Areca ARC LED for CI-Design Rack mount

Introduction

The unit comes with the flexibility of allowing different methods of enabling the activity and fail LED's depending on the manufacturer of the hard drive and the user's preference. This manual will inform the user on how to enable the activity and fail LED.

Information in this user manual is intended to be applied for the following series of Backplane (BP) Boards:

- 12-6336, 12-6361, 12-6362
- 12-6426-01AR (Note: some information written using <u>underlined letter</u> is dedicated for this BP<u>)</u>

I. INSTRUCTION FOR ACTIVITY LED
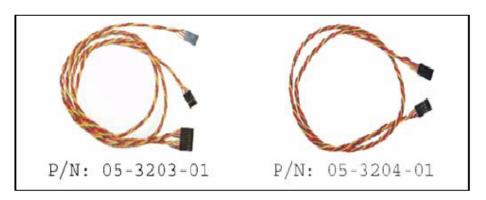
There are several options for Activity LED support:

1. **Option One**: Support from the SATA controller card

    a. Areca ARC-1110/1120/1130/1160/1170 Series (PCI-X 4/8/12/16 ports)

    b. Areca ARC-1210/1220/1230/1260 Series (PCI-E 4/8/12/16 ports)

2. **Option Two**: Support from the SATA II Hard Disk Drives

    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

3. **Option Three**: Support from I2C

4. Option Four: Support from SGPIO (only for BP 12-6426-01AR)

After deciding which method applies to you, continue with the steps for installation.

I.1 Activity LED *Option One: SATA Controller Card*

Required Materials

- LED Activity Cable (included)

P/N: 05-3203-01   P/N: 05-3204-01

Instructions

1. Turn pin 1 on SW2 to "ON" position. SW2 is the blue piano switch in the middle of BP.
   SW1   SW1

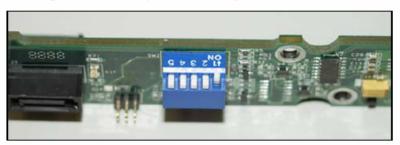   a. See **Figure 1** for details on piano switch settings and cable installation.

   Figure 1 – Turn pin 1 to "ON" position

2. Install the activity LED cable onto J13 of the backplane.

   J5

   a. See Figure 2 for installation on backplane.

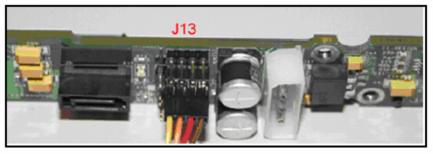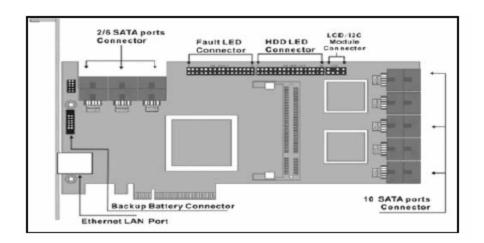   b. The label on the controller corresponds to the port number on the controller card and backplane.

   J13

   Figure 2 – Cable Installation on backplane

3. Install the activity LED cable to the SATA controller card. The even-numbered pins, located on the upper row, are 3.3V for the anode side of each LED to be connected. The odd-numbered pins are the return or cathode. Connect Yellow/Orange/Red/Brown wired to cathode side of LED signal pair.

(Yellow → Lower Number;   Brown → Higher Number)

a. See **Figure 3** for installation on PTP controller cards. (Polarity of LEDs for Activity headers on controller card are labeled as shown)
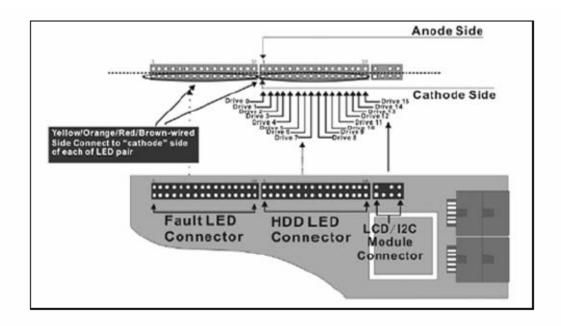

Figure 3 – Cable installation on Controller Card

I.2 *Activity LED Option Two: SATA Hard Disk Drive*

Instructions

Turn all of the switches on SW2 to the "ON" position.
<u>SW1</u>

    a.   See **Figure 4** for details on piano switch settings
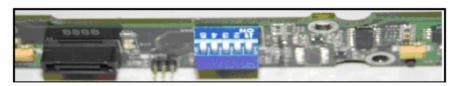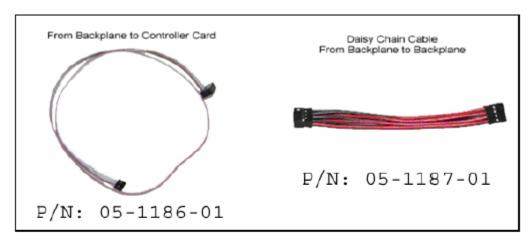

Figure 4 – Turn switches to "ON" position

1.3 *Activity and Fail LED Option Three: Support from I² C*

Information in this section will cover the instruction for Activity LED and Fail LED.

Instructions

Required Materials:

- I²C Cable (included)

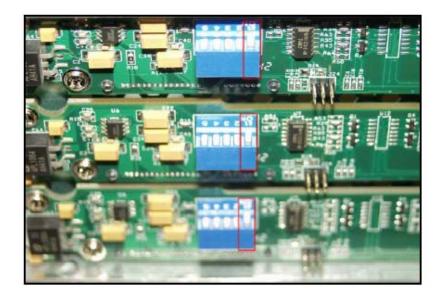- U13 that has been flashed ("Red/ Green" Dot Marking on U13)
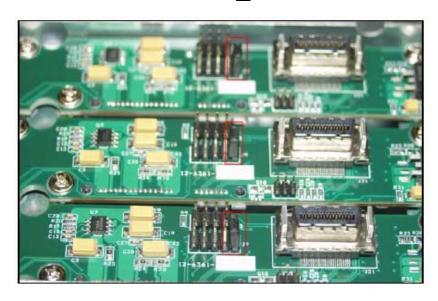 <u>U10</u>

Instructions

NOTE

This example shows pictures from SR212 Chassis, but will include settings for the other chassis'.

1.   Set SW2 dip/ key 1 to ON position for all BP in the chassis.
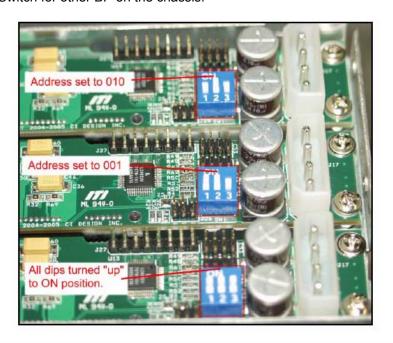   <u>SW1</u>

2. Install Shunt-Jumper on Pin 9-10 of J9 (5X2 Header on the Middle of the BP) for all BP.

<u>J6</u>

<u>For BP 12-6426-01AR, install also Shunt Jumper on J12</u>

J12

3. Choose the Bottom BP or the Top BP to connect the long I²C Cable (05-1186-01B) (CI Design default setting → Bottom BP). This BP1 should have the I²C address set to "000" by setting all keys on SW1 Switch to ON position. Refer to the below chart in setting this ~~SW2~~ Switch for other BP on the chassis.

NOTE

ON = 0, OFF = 1.   MSB = 1, LSB = 3.

Follow this chart for setting SW1 in other chassis
~~SW2~~

	BP1	BP2	BP3	BP4	BP5	BP6
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 (12 PORT X 2 Card)	000	001	010	000	001	010
SR524 (24 PORT X 1 Card)	000	001	010	011	100	101

4. Daisy chain the backplanes together from J28 to J29 using 05-1187-01A.
    ~~J7   J8~~
    Ensure that the cables are connected correctly and consistently in its orientation.

5. Connect 05-1186-01B to J28 (if Top BP) or J29 (if Bottom BP) of the backplane set
    ~~J7   J8~~
    with address "000".

05-1186-01B connects here (J29).

6. Blue LED should turn ON when there is activity on the HDD.

7. To test Fail LED, remove HDD from its bay and red LED should turn ON.

I.4 *Activity and Fail LED Option Four: Support from SGPIO (12-6426-01AR only)*

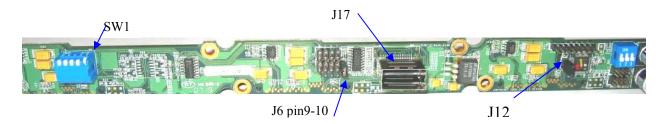Information in this section will cover the instructions for Activity LED and Fail LED.

Required Materials:

- Mini-SAS Cable with Side-band Signal feature.

- U10 that has been flashed (Red Dot Marking on U10).

Instructions

1. Install Shunt Jumper on J12.

2. Set the SW1 key1 to ON position for Activity LED.

3. Install Shunt Jumper on J6 pin9-10 for Fail LED.

4. Plug-in the Mini-SAS Cable (with Sideband Signal) to J17.

   (With this cable, the unit doesn't need any other cable to support the Activity/ Fail LED).

SW1   J17   J6 pin9-10   J12

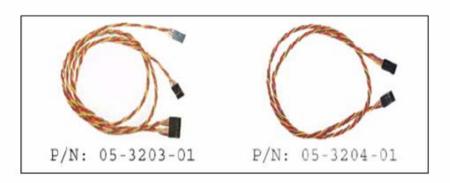## II. INSTRUCTION FOR FAIL LED

The options for Fail LED support are as follow:

1. **Option One:** Support from the SATA controller card

    e. Areca ARC-1110/1120/1130/1160/1170 Series (PCI-X 4/8/12/16 ports)

    f. Areca ARC-1210/1220/1230/1260 Series (PCI-E 4/8/12/16 ports)

2. **Option Two:** Support from I2C

3. Option Three: Support from SGPIO

II.1 *FAIL LED Option One: SATA Controller Card*

Required Materials

- LED Fail Cable (included)

P/N: 05-3203-01   P/N: 05-3204-01

Instructions

1. Install Shunt Jumper on J9 pins 9-10.

J6

Figure 6 – Installing shunt.

2. Install the Fail LED cable onto J9. Ensure that the Label on the Connector
   J6
   corresponds to the Port Number on the Controller Card and the Backplane.
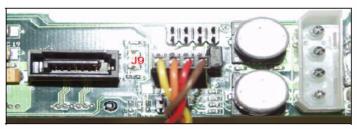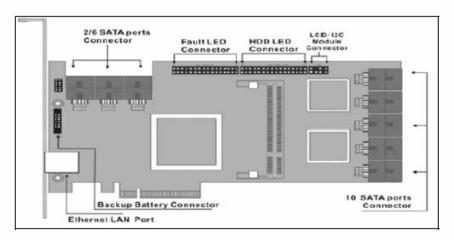

Figure 7 – Cable Installation on backplane

15-4104-01F

3. Install the fail LED cable to the SATA controller card. The even-numbered pins, located on the upper row, are 3.3V for the anode side of each LED to be connected. The odd-numbered pins are the return or cathode. Connect Yellow/Orange/Red/Brown wired to cathode side of LED signal pair.

    d. See **Figure 8** for installation on PTP controller cards. (Polarity of LEDs for Fail headers on controller card are labeled as shown)
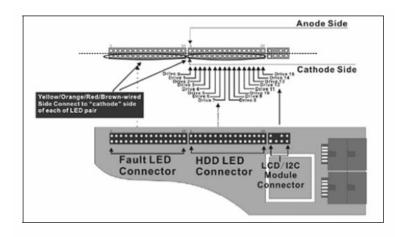

Figure 8 – Cable installation on Controller Card

II.2   Fail LED Option Two: Support from I²C

Refer to section I.3.

II.3   Fail LED Option Three: Support from SGPIO

Refer to section 1.4.