

1394 OHCI

DCAM Versions

DCAM Module
DRIVER15.10.322.4787/ 15.10.642.4787 (for 32-bit) / (for 64-bit)
9.28.9.4787

Cameras

Cameras	Nickname	400Mbps Max Card Speed	800Mbps Max Card Speed	Support OS	Note
C9100-24B	ImagEM X2 1K	n/a	BEST	Windows 8 / 8.1 32-bit / 64-bit (x64) Windows 7 (*20)/(*21) 32-bit / 64-bit (x64) Windows Vista 32-bit / 64-bit (x64)	
C11090-22B	ORCA-II	n/a	BEST		
C9100-23B	ImagEM X2	n/a	BEST		
C10600-10B	ORCA-R2	poor	BEST		(*1)
C11254-10B	ORCA-D2	poor	BEST		(*1)
C4742-80-12AG	ORCA-AG	good	BEST		(*Disc)
C4742-95-12ERG	ORCA-ERG	good	BEST		(*Disc)
C4742-95-12NRG	ORCA-NRG	good	BEST		(*Disc)
C4742-95-12G04 C4742-96-12G04	ORCA-285G	good	BEST		(*Disc)
C4742-98-ERG(2)	ORCA-II ERG	good	BEST		(*Disc)
C4742-98-EWG(2)	ORCA-II EWG	good	BEST		(*Disc)
C4742-98-2xKAG(2) C4742-98-2xKWG(2)	ORCA-II BTG 1024	good	BEST		(*Disc)
C4742-98-2xLAG(2) C4742-98-2xLWG(2)	ORCA-II BTG 512	good	BEST		(*Disc)
C8484-xxG	ORCA-xxG	good	BEST		(*4)(*Disc)
C8484-xxG01	ORCA-xxG	good	BEST		(*Disc)
C8484-xxG02	ORCA-xxG	good	BEST		
C9260-903		good	BEST		(*Disc)
C9440-05G		good	BEST		(*4)(*Disc)
C9440-05G01		good	BEST		(*4)(*Disc)
C9440-05G02		good	BEST		(*4)
C9664-01G		good	BEST		(*4)(*Disc)
C9664-01G01		good	BEST		(*4)(*Disc)
C9664-01G02		good	BEST		(*4)

Required

The IEEE-1394 card must have OHCI compatibility with Microsoft's Inbox Drivers.

Recommendations

- PCI Express x1 cards are better than PCI 32-bit/64-bit cards in desktops.
- ExpressCard is better than CardBus and PCMCIA cards in notebooks.
- LSI FW643 is the best PHY/Link IC for an IEEE-1394 interface card.
- It is highly recommended to disable C-state processor control in your PC's BIOS else you may get sporadic corrupted images transferred to the PC. See Note (*23).

Active Silicon Phoenix and FireBird (CameraLink)

DCAM Version

DCAM Module	15.10.322.4787/ 15.10.642.4787	(for 32-bit) / (for 64-bit)
DRIVER	5.58.240.4787	(for PHX; D24/48CL PE1)
	7.05.140.4787	(for FBD; FireBird)

Cards

Cards	Camera Link Configuration	PC Bus Type	Support OS	Note
AS-PHX-D24CL-PE1	Base	PCI Express x1	Windows 8 / 8.1 32-bit / 64-bit (x64)	Half Length
AS-PHX-D48CL-PE1	Base / Medium Dual Base			
AS-FBD-1XCLD-2PE8	Deca	PCI Express x8 Gen2 (*15)(*22)	Windows 7 32-bit / 64-bit (x64)	Half Length
AS-FBD-2XCLD-2PE8	Dual Deca	PCI Express x8 Gen2 (*15)(*22)	Windows Vista 32-bit / 64-bit (x64)	Half Length / Dual Slot

Cameras

Fast speed CameraLink cameras

Cameras	Nickname	Supported Card	Note
C11440-22C(U)	ORCA-Flash4.0 (V2)	AS-FBD-1XCLD-2PE8 AS-FBD-2XCLD-2PE8	
C11440-10C	ORCA-Flash2.8	AS-PHX-D24CL-PE1	(*18)
C10000-A01	TDI Board Camera		(*New)
C10000-201		AS-PHX-D48CL-PE1	(*Disc)
C10000-801	TDI Camera	AS-PHX-D24CL-PE1	
C10000-401			(*Disc)

CameraLink cameras

Cameras	Nickname	Supported Card	Note
C8000-30		AS-PHX-D24CL-PE1 AS-PHX-D48CL-PE1	
C8484-xxC(P)			
C8800-xxC			(*Disc)
C9100-01/11/12			(*Disc)
C9100-02/03			(*Disc)
C9100-13	ImagEM		
C9100-14	ImagEM 1K		
C9300-024/124/201/221			(*Disc)
C9750-xx	X-Ray Line		
C10400-xx			
C10650-xx	X-Ray TDI		
C12200-321/461/361/261			
C10800-xx-C	X-Ray Line Dual Energy		

Recommendation

It is highly recommended to disable C-state processor control in your PC's BIOS else you may get sporadic corrupted images transferred to the PC. See Note (*23).

Active Silicon Phoenix (LVDS/RS422)

DCAM Version

DCAM Module 15.10.322.4787/ 15.10.642.4787 (for 32-bit) / (for 64-bit)
DRIVER 6.68.00.4787

Cards

Cards	PC Bus Type	Support OS	Note
AS-PHX-D36-PE1	PCI Express x1	Windows 8 / 8.1 32-bit / 64-bit (x64) Windows 7 32-bit / 64-bit (x64) Windows Vista 32-bit / 64-bit (x64)	Half Length

Cameras

LVDS Color cameras

Cameras	Nickname	Supported Cards	Note
C7780-xx	ORCA-3CCD	AS-PHX-D36-PE1	

LVDS/RS-422 cameras

Cameras	Nickname	Supported Cards	Note
C4742-95-12NR(B)	ORCA-NR or ORCA-100	AS-PHX-D36-PE1	(*Disc)
C4742-95-12ER	ORCA-ER		(*Disc)
C4742-95-12HR	ORCA-HR		(*8)(*Disc)
C4742-98-2xNR	ORCA-II		(*Disc)
C4742-98-2xER	ORCA-II ER		(*Disc)
C4742-98-2xHR	ORCA-II HR		(*Disc)
C4742-98-2xKA / -2xKW	ORCA-II BT 1024		(*Disc)
C4742-98-2xLA / -2xLW	ORCA-II BT 512		(*Disc)
C4880-06/07/16/17			(*Disc)
C4880-80 / C6790-8x			(*Disc)
C7190-1x			(*Disc)
C7190-2x/4x/5x			(*8) (*Disc)
C8000-10 / -20			(*Disc)
C7390-xx	X-Ray Line		(*Disc)
C8133-xx			(*Disc)
C8750-xx			(*Disc)
C9133-xx			(*Disc)
C9750-xx			
C10400-xx			

Recommendation

It is highly recommended to disable C-state processor control in your PC's BIOS else you may get sporadic corrupted images transferred to the PC. See Note (*23).

GigE

DCAM Version

DCAM Module 15.10.339.4787/ 15.10.659.4787 (for 32-bit) / (for 64-bit)
DRIVER 4.0.5.3150

Cameras

Cameras	Nickname	Support OS	Note
C10500D-42/43	Flat panel	Windows 8 / 8.1 32-bit / 64-bit (x64) Windows 7 32-bit / 64-bit (x64)	
C10502D-42/43			
C10900D-40			
C10901D-40			
C11700DK-40			
C11701DK-40			

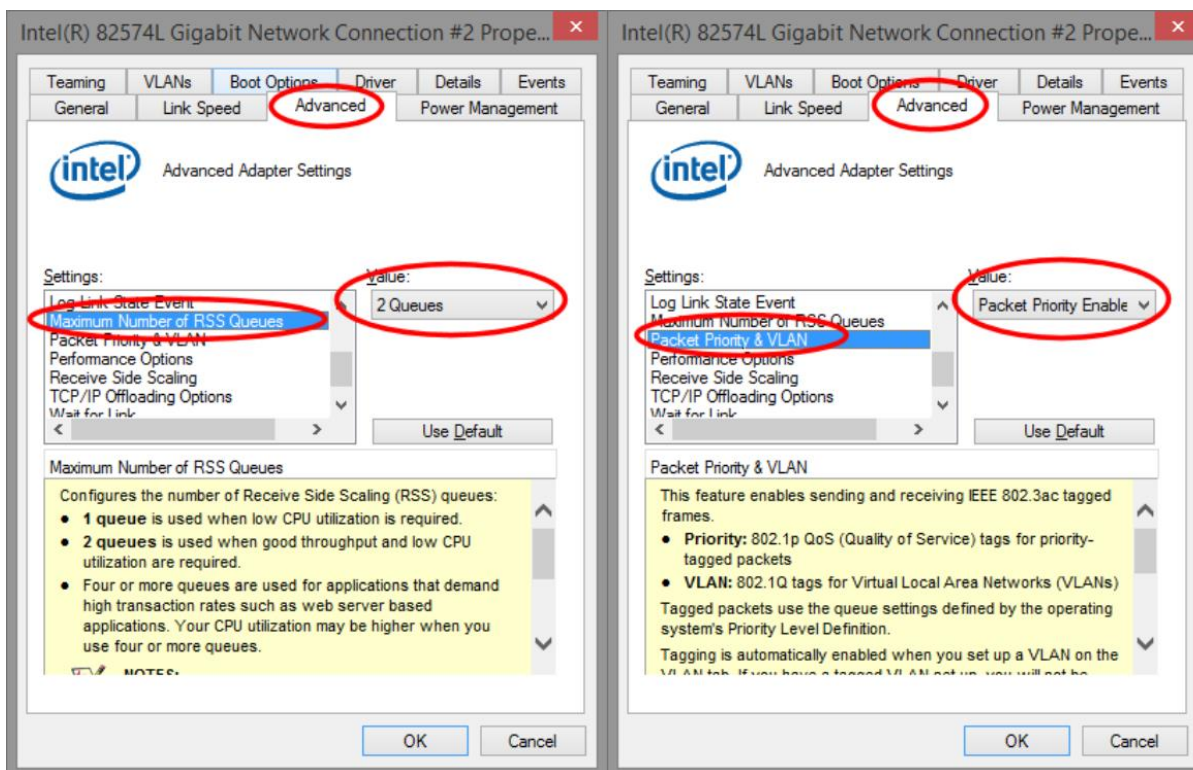
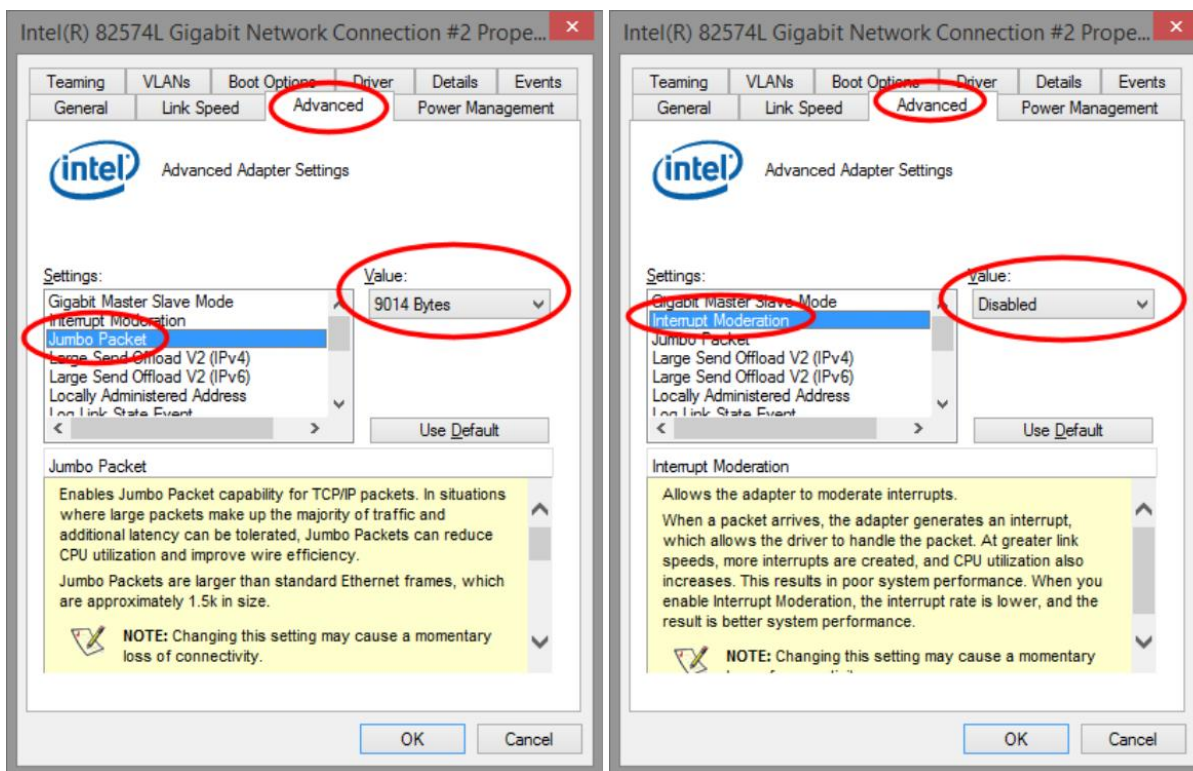
Recommendations

See the next pages.

GigE – Cont'd

Recommendations

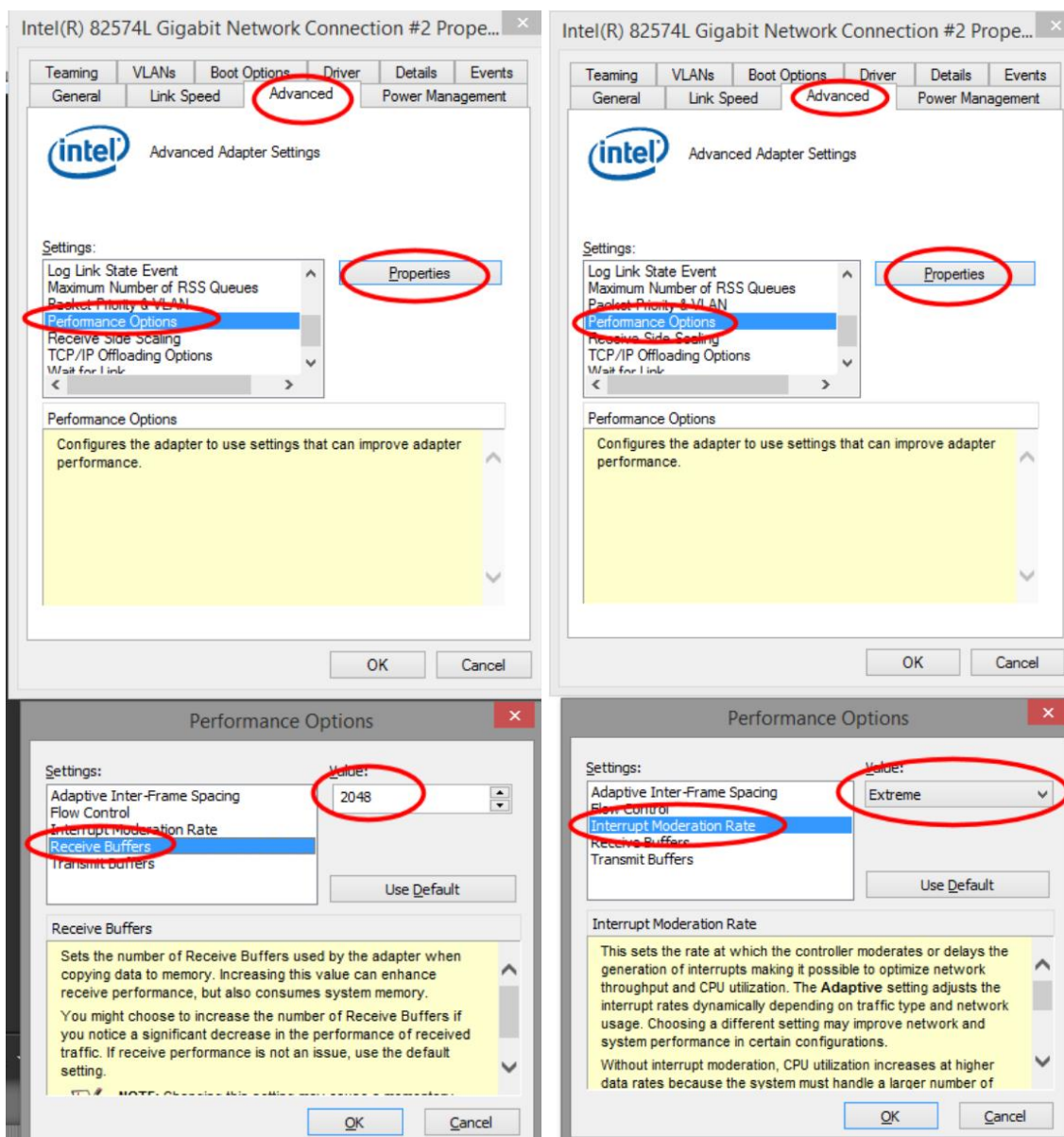
It is highly recommended to tweak these settings for the Gigabit Network Adapter for which the GigE device is connected, provided they are available for adjustment in Device Manager \ Properties for the adapter driver:



GigE – Cont'd

Recommendations

It is highly recommended to tweak these settings for the Gigabit Network Adapter for which the GigE device is connected, provided they are available for adjustment in Device Manager \ Properties for the adapter driver:



Notables:

- Jumbo Packets has the biggest effect to sustainable FPS and bandwidth. Set this setting to the highest possible by the adapter driver.
- Receive buffers should be set to maximum allowed by the driver if the setting exists.
- Interrupt Moderation Disabled and/or Interrupt Moderate Rate Extreme may cause a single CPU stress to increase, but FPS is very stable at high rates.

Teledyne DALSA Xcelera (CameraLink)

DCAM Version

DCAM Module 15.10.322.4787/ 15.10.642.4787 (for 32-bit) / (for 64-bit)
DRIVER 1.30.1468.4787

Cards

Cards	PC Bus Type	Support OS	Note
Xcelera-CL PX4 DUAL	PCI Express x4 (*15)	Windows 7 32-bit / 64-bit (x64) (*14) Windows Vista 32-bit / 64-bit (x64) (*14)	
Xcelera-CL PX4 FULL			

Cameras

Cameras	Nickname	Supported Cards	Note
C9100-13	ImagEM	Xcelera-CL PX4 DUAL Xcelera-CL PX4 FULL	
C10000-801	TDI Camera		(*Disc)
C10000-401			
C11440-10C	ORCA-Flash 2.8		
C10000-201	TDI Board Camera	Xcelera-CL PX4 FULL Xcelera-CL PX4 DUAL (*25)	(*Disc)
C10000-701B			(*Disc)

Required

The PC Motherboard has to have a free PCI Express x4, x8 or x16 slot.

If the slot is x8 or x16, the slot has to support also PCI Express x4. Some motherboards/slots do not. (*15)

Specification of our test PC

CPU: Pentium 4/3GHz with Hyper Threading

RAM: 3GB

OS: Windows 7

Teledyne DALSA Xcelera (CameraLink) – Cont'd

Important Note

Older motherboards and/or some PCI Express 2.0 slots (Ex. - Dell T5400/T7400 x16 slots) may have BIOS incompatibilities with the Xcelera card. This usually presents itself where the PCIe slot in which the board is installed cannot initialize and a BIOS error message is shown, or the PC will not boot at all. In either case, the cause can be related to unexpected PCIe bus reset negotiations with the BIOS/motherboard and the Xcelera. A possible method to circumvent this issue is to set DIPSW3-2 to ON (right position) before installing the card into the PC. This causes the Xcelera to ignore PCIe reset requests which normally allows the card/PC to boot properly. The side effect is when the board is configured in this manner, if the board has never been initialized with the current drivers/firmware yet, a firmware flash may be attempted silently to the board after Windows startup or just after the first PnP device detection sequence. After flashing is made, the board may still be inoperable – you can know it if your DCAM-API host application fails to initialize and detect your camera after approximately 5 minutes after startup. If this should happen, a manual Windows restart should correct the issue, and the board will continue to operate properly in the installed slot. The DIPSW3 bank is located on the board at the red circled location:



USB

DCAM Version

DCAM Module	15.10.322.4787/ 15.10.642.4787	(for 32-bit) / (for 64-bit)
DRIVER	15.10.327.4787/ 15.10.647.4787	(for 32-bit / for 64-bit - C11440-22CU)
	15.10.339.4787/ 15.10.659.4787	(for 32-bit / for 64-bit - C10633)
	2.12.2.4787	(for others)

Cameras

Cameras	Nickname	Support OS	Note
C11440-42U	ORCA-Flash4.0 LT	Windows 8 / 8.1 32-bit / 64-bit (x64)	(*24)
C11440-22CU	ORCA-Flash4.0 (V2)		(*24)
C10633-13/23	InGaAs camera		
C9260-901/902/904/905	Board camera		(*Disc)
C9260-930	Line binning and TDI		(*Disc)
C10400	X-Ray		
C10650	X-Ray TDI		
C10990	Board camera		
C11013	Board camera		(*Disc)
C9728DK-10	Flat panel		Windows 8 32-bit / 64-bit (x64)
C9730DK-10	Flat panel		
C9732DK	Flat panel	(*Disc)	
C9732DK-11	Flat panel		

Notes

- *New: New supported hardware or OS from the 15.2.4675 release.
- *Disc: Discontinued. There is no more new production so stock may be depleted or very minimal. Hardware/firmware support is finalized. Software support for hardware is for backward compatibility.
- *1: C10600-10B (ORCA-R2) and C11254-10B(ORCA-D2) have limitations for full performance with IEEE-1394 400Mbps port.
- *2: This note is deprecated.
- *3: This note is deprecated.
- *4: These cameras should not be connected to Mac's on-board FireWire port because it supplies about 30V which may damage the camera. Please use a PCI Express FireWire Adapter card.
- *5: This note is deprecated.
- *6: This note is deprecated.
- *7: This note is deprecated.
- *8: Special Digital I/F cable for Phoenix is required:
 - (a) HPK cable part number: A9608-95 (Digital I/F cable for Phoenix/C7190-20)
 - or
 - (b) For C7190-2x/4x/5x and C4742-95-12HR, HC cable part number:
CAMRA-4205-000 (INTERFACE CABLE PHOENIX BOARD FOR ORCA-HR)with Phoenix Serial Port jumpers set for RS232 for MacOSX. For Windows, these parts and setting are recommended.
- *9: This note is deprecated.
- *10: This note is deprecated.
- *11: This note is deprecated.
- *12: This note is deprecated.
- *13: This note is deprecated.
- *14: Teledyne DALSA does not support Windows 32-bit support on any Windows 64-bit (x64) Operating System (WoW64 -Windows-on-Windows 64-bit) with their hardware and drivers. Only native 64-bit (x64) applications can work with Teledyne DALSA in Windows 64-bit (x64) operating systems.

*15: PCIe x4 and x8 slot compatibility - For example, this is information comparing PCIe slot compatibility for some known Dell Precision Workstations and Dell Optiplex Desktops:

>Workstation T3600 or newer series

All slots are clearly labeled on the motherboard with their maximum link negotiation speed, width, as well as max power.

>Workstation T7500

Slot 2 PCI Express Gen2 x16 with support for up to 300W, full length, full height. Can support x8, x4 and x1 down shift.

(All Class Code cards should work, but certain cards may fall outside of spec. Report any issues.)

Slot 4 PCI Express Gen2 x16 with support for up to 225W, full length, full height. Can support x8, x4 and x1 down shift.

(All Class Code cards should work, but certain cards may fall outside of spec. Report any issues.)

Slot 1 PCI Express Gen2 x16 wired as x8 slot with support for up to 75W – half length, full height.

Can support x8, x4 and x1 down shift.

Slot 3 PCI Express Gen2 x16 wired as x8 slot with support for up to 75W – full length, full height.

Can support x8, x4 and x1 down shift.

Slot 6 PCI Express Gen2 x16 wired as x4 slot with support for up to 75W - full length, full height.

Can support x4, x1 down shift.

>Workstation T5500

Slots 2,4 PCI Express x16 with support for up to 225W – full length, full height. Can support x8, x4 and x1 down shift.

(All Class Code cards should work, but certain cards may fall outside of spec. Report any issues.)

Slot 1 PCI Express Gen2 x16 wired as x8 slot with support for up to 75W – half length, full height.

Can support x8, x4 and x1 down shift.

Slot 3 PCI Express Gen2 x16 wired as x8 slot with support for up to 75W – full length, full height.

Can support x8, x4 and x1 down shift.

>Workstation T3500

Slots 2,4 PCI Express x16 with support for up to 225W – full length, full height. Can support x8, x4 and x1 down shift.

(All Class Code cards should work, but certain cards may fall outside of spec. Report any issues.)

Slots 1,3 PCI Express x8 wired as x4 slot with support for up to 75W – half length, full height.

Can support x4 and x1 down shift.

>Workstation T1500

Slot 1 PCI Express x16 with support for up to 75W – half length, full height. Can support x8, x4, and x1 down shift.

(All Class Code cards should work, but certain cards may fall outside of spec. Report any issues.)

Here is some compatibility information for some known HP Workstations:

> HP Z220, Z420, Z620, and Z820 Workstations

- View the [Maintenance and Service Guide](#)
 - Component replacement guidelines
 - Expansion slots

> HP Z210 CMT Workstation

- View the [Maintenance and Service Guide](#)
 - Component replacement guidelines
 - Expansion slots

Notes – Cont'd

>Z400 Workstation (Taken from the HP Z400 Maintenance and Service Guide)

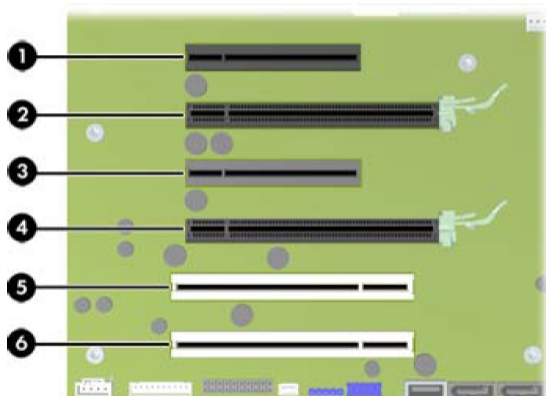
Expansion card slot identification

This section identifies and describes workstation expansion card slots, and presents card configuration information.

Slot identification and description

The following figure identifies workstation expansion card slots.

Identifying expansion card slots



The following table describes the workstation PCIe card slots.

Slot	Type	Slot power (Maximum)
1	PCIe2 - x8(4)	25W
2	PCIe2 - x16	75W
3	PCIe - x8(4)	25W
4	PCIe2 - x16	75W

NOTE: The x1, x4, x8, and x16 designators describe the mechanical length of the slot. The number in parentheses shows how many electrical PCIe lanes are routed to the expansion slot. For example, x16(8) means that the expansion slot is mechanically a x16 length connector, with eight PCIe lanes connected. A x16 PCIe card runs at the bandwidth of the slot it is plugged into.

Slots one and three use open-ended PCIe connectors, so a PCIe x16 card can be inserted. Graphics cards greater than 75 watts require the use of an auxiliary power cable adapter.

Expansion card

PCIe I/O slots can support other PCIe cards with less bus bandwidth than what is physically defined for the slot.

Expansion card slot description

NOTE: The x1, x4, x8, and x16 designators describe the mechanical length of the slot. The number in parentheses shows how many electrical PCIe lanes are routed to the expansion slot. For example, x16(8) means that the expansion slot is mechanically a x16 length connector, with eight PCIe lanes connected. A x16 PCIe card runs at the bandwidth of the slot it is plugged into.

Use the following table to determine PCIe card compatibility.

Workstation PCIe compatibility matrix		
Slot	Mechanical compatibility	Electrical compatibility
1	x8 connector, open-ended*	PCIe2 (x1, x4)
2	x16 connector	PCIe2 (x1, x4, x8, x16)
3	x8 connector, open-ended†	PCIe (x1, x4)
4	x16 connector	PCIe2 (x1, x4, x8, x16)

* This slot is open-ended so a PCIe x16 card can be inserted.

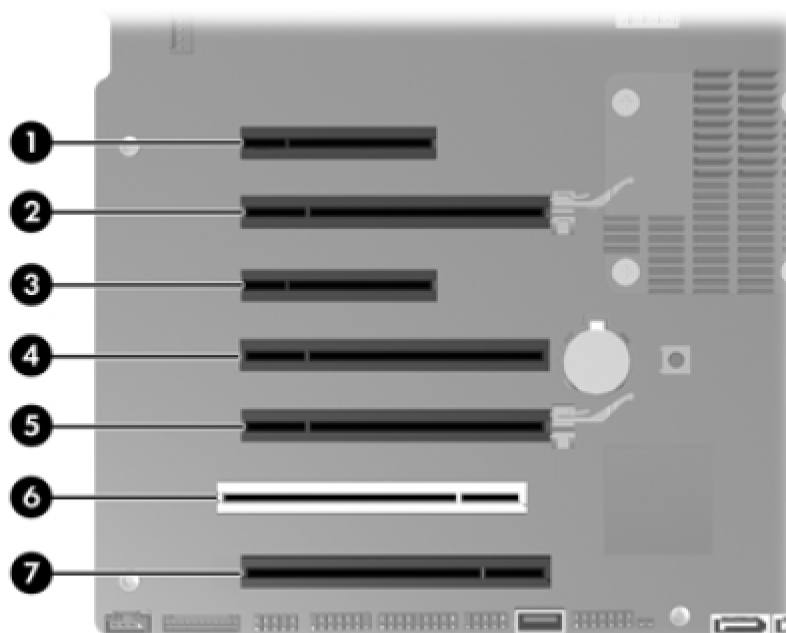
- Slots one, two, and four are PCIe GEN2 slots.
- Graphics cards greater than 75 watts require the use of an auxiliary power cable adapter.

>Z800 Workstation (Taken from the HP Z800 Maintenance and Service Guide)

Expansion card slot description

The following figure identifies workstation expansion card slots.

Identifying expansion card slots



The following table describes the workstation expansion card slots.

Expansion card slot description and compatibility

Slot	Type	Mechanical compatibility	Electrical compatibility	Slot power (Maximum)
1 ¹	PCIe2 x8(4) open-ended	x1, x4, x8, x16	x1, x4	25W
2 ²	PCIe2 x16 ³	x1, x4, x8, x16	x1, x4, x8, x16	75W
3	PCIe x8(4) open-ended	x1, x4, x8, x16	x1, x4	25W
4 ¹	PCIe2 x16(8)	x1, x4, x8, x16	x1, x4, x8	25W
5 ¹	PCIe2 x16 ⁴	x1, x4, x8, x16	x1, x4, x8, x16	75W
7	PCIe2 x16(8)	x1, x4, x8, x16	x1, x4, x8	25W

¹ PCIe GEN2 slot.

² Primary graphics slot

⁴ Secondary graphics slot

NOTE: The x1, x4, x8, and x16 designators describe the number of electrical PCIe lanes routed to an expansion slot. For example, x16(8) means that the expansion slot is mechanically a x16 length connector, with eight PCIe lanes connected.

Slots one and three use open-ended PCIe connectors, so a PCIe x16 card can be inserted. This allows the workstation to support more PCIe x16 expansion cards. A x16 card typically trains and runs at the maximum lane width available by the expansion slot. The card runs at the reduced lane width, with a corresponding performance decrease.

A x16 graphics card runs at the bandwidth of the slot it is plugged into. The slot bandwidth can be x1, x4, x8, or x16. A PCIe card can be plugged into a slot with a lesser speed. It runs at that speed with a commensurate performance decrease. (Older graphics cards may not comply with this.)

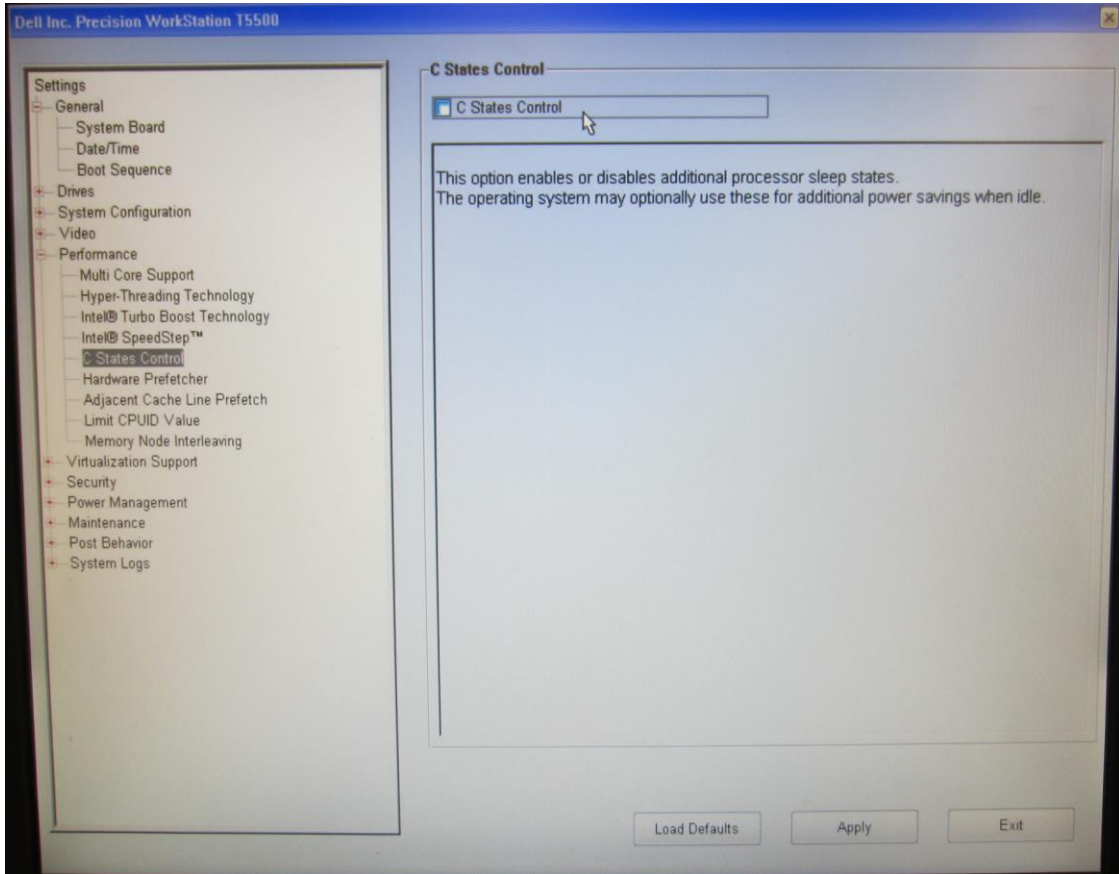
- *16: This note is deprecated.
- *17: This note is deprecated.
- *18: The C11440-10C (ORCA-Flash 2.8) with a Phoenix PE1 card requires the camera firmware version to be 1.1 or newer. Also, this combination will use more CPU stress during image acquisition than a PCI Express x4 solution (for example – Phoenix PE4 and Xcelera-CL PX4).
- *19: This note is deprecated.
- *20: For 1394 and Windows 7 only, it is recommended that you install Service Pack 1:
<http://support.microsoft.com/kb/976932>
Microsoft has made many improvements to their 1394 driver stack which are incorporated in SP1 and not necessarily documented or included in RTM hotfixes.
- *21: For 1394 and Windows 7 only, if your experiment requires you to make many captures with various binning, sub-array, scan speed, and/or data type settings over hours of operation (usually more than 1 hour), there is a known bug inside Microsoft's latest driver standard driver stack which could present itself through our API to the host application as an "Out of Resource" or "No Resource" error. When this happens, there is no way to recover capturing again from our 1394 device unless you exit your current application, power cycle the device, and restart the experiment manually. We have traced the root cause of the problem. It happens when our lower drivers cannot free 1394 Isochronous bandwidth properly through the Microsoft drivers, we can no longer re-use that bandwidth, and further allocations we require will fail.

If you experience the above known issue, it is recommended you install SP1 if you are not at this level:
<http://support.microsoft.com/kb/976932>

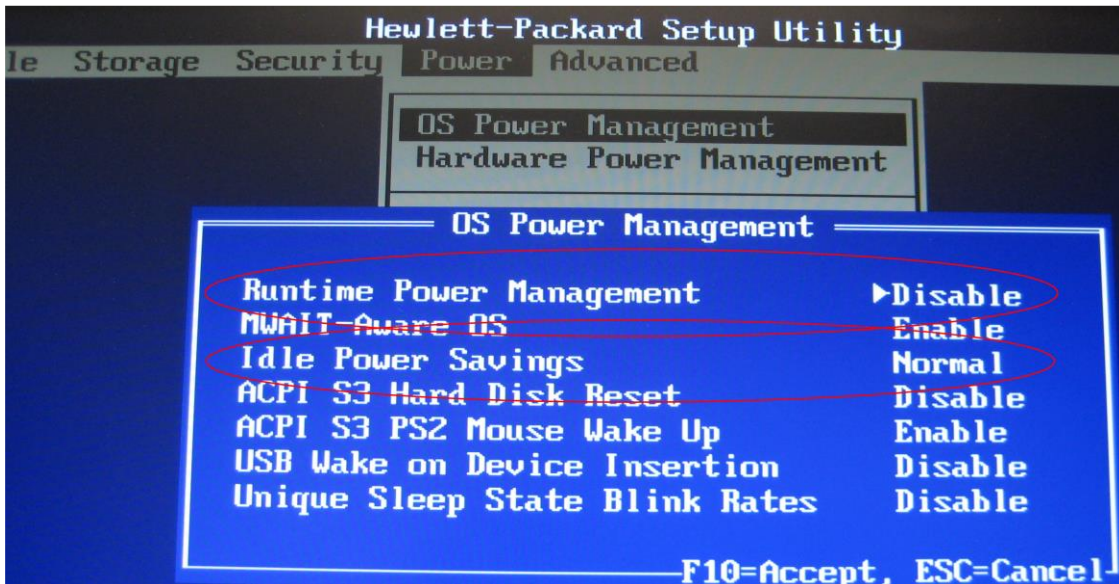
Microsoft has released an official hotfix to address this issue:
<http://support.microsoft.com/kb/2524249>

If you configured your IEEE1394 Bus controller driver for Legacy per a previous Compatibility Note recommendation, you should revert your IEEE 1394 Bus Controller driver away from Legacy and back to the Standard driver to use this hotfix and be the most stable. The Legacy driver is provided in Windows 7 only for backward driver compatibility. It will likely not evolve in stability and function beyond its current state.
- *22: The FireBird 2PE8 cards operate optimally with PCIe x8 Gen2 slots. Please make sure you install this card into an electrically compatible PCIe x8 Gen2 slot. If you have a Dell or HP Workstation, please reference to (*15) above.
- *23: For all PCIe interface options, it is highly recommended to disable C-state processor control in your PC's BIOS. Most PC manufacturers (such as Dell and HP) ship with C-state processor control enabled from the factory. When this is enabled, the processor may drop in and out of S0 maximum power state – when this happens, if you are transferring image data across the PCIe bus, it may get interrupted to the point where data becomes corrupted or lost. It is also known that C-state being enabled can affect the overall maximum bandwidth of particular PCIe slots on the motherboard. For critical image capturing, insure S0 power state is always maximum – the best way to do it is to tweak the BIOS for such control.

For example, if you have a Dell T3500, T5500, and/or T7500, the setting appears in the BIOS under Performance:



If you have an HP Z400 or Z800 Workstation, it appears in the BIOS here:



Set Runtime Power Management to Disable and Idle Power Savings to Normal. For a further description from HP (Taken from Computer Setup(F10) Utility):

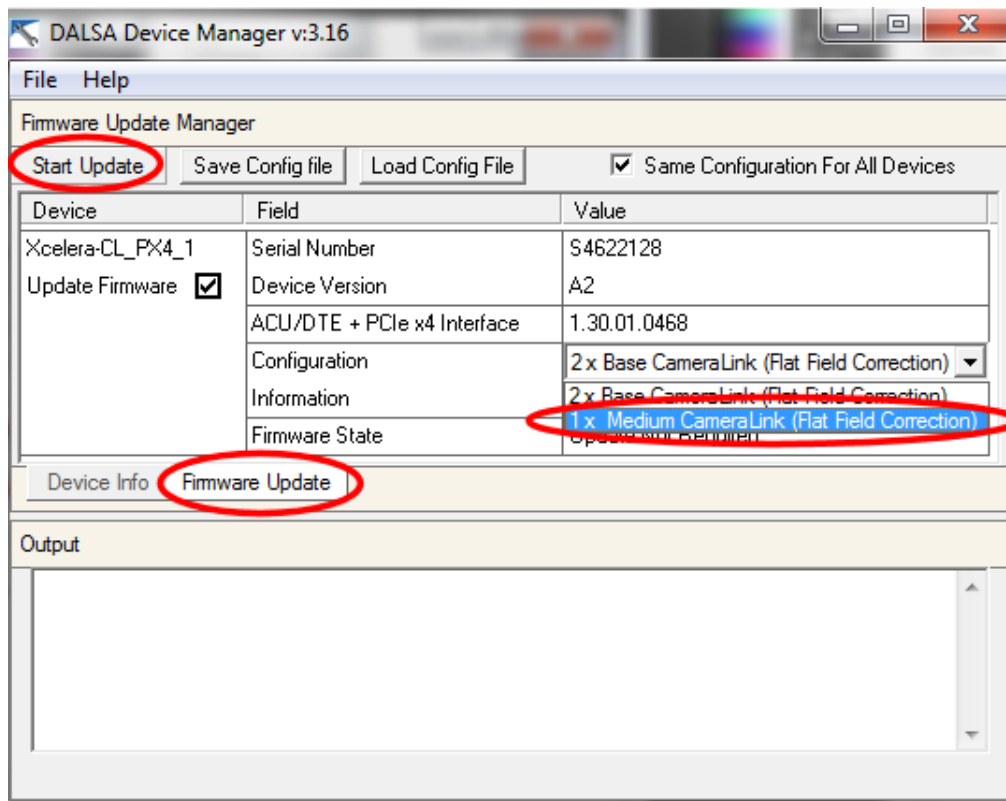
Computer Setup—Power	
Option	Description
OS Power Management	<ul style="list-style-type: none"> Runtime Power Management— Enable/Disable. Allows certain operating systems to reduce processor voltage and frequency when the current software load does not require the full capabilities of the processor. Idle Power Savings—Extended/Normal. Allows certain operating systems to decrease the processors power consumption when the processor is idle.

- *24 For C11440-22CU with USB and C11440-42U, they must be connected to a USB 3.0 compliant bus, the drivers for the USB 3.0 chipset controller must be operational in Device Manager (check the card or PC manufacturer's website for proper drivers if Windows 7/Vista. Windows 8 and higher ship with in-box USB xHCI compliant drivers from Microsoft that can work with any known USB3 chipset controller), and the USB 3.0 chipset controller must be installed/operating on a PCI Express / ExpressCard **Gen2** (5GT/s) capable slot / bus.
- *25 If you are using an Xcelera-CL PX4 DUAL board with MEDIUM Camera Link specification cameras, Teledyne DALSA / Xcelera requires you to manually program its firmware to MEDIUM, as well as manually configure a configuration file to notify the software/drivers that it will be using MEDIUM configuration. To do this, follow these steps after fully installing the DCAM-API Sopera Drivers and Xcelera frame grabber into the system and rebooting if necessary – the drivers for the board need to be running to use the tools.

1. Run this command line as administrator:

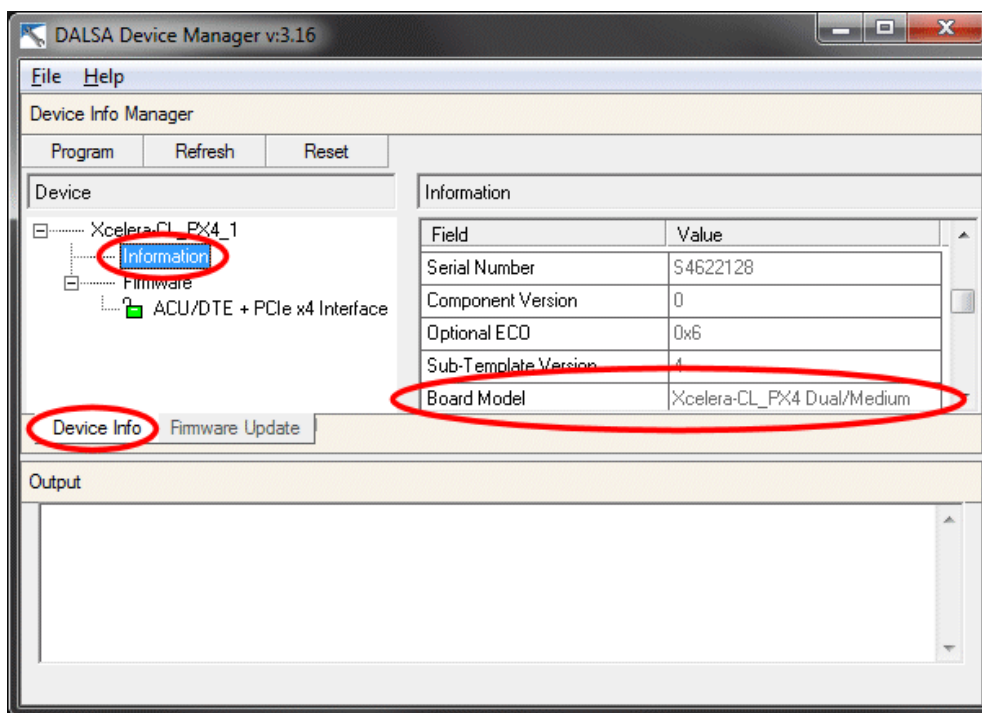
```
%windir%\System32\DCAMAPIModules\sopera\bin\CorDeviceManager.exe -a/bCorX64Expre4xx
```

2. Press the Firmware Update tab and change the Configuration to Medium CameraLink for the board you wish to reprogram:



3. Press the Start Update button to reprogram the board. When done, do not reboot yet if it tells you.

4. Press the Device Info tab, then click Information, scroll the right pane to show the Board Model and take note of it:



5. Edit this file:

```
%windir%\System32\DCAMAPI\Modules\sapera\bin\BestMatch.ini
```

Modify it (edit and save) and change the Default CFC file Id to be 1 for the board you modified. For example:

```
[options]
Install Silently=1
Silent Install Error Messages=0
Multiple Firmware Configuration=0
Multiple Firmware Configuration=0
Best Match=1
```

```
[Xcelera-CL_PX4_1]
Default CFC file Id=1
Board Model=4098
CMI=0x0000
```

```
[Xcelera-CL_PX4_2]
Default CFC file Id=2
Board Model=4097
CMI=0x0000
```

Modify the section which includes Board Model=4098.

The above example shows changing the firmware type for a Dual/Medium board to Medium.

6. If it told you to reboot in step 3, do it now, then everything should be OK.

If you should need to reprogram back to Dual Base, follow the instructions above to reprogram the board and modify the INI file with Default CFC file Id=3 for Dual Base.