



Avid Configuration Guidelines HP Z800 Dual Quad-Core CPU Workstation Symphony / Media Composer / NewsCutter

1.) HP Z800 AVID Qualified System Specification:

- Microsoft® Windows Vista Business 64-bit Edition (SP1 / SP2)
- Dual Intel® Quad-Core Xeon® 5570 Processors @ 2.93GHz 8MB cache / 1333MHz memory
- NVIDIA Quadro FX 4800 1.5GB PCI-e video board
- 320GB SATA-II 3Gb/s 7200RPM Hard Disk Drive
- Standard AVID memory configuration: 6GB (6 x 1GB) DDR3 1333 ECC memory –
(Requires six 1GB DIMMs, DIMM sizes cannot be mixed sizes)
1GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM5
CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM5

Optional 12GB memory configuration

- Optional AVID memory configuration: 12GB (6 x 2GB) DDR3 1333 ECC memory –
(Requires six 2GB DIMMs, DIMM sizes cannot be mixed sizes)
2GB memory modules must be installed in the following memory slots:
CPU0-DIMM1, CPU0-DIMM3, CPU0-DIMM5
CPU1-DIMM1, CPU1-DIMM3, CPU1-DIMM5

Memory configuration constraints

- No other memory configurations are allowed in AVID environments. Only the 6GB (6 x 1GB) and 12GB (6 x 2GB) configurations are supported. Memory configurations which mix and match memory module sizes and locations will result in a poor performing, non-optimal operating environment.

2.) Qualified Operating System for Avid Client Editing Applications and Hardware on the HP Z800:

- **Supported: Microsoft® Windows Vista Business 64-bit Edition (SP1 / SP2)**
- **Supported: Microsoft® Windows Vista Ultimate 64-bit Edition (SP1 / SP2)**
- **Not Supported - Microsoft® Windows XP (any version)**
- **Not Supported - Microsoft® Windows Vista 32-bit (any version)**

3.) Qualified Avid Editing Applications and Hardware Supported on the HP Z800 workstation:

- 1.) Avid Symphony ver 3.5.4 or later
 - Supports Nitris DX
- 2.) Avid Media Composer ver 3.5.4 or later
 - Supports Mojo DX, Nitris DX, 1394 Mojo-SDI or software only
- 3.) Avid NewsCutter ver 7.5.4 or later
 - Supports Mojo DX, Nitris DX, 1394 Mojo-SDI or software only

AVID qualified Hardware / Shared Storage

| | Qualified / Supported | Minimum Version S/W |
|------------------------------------|-----------------------|--|
| Mojo DX | Yes | MC / Symphony v3.5.4 Newscutter 7.5.4 |
| Nitris DX | Yes | MC / Symphony v3.5.4 Newscutter 7.5.4 |
| 1394 Mojo-SDI DNA | Yes | MC / Symphony v3.5.4 Newscutter 7.5.4 |
| 1394 Mojo Analog DNA | No | N/A |
| 1394 Adrenaline DNA | No | N/A |
| Symphony-Nitris DNA (Classic) | No | N/A |
| Unity ISIS 1 Gbit Ethernet Client | Yes | ISIS 2.02 |
| Unity ISIS Hi-res (10 Gbit) client | Yes | ISIS 2.02 |
| Unity MediaNet Fibre | Yes | ISIS 5.1.2 |
| Unity MediaNet AECIFs | Yes | ISIS 5.1.2 |

AVID qualified HBA info

| AVID qualified HBA | AVID Part Number | Slot Location | Function |
|---|---|---------------|--|
| Avid HIB, DX Interface HBA (Active only) | 7030-20084-01 | #1 | Avid DX Hardware Interface HBA |
| Atto FC-41ES | 7030-20004-01 | #4 | Shared Storage: Unity MediaNet Fibre |
| Intel PRO 1000 PT - ISIS | 7030-20139-01 | #4 | Shared Storage: Unity ISIS Copper Gb-Ethernet |
| Intel PRO 1000 PF - ISIS | Not stocked by AVID | #4 | Shared Storage: Unity ISIS Optical Gb-Ethernet |
| Chelsio S310E-SR | 7030-20171-01 | #4 | Shared Storage: Unity ISIS 10Gb-Ethernet |
| Atto R380 | 7030-20166-01 | #5 | Local Storage – VideoRAID ST |
| Atto UL5D | 7030-20002-01 | #5 | Local Storage – VideoRAID RTR & Legacy Avid u320 SCSI storage <i>(The UL5D BIOS should be disabled)</i> |
| StarTech PEX1394B3 1394b PCI-E | 7030-30029-01 | #1 | Mojo-SDI 1394 connectivity |
| Dynex DX-PCI2PF 1394b PCI-E | Alternate 1394b PCI-E HBA, Not stocked by AVID | #1 | Mojo-SDI 1394 connectivity |
| Point Grey Research model FWB-PCIE-01, 1394b PCI-E | Alternate 1394b PCI-E HBA, Not stocked by AVID | #1 | Mojo-SDI 1394 connectivity |

4.) Slot Configuration:

| | | | DX Hardware | 1394 Mojo-SDI Hardware |
|--------|--------------------------------------|-------------------|--|--|
| Slot # | Electrical | Mechanical | | |
| 1 | x4 PCI-E Gen 2 | x8 | Avid HIB, DX Interface HBA (Active only) 7030-20084-01 | <i>1394b PCI-Express HBA required (w 8K buffers) specific info below 1394 Mojo-SDI must connect here</i> |
| 2 | x16 PCI-E Gen 2 (225Watts) | x16 | Quadro FX 4800 | Quadro FX 4800 |
| 3 | x4 PCI-E Gen 1 | x8 | <i>Not Used</i> | <i>Not Used</i> |
| 4 | x8 PCI-E Gen 2 | x16 | Shared Storage Controllers: Atto FC-41ES - MediaNet Intel PRO 1000 PT - ISIS Intel PRO 1000 PF - ISIS Chelsio S310E-SR - ISIS 10Gb | Shared Storage Controllers: Atto FC-41ES - MediaNet Intel PRO 1000 PT - ISIS Intel PRO 1000 PF - ISIS Chelsio S310E-SR - ISIS 10Gb |
| 5 | x16 PCI-E Gen 2 (225Watts) | x16 | Local Storage Controllers: Atto R380 - SAS VR11 ST support Atto UL5D - Legacy u320 SCSI support | Local Storage Controllers: Atto R380 - SAS VR11 ST support Atto UL5D - Legacy u320 SCSI support <i>(The UL5D BIOS should be disabled)</i> |
| 6 | PCI-E 32bit /33MHz | PCI 32/33 | <i>Secondary SAS Port (Embedded)</i> | <i>Secondary SAS Port (Embedded)</i> |
| 7 | x8 PCI-E Gen 2 | x16 | <i>Not Used</i> | <i>Not Used</i> |
| | Embedded Broadcom BCM5764 GbE NIC | PCI-E x1 Gen 1 | <i>Not qualified for Avid ISIS Connectivity</i> <i>Qualified for Avid MediaNetwork AECIFs</i> | <i>Not qualified for Avid ISIS Connectivity</i> <i>Qualified for Avid MediaNetwork AECIFs</i> |

5.) 1394 Mojo-SDI configuration requirements (slot #1 requirement)

1394 Mojo-SDI must connect via specific add-in 1394b PCI-Express Firewire cards (with 8K buffers) which must be installed in Slot #1. *The Z800 embedded 1394 port cannot be used for connectivity to 1394 Mojo-SDI.*

Current qualified PCI-Express 1394b Firewire cards are:

- 1.) StarTech PEX1394B3 StarTech PEX1394B3 (AVID P/N 7030-30029-01)

<http://www.startech.com/item/PEX1394B3-2b-1a-PCI-Express-1394-FireWire-Adapter-Card.aspx>

- 2.) Dynex DX-PCI2PF

<http://www.dynexproducts.com/pc-729-2-dynex-2-port-firewire-800-and-1-port-firewire-400-pcie-adapter.aspx>

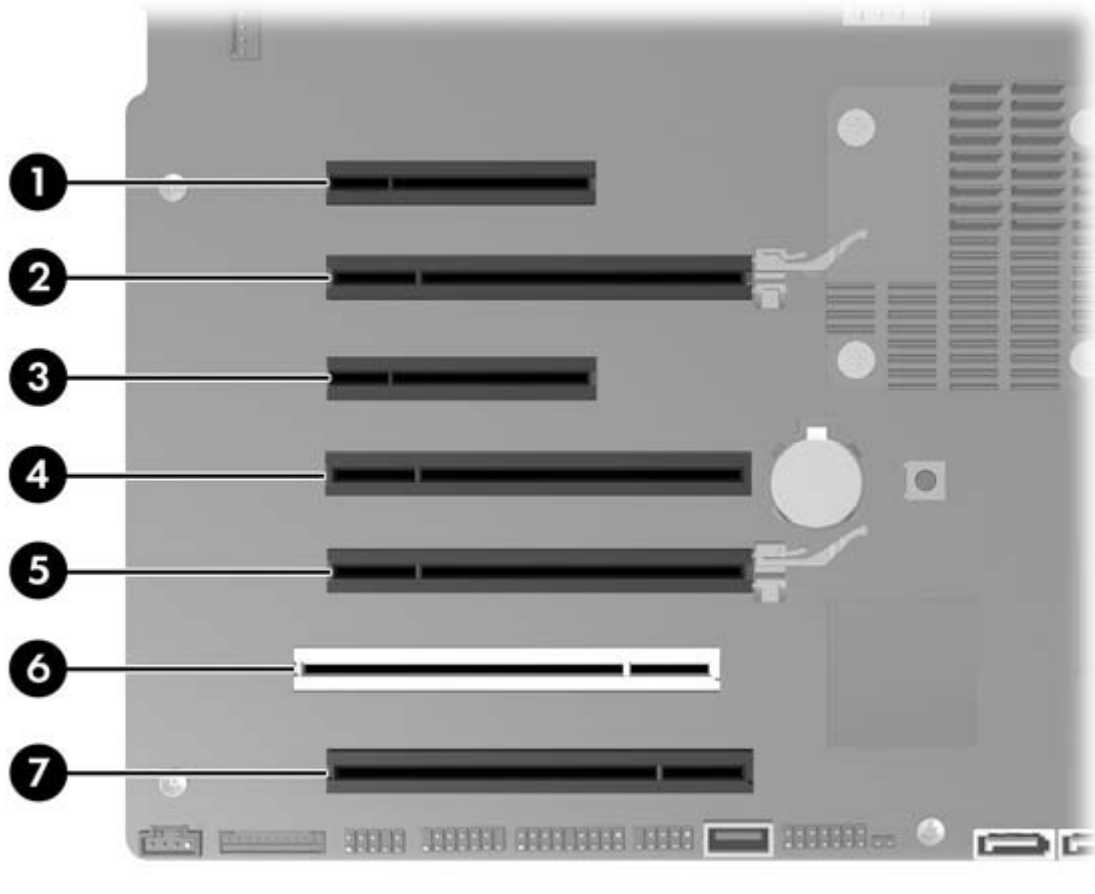
- 3.) Point Grey Research FWB-PCIE-01

http://www.ptgrey.com/products/firepro/adapters/FWB-PCIE/PCle_1394b_card_datasheet.pdf

6.) Utilization of embedded (on-board) 1394 ports

| <u>Configuration</u> | On-board 1394 utilization for Camera / Deck / Disk Drive support | On-board 1394 utilization for 1394 Mojo-SDI H/W support |
|----------------------|---|---|
| 1394 Mojo-SDI H/W | Yes - Supports 1394 Deck / Camera / Disk Drive | Not supported. Avid specified add-in 1394b controller required in slot #1 for 1394 Mojo-SDI connectivity. For 1394 Mojo-SDI configs on-board 1394 <i>cannot be used.</i> |
| DX H/W | Yes - Supports 1394 Deck / Camera / Disk Drive | N/A |
| S/W Only | Yes - Supports 1394 Deck / Camera / Disk Drive | N/A |

HP Z800 Slot Layout



7.) Configuration Issues:

D/X hardware configs –

Use only the “Active” version HIB (AVID part number 7030-20084-01)

Passive version HIB (AVID part number 7030-30021-01) should not be used.

Use only the active HIB pictured below (7030-20084-01)



Do Not Use Passive HIB pictured below (7030-30021-01)



Qualified Avid system BIOS version(s): (As of this writing):

If the Z800 has BIOS version 1.05 or earlier installed, it is **mandatory** that the BIOS be updated to an "AVID Qualified" BIOS. *Failure to update the Z800 to an "Avid qualified BIOS" will result in non-optimal operation of the AVID software and hardware.*

- 1.06 (Minimum BIOS version for Avid environments).
- 1.14 (Qualified July 14th 2009)

Required system BIOS settings for AVID environments:

Please Note: CPU Hyper-threading is Disabled by default and should not be enabled on the Z800 for Avid environments.

Z800 Required system BIOS changes:

1. Set Memory Mode Interleave - **Enable**
 2. Set Runtime Power Management - **Disable**
 3. Set MWAIT-Aware OS - **Disable**
 4. Set Idle Power Savings - **Normal**
- During boot up press F10 at the HP splash screen to invoke Set Up.
 - Select the Advanced tab
 - Select Chipset / Memory. <Enter>
 - Select Memory Mode Interleave
 - Default setting is Disable
 - Change this setting from Disable to Enable
 - Hi F10 to save the Memory Mode Interleave setting
 - Select the Power tab
 - Select OS Power Management <return>
 - Select Runtime Power Management
 - Default setting is Enable
 - Change this setting from Enable to Disable
 - Select MWAIT-Aware OS
 - Default setting is Enable
 - Change this setting from Enable to Disable
 - Select Idle Power Savings
 - Default setting is Extended
 - Change this setting from Extended to Normal
 - Hi F10 to save the Runtime Power Management, MWAIT-Aware OS, and Idle Power Savings
 - Press F10 twice to Save
 - Save Changes and Exit
 - System will Reboot

Nvidia driver 182.65 is the AVID qualified driver for support of the new FX4800 graphics card. The previously qualified 169.47 Nvidia driver released with previous versions of Avid editing applications does not support the new generation FX4800 video card.

ATTO UL5D issue: When an ATTO UL5D PCI-E u320 SCSI controller is installed in slot #5, the UL5D BIOS must be disabled or the following warning may be reported during system boot: (Also the UL5D BIOS must be disabled for proper operation when connected to an AVID VideoRAID RTR u320 SCSI).

110 – Out of memory space for option ROMS.

The option ROM for the following device was unable to run due to memory constraints. If you choose to continue, one or more PCI devices may not work properly

To disable the UL5D BIOS and eliminate the above warning, perform one of the following:

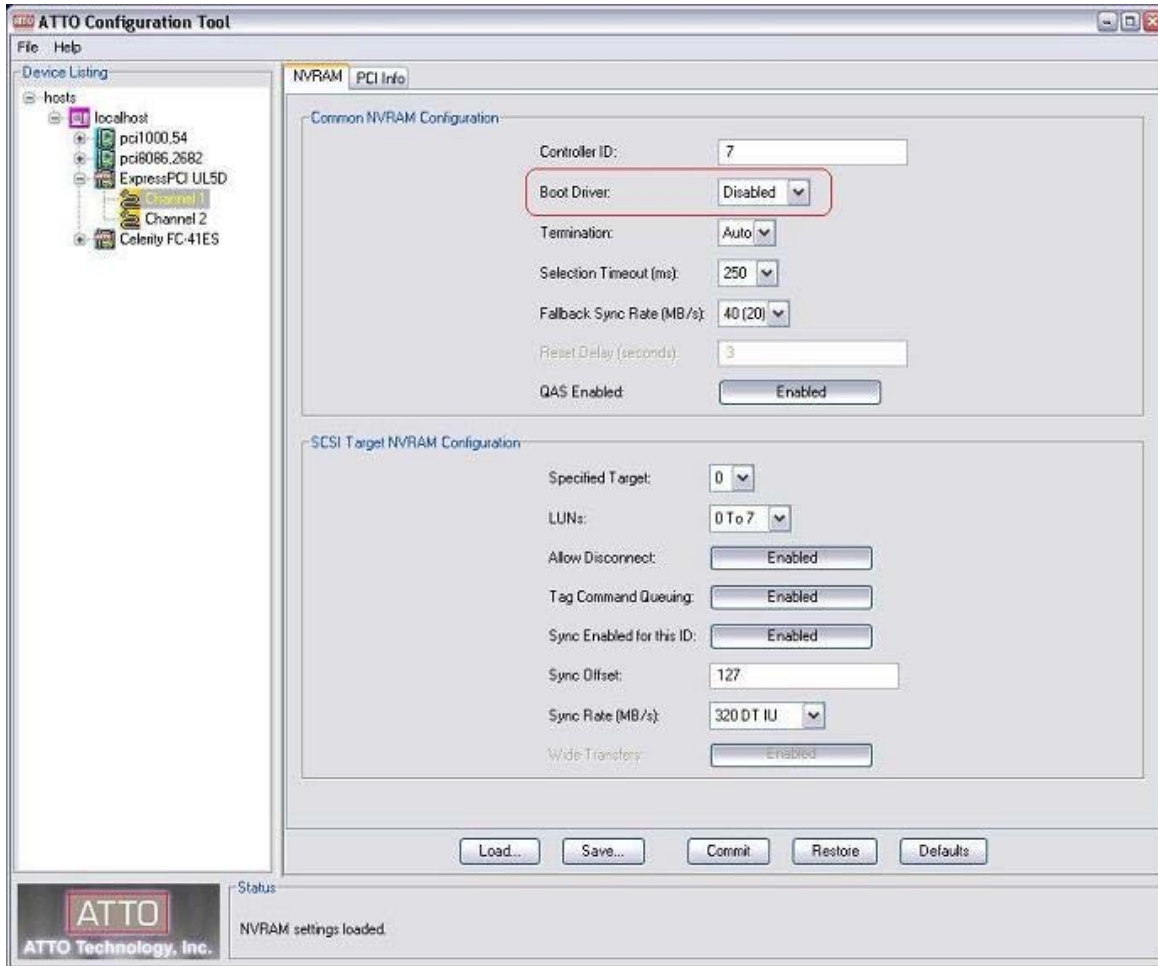
- A. AVID Knowledge Base article 273945, <http://avid.custkb.com/avid/app/selfservice/search.jsp?DocId=273945&Hilite=UL5D>

Install Atto UL5D configuration tool and launch the software.

Expand the Express PCI UL5D menu, and click on Channel.

The **Boot Driver** has to be **disabled** on **both channels** of the UL5D.

Configure the UL5D per this screenshot, and do this for both Channel 1 and Channel 2



B. Or during system boot perform the following:

1. Reboot the system
2. Hit "Escape" to clear the HP splash screen
3. Hit Ctrl-Z when the following Atto UL5D BIOS message prompts

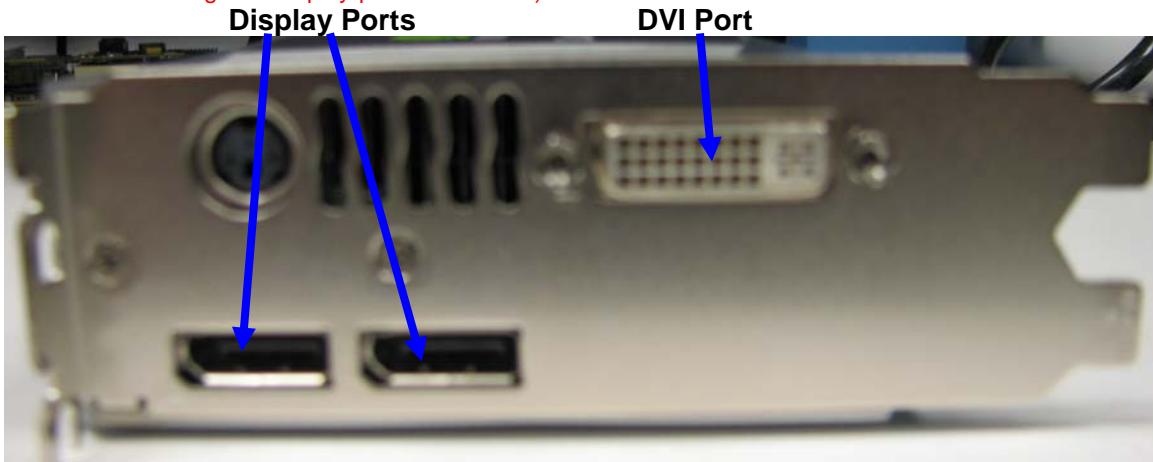
** ATTO ExpressPCI™ Version 2.10 **
***** Press [Ctrl + Z] for Setup Utility *****
4. Select 1 - Adapter menu
5. Select 2 - Configure Both Adapter Channels
6. Select Host Adapter BIOS
7. Select "Disabled" using [Page Up] / [Page Down]
8. Press "ESC"
9. Press "ESC"
10. Select 4 – Save Parameters and Exit

8.) Nvidia FX 4800 monitor connectivity:

The new generation Nvidia FX 4800 graphics card has a single DVI port and two Display-Port ports
*(Important: Display-ports **are not** HDMI ports, at first glance they do look very similar to HDMI ports)*
The HP Z800 includes one Display-Port-to-DVI adapter. HP P/N 481409-001

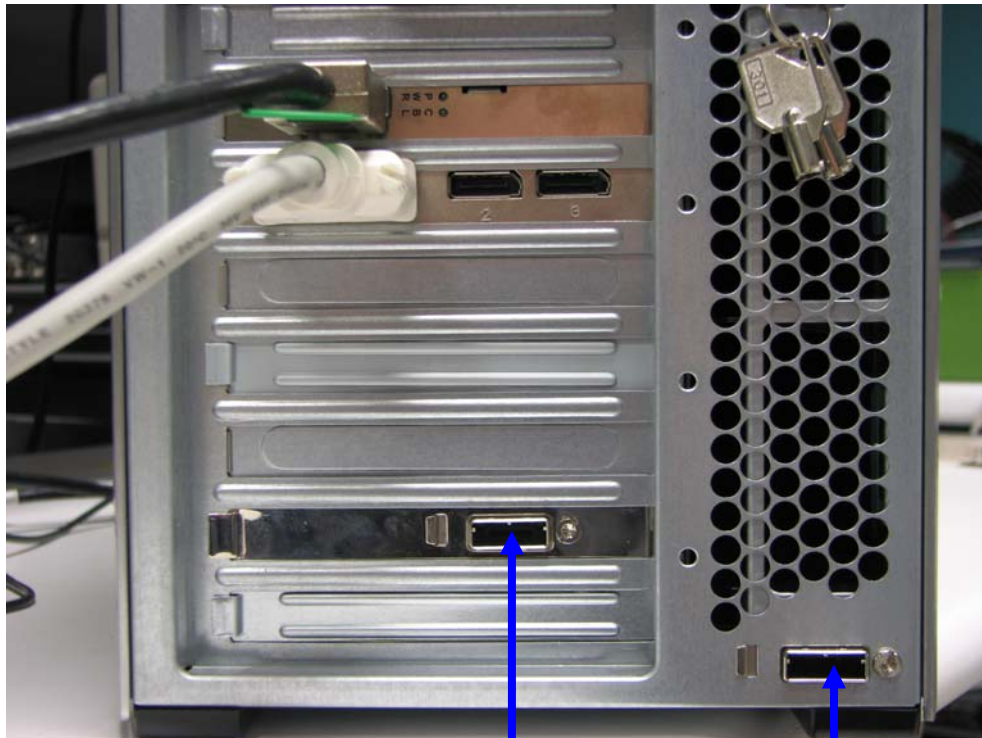
For dual monitor connectivity:

1. Use the DVI port and one Display-Port (Display-Port connection can be native display-port to monitor via display-port connection, or use the display-port-to-DVI-adapter supplied with the system to connect to a native DVI monitor).
2. Or use two Display-Ports *(Requires monitors with native display-port connections, two display-port to DVI adapters cannot be used when using dual display-port connections).*



9.) SR SAS storage connectivity:

The Z800 can support two external AVID SR SAS local storage chassis:



External SAS Port 2 External SAS Port 1

10.) Serial Port Deck Control:

The HP Z800 workstation does have an embedded serial port. The embedded serial-port has been qualified by Avid and will maintain frame accuracy in Avid environments. A USB-to-serial-port adapter is not required unless the user requires simultaneous connection to two decks via a serial port. If the user requires simultaneous connection to two decks via serial port, the deck control for the 2nd serial port must be established via a Keyspan (Tripp-Lite) Model USA-19HS USB-to-serial-port adapter. The 19HS USB-to-serial-port adapter has been qualified by Avid and will maintain frame accuracy in Avid environments.

AVID P/N 7080-20013-01

<http://www.tripplite.com/en/products/model.cfm?txtSeriesID=518&EID=13384&txtModelID=3914>

Revision Update

| Revision | Date | Name | Update |
|----------|------------------------------|--------------|------------------------|
| A | July 16 th , 2009 | Joe Conforti | Initial Public Release |
| A1 | July 24 th , 2009 | Joe Conforti | General Clean-up |
| | | | |
| | | | |
| | | | |
| | | | |