

Operating Cobra-S Camera in 80-bit Mode for up to 250 kHz Operation with MX4 Frame Grabber

Overview:

The main steps will be changing the camera settings to 8Tap 10-bit in Commcam, changing the firmware mode to 80-bit on the frame grabber, and using a correct ccf file that supports the 80-bit mode in CamExpert. It is also assumed both Camera Link cables are used to connect the camera to the frame grabber when using anything above 2Tap base mode.

Commcam:

In Commcam, the *CameraLink Resolution* should be set to 10bits, then the CameraLink Geometry can be set to 8Taps - 1x8. That will allow the minimum 4us line period to be set along with the exposure. The exposure time has to be set lower than the line period, and Commcam will not let you set a value that is not allowed.

	Concentration Done					
	🖨 📙 Camera Link					
	🖉 🔮 CameraLink Resolution 10bits					
	🖉 🙆 CameraLink Geometry 🛛 8Taps - 1X8					
	– 🙆 CameraLink Geometry Order 🛛 Normal					
	🛛 🙆 Output Frequency 85 MHz					
	Reverse X Off					
🖯 🗁 🔄 User Set Control						

Teledyne DALSA Device Manager Firmware Update:

In Teledyne DALS Device Manager in the *Firmware Update* tab the configuration should be changed to *80-Bits Camera Link* mode and then press *Start Update*. It may be necessary to close out any other running programs like Commcam or *CamExpert* to proceed with the update.

Start Update	Save	Config file	Load Config File	Same Configuration For All Devices	
Device	vice Field			Value	
Xtium-CL_MX4_1		Serial Number		H1260223	
Update Firmware	pdate Firmware 🔽		sion	0x000000000030000	
			+ PCIe Interface	1.20.00.0234	
		Configuration		1 x Full Camera Link	-
		Information Firmware State		80-Bits Camera Link	
				1 x Full Camera Link	
🕋 Teledyne 🛙	DALSA E	Device Mana	ager v:3.76	- 0	×
File Tools H	Help				
Firmware Update	Manag	er			
Start Update	Save	Config file	Load Config File	✓ Same Configuration For All Devices	-
Device		Field		Value	
Xtium-CL_MX4_	1	Serial Num	ber	H1260223	
Update Firmwar	Jpdate Firmware 🗹		sion	0x00000000000000000	
			+ PCIe Interface	1.20.00.0234	
		Configuratio	n	1 x Full Camera Link	
		Information		Support for one Full Camera Link camera.	
			tate	Update Not Required	[
					- 1
					_ [
Doution Info	Gimmun	m Undata			-
Device Into	1	are opuate			
Output					
					^
					F
					\mathbf{v}
	_			····· ··· · · · · · · · · · · · · · ·	_



CamExpert:

In CamExpert, the device to select will be the *CameraLink 8-Tap/10-Bit Mono* under the *Xtium-CL_MX4_1*. The camera configuration file (ccf) is different for 80-bit than base/medium/full modes. Example CCF files are available to use or edit or new ones can be created from scratch.

