiSetParamInt(h,XI_PRM_EXPOSURE,20000);
// enable acquisition
xiStartAcquisition();

// burst of frames in 1 sec intervals with a burst duration of 0.5
sec

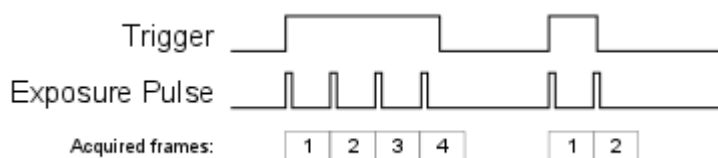
while(1)
{
    xiSetParamInt(h, XI_PRM_TRG_SOFTWARE, 1);
    Sleep(500);
    xiSetParamInt(h, XI_PRM_TRG_SOFTWARE, 0);
    Sleep(500);
}
```

GenICam reference (SFNC)¶

TriggerSelector = FrameBurstActive

Timing Diagram¶

Timing diagram of the trigger and the output signal when trigger selector is set to **Frame Burst Active** and GPO mode is set to **Exposure Pulse**.



[Multiple ROI](#)