

Andor 社製 iXON DV887-BV 設定方法(Rev 1.01)

Step1: Meta Imaging Series Administrator の設定

- 1) カメラに付属されてきます iXON-SDK を使用する PC にインストールします。
- 2) [Meta Imaging Series Administrator]を起動させ[Configure Hardware] [Configure Acquisition]を 選びます。
- [Available Drivers]リストから[Andor]を選び[Add>>]ボタンで[Installed Drivers]リストに 移動させます。
- 4) [Installed Drivers]リストに移動した[Andor]を選び[Configure]ボタンを押します。
- 5) 各 Tab の諸設定を次のとおりにします。

Andor Gamera Driver	Andor Camera Driver 🛛 🛛 🔀
Camera Advanced Defect Correction Version	Camera Advanced Defect Correction Version
Camera Information (Channel 1)	Camera: Andor DV897_BV
Name: Andor DV897_BV Reset	Temperature Control
Serial Number: 1860 🗖 Flip Horizontally	Enable cooler during camera initialization
Flip Vertically	Temperature: 50 C (100 to 20)
Camera Information (Channel 2)	- Shutter Centrel
	C None This camera does not control shutters of any kind
CAMERA NUT FOUND	© Camera This camera has a CCD with a built in shutter
	Shutter Polaritir TTL low signal to open shutter
✓ Hide all camera error messages	Open Delay: 50 ms.
	Close Delay: 50 ms.
	Vertical Shift Speed: 294.12 KHz (3.40 usec/pixel)
	Vertical Clock Voltage: Normal
	Pre-Amplifier Gain: 1.00x 💌 Reset
	UK
Andor Gamera Driver	Andor Gamera Driver
Andor Camera Driver	Andor Gamera Driver
Andor Camera Driver Camera Advanced Defect Correction Version	Andor Camera Driver ?X Camera Advanced Defect Correction [Version] - Software Version Information
Andor Camera Driver Camera Advanced Defect Correction Version Camera: Andor DV897_BV Temperature Control	Andor Camera Driver Camera Advanced Defect Correction [Version] Software Version Information EPROM Version: 0
Andor Camera Driver Camera Advanced Defect Correction Version Camera: Andor DV897_BV Temperature Control Temperature Control	Andor Camera Driver Camera Advanced Defect Correction Version Software Version Information EPROM Version: 0 COF File Version: 160
Andor Camera Driver Camera Advanced Defect Correction Version Camera: Andor DV897_BV Image: Control Image:	Andor Camera Driver
Andor Camera Driver Camera Advanced Defect Correction Version Camera: Andor DV897_BV Image: Control Temperature Control Image: Enable cooler during camera initialization Fan Mode: High Image: Temperature: 1-50 C (-100 to 20) C (-100 to 20)	Andor Camera Driver Image: Camera Advanced Defect Correction Territon Camera Advanced Defect Correction Territon Software Version Territon Software Version Information EPROM Version: 0 COF File Version: 160 VXD Driver Version: 4.22 DLL Driver Version: 2.72
Andor Camera Driver	Andor Camera Driver ? X Camera Advanced Defect Correction Version
Andor Camera Driver Camera Advanced Defect Correction Version Camera Andor DV897_BV Image: Control Temperature Control Image: Enable cooler during camera initialization Fan Mode: High Image: Fan Mode: Figh Temperature: -50 C (-100 to 20) Shutter Control Image: None This camera does not control shutters of any kind Image: Camera This camera has a CCD with a built in shutter	Andor Camera Driver Image: Camera Advanced Defect Correction Version Camera Advanced Defect Correction Version Image: Camera Advanced Defect Correction Version Software Version Information Image: Camera Advanced Defect Correction Version EPROM Version: 0 COF File Version: 160 VXD Driver Version: 2.72 Hardware Version Information PCB Version: 0 PCB Version: 0 Flex Version: 171
Andor Camera Driver Camera Advanced Defect Correction Version Camera Advanced Defect Correction Version Camera: Andor DV897_BV Image: Control Image: Temperature Control Image: Control Image: Control Image: Fan Mode: High Image: Control Image: Shutter Control Image: Control Image: Control Image: Shutter Control Image: Control shutters of any kind Image: Control shutters of any kind Image: Camera: This camera does not control shutters of any kind Image: Camera This camera has a CCD with a built in shutter Image: Camera: This camera is being used to control an external shutter Image: Camera is being used to control an external shutter	Andor Camera Driver Point Camera Advanced Defect Correction Version
Andor Camera Driver Camera Advanced Defect Correction Version Camera Andor DV897_BV Image: Control Temperature Control Image: Enable cooler during camera initialization Fan Mode: High Image: High Temperature: -50 C (-100 to 20) Shutter Control Image: None This camera does not control shutters of any kind Camera This camera has a CCD with a built in shutter External This camera is being used to control an external shutter Shutter Polarity: TTL low signal to open shutter	Andor Camera Driver Point Camera Advanced Defect Correction Version
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Andor Camera Driver Camera Advanced Defect Correction Version Camera Andor DV897_BV Image: Control Image: Enable cooler during camera initialization Image: Control Image: Control Image: Enable cooler during camera initialization Image: Control Image: Control Image: Enable cooler during camera initialization Image: Control Image: Control Image: Source control C (100 to 20) Shutter Control Image: Shutter Control C (100 to 20) Shutter Control Image: Control Image: Control Image: Control shutters of any kind Image: Control Image: Control shutter control shutter Image: Control shutter Image: Control Image: Control shutter control and external shutter Image: Control shutter Image: Control Image: Control shutter Image: Control shutter Image: Control shutter Image: Control Image: Control shutter Image: Control shutter Image: Control shutter Image: Control shutter Image: Control control Image: Control shutter Image: Control shutter Image: Control shutter Image: Control shutter Image: Control control Image: Control shutter	Andor Camera Driver Point Camera Advanced Defect Correction Version Software Version Information EPROM Version: 0 COF File Version: 160 VXD Driver Version: 4.22 DLL Driver Version: 2.72 Hardware Version Information PCB Version: 0 Flex Version: 171 SerPar Version: 0 Clocks Version: 0
Andor Camera Driver Camera Advanced Defect Correction Version Camera Advanced Defect Correction Version Camera: Andor DV897_BV Image: Control Image: Control Image: Enable cooler during camera initialization Image: Control Image: Control Image: Enable cooler during camera initialization Image: Control Image: Control Image: Source control Image: Control Image: Control Image: Control Image: Shutter Control Image: Control control shutters of any kind Image: Control control shutter control an external shutter Image: Control Image: Control control shutter control an external shutter Image: Control control an external shutter Image: Control Image: Control control control an external shutter Image: Control control an external shutter Image: Control Image: Control control control an external shutter Image: Control control control an external shutter Image: Control Control Image: Control Image: Control Control control Image: Control	Andor Camera Driver Provide The State of Correction (Version) Camera Advanced Defect Correction (Version) Software Version Information EPROM Version: 0 COF File Version: 4.22 DLL Driver Version: 2.72 Hardware Version Information PCB Version: 0 Flex Version: 171 SerPar Version: 0 Clocks Version: 0
Andor Camera Driver Image: Camera Advanced Defect Correction Version Camera Advanced Defect Correction Version Camera: Andor DV897_BV Temperature Control Image: Enable cooler during camera initialization; Fan Mode: High Temperature: -50 Chitter Control None This camera does not control shutters of any kind Camera: This camera does not control shutters of any kind Camera: This camera is being used to control an external shutter Shutter Polarity: TTL low signal to open shutter Open Delay: 50 Vertical Shift Speed: 294.12 KHz (3.40 usec/pixel) Vertical Clock Voltage: Normal Pre-Amplifier Gain: 1.00x	Andor Camera Driver Point Camera Advanced Defect Correction Version Software Version Information EPROM Version: 0 COF File Version: 160 VXD Driver Version: 4.22 DLL Driver Version: 2.72 Hardware Version Information PCB Version: 0 Flex Version: 171 SerPar Version: 0 Clocks Version: 0

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- 6) すべて確認しましたら[OK]ボタンを押し設定を確定し、Administratorを終了します。
- MetaMorph を起動し、[Acquire]メニューの[Acquire]で CCD カメラの設定ボックスを表示させ Special タブの Pre-Amplifier Gain、Digitizer、Gain、EM Gain を必要に応じて設定します。なお、Camera Shutter は通常 Always Open を選択します。

Vertical Shift Speed は 294.12kHz (3.4usec/pixel), Vertical Clock Voltage は Normal に設定して ください。また Multi Dimensional Acquire を使用する場合は、Acquire ボックスの EM Gain と MDA の Wavelength タブの EM Gain はリンクしていませんので、使用する各波長ごとに EM Gain を設定 しなければいけません。

Acquire	
Acquire	Image: 📑 Acquired
Save Image	Save to: C:¥MM¥¥Acquired001.tif Set Save
🔲 Save w/Sequence	Display Acquire Correct Annotate Special
Exposure Time:	Digitizer: 14-bit (10 MHz)
100 🕂 ms 🔻	EM Gsin: 50 🕂 🕢 🕨
AutoExpose	Vertical Shift Speed: 294.12 KHz (3.40 usec/pixel)
Binning: 1	Vertical Clock Voltage: Normal
Camera Area:	Pre-Amplifier Gain: 1.00×
-> Full Onip	Camera Shutter: Always Open 👻
Center Quad.	Info
Use Active Region	Frames To Ave:
Show Live	Cooler On
Live Bin: 1 📑	External Trigger
Тетр: -49 с	Camera State: Non-Overlapped
Catting Datadiás dl	Show Focus Indicator
secure [wodified]:	Reset
Close Less <<	Settine: Load Save Save As

Digitizer の選択

re Correc	t Annotate Special
Digitizer:	14-bit (10 MHz) 🔹
EM Gain:	1 4-bit (1 0 MHz) 1 4-bit (5 MHz)
ift Speed:	1 4-bit (3 MHz) 1 4-bit (1 MHz)

Vertical Shift Speed の選択

		1
Vertical Shift Speed:	294.12 KHz (3.40 usec/pixel) 🚽	
Vertical Clock Voltage: Pre-Amplifier Gain:	(2.50 MHz (0.40 usec/pixel) 1.67 MHz (0.60 usec/pixel) 1.00 MHz (1.00 usec/pixel) 555 55 (V to (1.00 usec/pixel)	li
Camera Shutter:	294.12 KHz (3.40 use c/pixel) 151.52 KHz (6.60 use c/pixel)	
Vertical Clock Volta	age の選択	_
		1
Vertical Clock Voltage:	Normal	
Pre-Amplifier Gain:	Normal	
Camera Shutter:	+1 +2 +3	
Info	+4	Γ.
Pre-Amplifier Gain	の選択	
Pre-Amplifier Gain: 1.0	00×	'
Camera Shutter: 🎵		L

14-bit (<u>x</u>MHz)の数字が大きい Digitizer ほど、 読み出し速度が速いことを意味します

Vertical Shift Speedを早いものを間違って選んで しまうと、CCD 内で電荷が正常に転送できなくなり 画像がひずんだりします 初期設定は必ず 294.12kHz を選んでください

Vertical Clock Voltage は Normal を使用します

Pre-Amplifier Gain は通常 1.00x でよいですが、極 微弱光測定時に 2.50x を使用する場合があります

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Camera Shutter の選択

Camera Shutter:	Always Open	•
Info	Open for Expose Always Closed	^
E	Always Open	× .

Camera State の選択

Camera State:	Non-Overlapped	•
Focus Indicator	Non-Overlapped	
	Overlapped	-

Info…の表示例

Andor Camera Driver 🛛 🗙		
Camera Serial Numbe	er	
Camera S/N:	1860	
Software Version Information		
EPROM Version: COF File Version: VXD Driver Version: DLL Driver Version:	0 160 4.22 2.72	
Paroware version int	ormation 	
POB Version: Flex Version: SerPar Version: Clocks Version:	0 171 0 0	
(OK		

Open for Expose:露光時間に合わせてシャッターを 開閉します

Always Open:常時シャッターを開いた状態で保持 します(通常測定時)

Always Close:常時シャッターを閉じた状態で保持 します(バックグラウンド測定時に使用)

Non - Overlapped: MDA や TimeLapse データ取得 時に使用します

Overlapped:Live 画像の高速表示を要する場合や StreamAcquistion を使用する場合に使用します

Overlapped モード時はより高速にデータ取得 が可能となります

PCに接続しているカメラのシリアル番号やソフトウェ アのバージョンの確認が行えます