

Technical Note

Video Process Bypass

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A number of recent JAI Cameras, particularly in the Spark and Go Series, support a mode called “Video Process Bypass.” This document describes the concept and behavior of the Video Process Bypass mode.

1. Background and Concept:

JAI cameras usually contain a large amount of built-in video processing functions, such as gain control, shading correction, etc. On the other hand, some applications or customers prefer to perform these video processing functions on the host system and require disabling of the camera’s video processing.

To meet these demands, JAI cameras support Video Process Bypass. In this Video Process Bypass mode, many processing functions, especially FPGA-related ones, can be bypassed.

In this mode, the host computer receives less-processed (closer to native) images and can then execute image processing on the host, using proprietary or off-the-shelf third-party applications.

2. Functions bypassed by “Video Processing Bypass”

Multiple functions are bypassed using the Video Processing Bypass mode and the variations are a bit different for each model. Table 1 describes the functions which are bypassed.

Item	SP-5000	SP-20000	SP-12000	GO-2400
Digital Gain	x	x	x	x (R/B only)
Black Level Adjustment	x	x		x
LUT/Gamma	x	x	x	x
Shading correction	x	x	x	x
Binning			x	x
Sequence ROI			x	x

Table 1: Bypassed functions

3. Automatic enabling of “Video Processing Bypass”

For the following models, Video Process Bypass mode turns on automatically when the pixel format is set to 12 bit.

- SP-12000
- GO-2400

For other models, please refer to user manual of each model.

End.

