15-4112-01G

I. Introduction

This manual will go through the steps of flashing the EPCT onto your 3Ware Controller Card thus enabling drive status LED functions from the I²C Bus. For use with Backplane Board 12-6386-01A, 12-6412-01A, 12-6412-01B.

II. Required materials:

1. Cables:

P/N: 05-1199-01B   **P/N: 05-1187-01A**

2. Software Kit

   Download the appropriate 3ware ECPT Code from www.cidesign.com or contact CI Design

   Engineer or your 3Ware Rep for software kit compatible with Ci Design chassis.

III. Instructions for flashing your controller card

1. Download the 3ware ECPT Code and program, use the appropriate esconfig and ECPT file.

2. Unzip the kit and remember the location.

3. Run the esConfig.exe file.

   Example: esconfig –c0 –i xxxx.bin

   - –c# is the controller card port.
   - –i install the CCU onto controller card.
   - xxxx.bin is the name of the ECPT file.

4. After flashing is complete, the system must be restarted.

IV. Installing the cables onto backplanes

1. The I²C Cable 05-1199-01B must be installed on the First Backplane Board of the unit. Connect the 4x2 Cable Connector Housing to the JP29 Header on the Board ("Red Point" of Housing Connector to pin #1 JP29 Header). The SW1 of this First Board must be set to Binary 0 (ON ON ON).
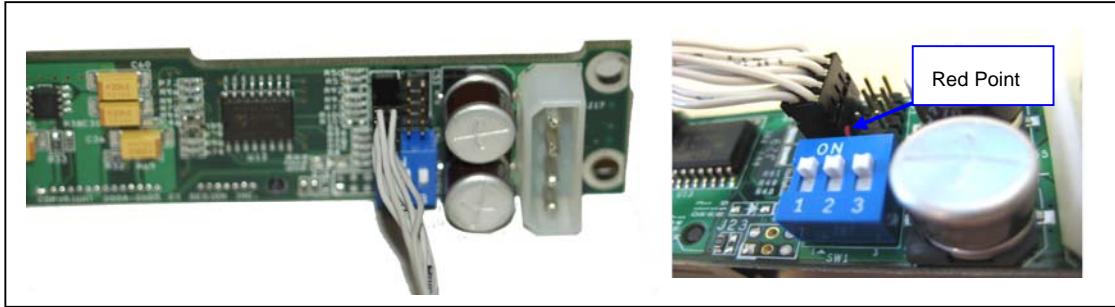

Figure 1 - I2C cable plugged into backplane

2. The next/ Second Board (if any) must be daisy chained to the First Board using cable 05-1187-01A from J28 to J29. This Second Board SW1 must be set to Binary 1 (ON ON OFF).

3. Repeat similar step no.2 if there is additional backplane boards. Refer to V.1 for SW1 setting.
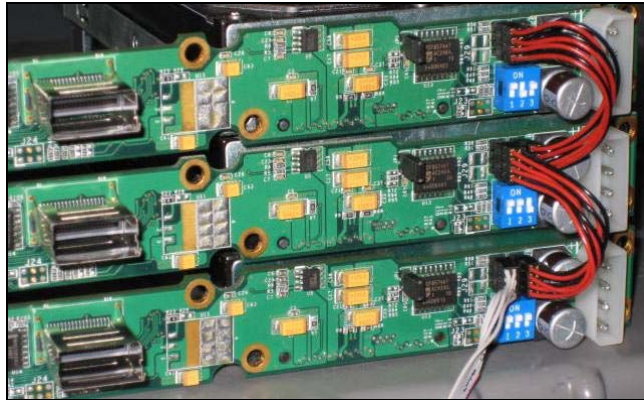

Figure 2 - Daisy chain from J28 to J29

4. If the HDD does not support pin 11 then the discrete Activity-LED Cable need to be installed to J13 or J22.   Default Setting: This cable is excluded from the unit, unless customer requests it specifically.

Figure 3 – Activity LED Cable plugged into backplane

V. Switch settings on backplane

1. SW1 – Controls the I²C Addresses

Follow the chart to determine the dip settings:

	BP 1	BP 2	BP 3	BP 4	BP 5	BP 6
All 1U Chassis	000	N/A	N/A	N/A	N/A	N/A
SR208	000	001	N/A	N/A	N/A	N/A
SR212	000	001	010	N/A	N/A	N/A
SR316	000	001	010	011	N/A	N/A
SR524*	000	001	010	011	100	101
SR524**	000	001	010	011	000	001
SR524***	000	001	010	000	001	010

*   Using the 24 port controller card on BP1-6. Requires 1x 05-1199-01B

** Using the16port controller card on BP1-4 and 8port controller card on BP5-6. Requires 2x 05-1199-01B

***Using a 12port controller card on BP1-3 and 12port controller card on BP4-6. Requires 2x 05-1199-01B.
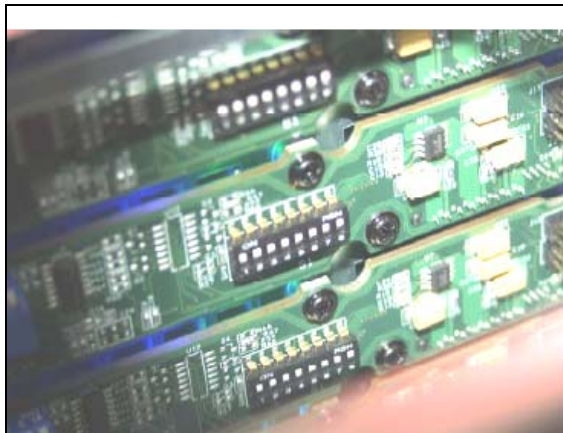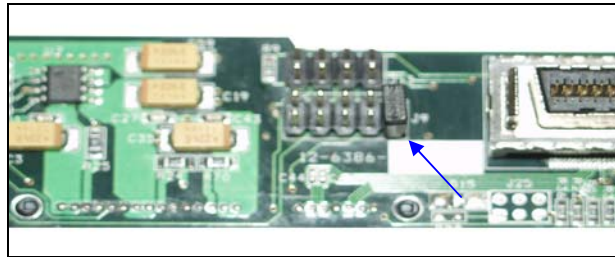

☼   **NOTE**

ON = 0, OFF = 1.

---

2. S1 (only for Backplane Board 12-6412-01B and 12-6412-011A).

If using 3Ware I²C, turn all dips to ON position.

Figure 4 - S1 Switch

3. Install shunt onto pins 9 and 10 of J9 to turn on FAIL LEDs.

Figure 5 - Installing shunt

4. SW2 – Controls the BLUE Activity LED.

   All dips on SW2 should be in ON position if HDD supports pin 11.   All dips on SW2 should be in OFF position if HDD is not supporting P11 (ACT LED is supported from discrete cables).   The list below shows some of HDD supporting pin 11, for example:

   a.   Western Digital – All models

   b.   Maxtor – DiamondMax 10 and MaXLine III

   c.   Hitachi Deskstar – 7K500 (Kurofune-II), T7K250 (Vancouver-IV), 7K80 (Pathfinder-I)

   d.   Seagate Barracuda - 7200.8 ST3300831AS, NL35 Series
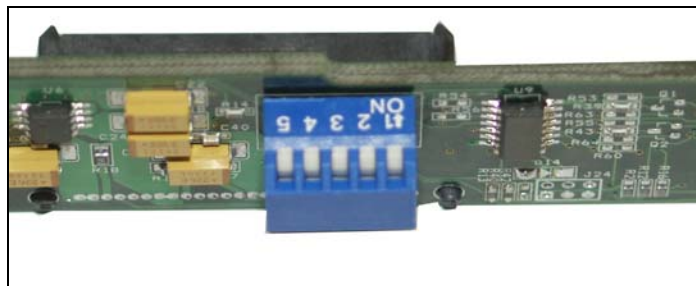
Figure 6 - SW2 dips in "ON" position

VI. Installing the cables onto controller card

1. The I²C 5x2 Cable Connector Housing connects to 3Ware Card I²C Header (The Red Point of the Cable Housing Connector to Pin-1 of Card Header).
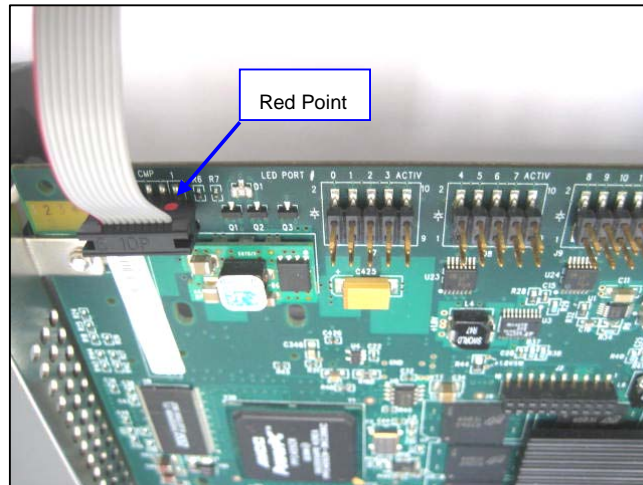

Red Point

Figure 7 - I²C cable plugged into controller card

2. If The Discrete Activity LED Cable is used, see the following picture for its connections to the Card (Connect the LED Cable of the backplane board to its corresponding ACT LED Header on the card) :
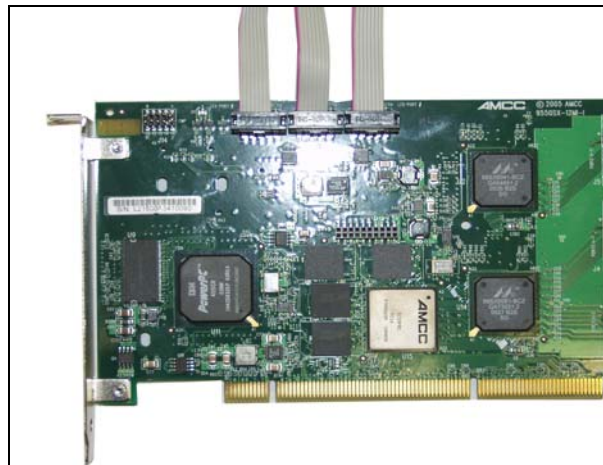

Figure 8 – Activity-Cable plugged into controller card

VII. Description of LED codes

The following table describes the drive status LED code.

COLOR	STATUS
Solid Green	Drive OK
Blinking Green	Identify
Black	No Drive
Red and Green	Hot Spare
Blinking Red and Green	Rebuilding
Solid Red	Drive timeout or RAID DCB Error
Blinking Red	SMART threshold exceeded error or ECC error
Blinking and Solid Blue	Drive Activity

Drive time-out, DCB error, SMART threshold exceeded, or ECC error will retain across power cycle (non-volatile).

The exceptions are:

- ECC error if mapped out by drive (through RAID creation, initialize, write operation), firmware will report solid green instead of blinking red.

- DCB error result in solid red across power cycles, unless user creates new array using the same drive, which firmware will report solid green.

- SMART error will retain its status through initialization, rebuilding, and array creating by blinking red.

- Drive timeout error may or may not retain solid red, if firmware at any point can communicate with the drive after power cycle, reset, or hard reset.