



**DCB, Inc.**  
**2949 CR 1000 E**  
**Dewey, Illinois**  
**61840**

217.897.6600 Tel  
800.432.2638 Toll Free  
217.897.1331 Fax  
[www.dcbnet.com](http://www.dcbnet.com)

## **AM3440 Firmware Updating for Dual Controller Cards** **10/2010, rev. 01/2011**

To be safe, upload the current firmware and configuration so you have an emergency backup copy.

You need to connect to the console via of the AM3440 via serial or Ethernet and have a TFTP SERVER running on a PC that is on the same subnet as the AM3440. You must have an Ethernet connection to the AM3440 for TFTP file transfers. The AM3440 and the PC must each have their own unique IP address in the same subnet.

Update the main controller first. The process presumes that the primary controller and the backup controller start the process with the same firmware in both. On the main ===Controller Menu=== you should see "Redundant Controller: Enabled" on the upperright hand side of the screen. See below

```
LOOP AM3440-A          === Controller Menu ===          22:04:27
11/10/2010

Serial Number   : 173030          Redundant Controller: Enabled
Hardware Version: Ver.H          Start Time   : 21:45:18
11/10/2010
Software Version: V8.13.01 10/27/2010  Device Name: LOOP AM3440-A

[DISPLAY]                               [SETUP]
C -> System Configuration             S -> System Setup
B -> Clock source Configuration       M -> System Alarm Setup
Q -> Alarm Queue Summary              W -> Firmware Transfer
I -> Information Summary              V -> Store/Retrieve
Configuration
R -> Redundant CTRL Information        K -> Clock source Setup
P -> Performance Report               T -> Bit Error Rate Test

[LOG]                                     [MISC]
U -> Choose a Slot                    A -> Alarm Cut Off
F -> Log Off [SETUP],[MISC] Menu      X -> Clear Alarm Queue
O -> Log On [SETUP],[MISC] Menu       Y -> Controller Return to
Default                               Z -> Controller Reset

>>SPACE bar to refresh or enter a command ==>
```



**DATA COMM FOR BUSINESS**



**DCB, Inc.**  
**2949 CR 1000 E**  
**Dewey, Illinois**  
**61840**

217.897.6600 Tel  
800.432.2638 Toll Free  
217.897.1331 Fax  
www.dcbnet.com

Below, use "B" to Upload Mainboard Firmware to your PC. Use "D" to Upload the Configuration to your PC.

Then chose "A → Download Mainboard Firmware"

```
LOOP AM3440-A          === File Transfer ===          22:05:00
11/10/2010

A -> Download Mainboard Firmware
B -> Upload Mainboard Firmware
C -> Download Configuration
D -> Upload Configuration
E -> Download Mainboard Boot-up
R -> Copy Firmware to Redundant

<< Press ESC key to return to Main Menu or enter a command >>
```

The download screen is below:

```
LOOP AM3440-A          === Download Firmware ===        22:05:22
11/10/2010
ARROW KEYS: CURSOR MOVE, Please Input: nnn.nnn.nnn.nnn, BACKSPACE to
edit

Firmware 1 Version    : V8.13.01 10/27/2010
Firmware 2 Version    : V8.12.01 09/07/2010
Current Firmware Bank: 1
Next Boot Firmware    : 1
TFTP Server IP        : 000.000.000.000
Firmware File Name    :

<< Press ESC key to return to previous menu >>
```

Fill in the TFTP Server IP address and the firmware file name

```
LOOP AM3440-A          === Download Firmware ===        22:05:22
11/10/2010
ARROW KEYS: CURSOR MOVE, BACKSPACE to edit, ESC to abort

Firmware 1 Version    : V8.13.01 10/27/2010
Firmware 2 Version    : V8.12.01 09/07/2010
Current Firmware Bank: 1
Next Boot Firmware    : 1
TFTP Server IP        : 205.166.54.194
Firmware File Name    : new_
81301.run
```



**DCB, Inc.**  
**2949 CR 1000 E**  
**Dewey, Illinois**  
**61840**

217.897.6600 Tel  
 800.432.2638 Toll Free  
 217.897.1331 Fax  
 www.dcbnet.com

Answer Y to the "Really want to Download ?" question.

```

LOOP AM3440-A          === Download Firmware ===          22:05:22
11/10/2010
ARROW KEYS: CURSOR MOVE, BACKSPACE to edit, ESC to abort

Firmware 1 Version    : V8.13.01 10/27/2010
Firmware 2 Version    : V8.12.01 09/07/2010
Current Firmware Bank: 1
Next Boot Firmware    : 1
TFTP Server IP        : 205.166.54.194
Firmware File Name    : new 81301.run

Really want to Download ?
  
```

The progress of the download is shown on the screen. This takes several minutes.

```

LOOP AM3440-A          === Download Firmware ===          22:05:22
11/10/2010
ARROW KEYS: CURSOR MOVE, BACKSPACE to edit, ESC to abort

Firmware 1 Version    : V8.13.01 10/27/2010
Firmware 2 Version    : V8.12.01 09/07/2010
Current Firmware Bank: 1
Next Boot Firmware    : 1
TFTP Server IP        : 205.166.54.194
Firmware File Name    : new 81301.run

                22:07:56 11/10/10  Downloading firmware .Received 1061
Blocks12;53HRe
ceived 993 Blocks
  
```

Here is some more of the downloading process info you see:

```

22:07:56 11/10/10  Downloading firmware .Received 1943 Blocks[12;53HR
eceived 18522:08:07 11/10/10  Received 994870 bytes
                22:08:07 11/10/10  Checksum ok.
                22:08:07 11/10/10  Write firmware file to flash: 46%

22:08:07 11/10/10  Write firmware file to flash: 99%
  
```

When you are done, you will get a message that reminds you to reboot the controller, then takes you to the process to "---Copy Firmware to Redundant Board==="

=====



**DATA COMM FOR BUSINESS**



**DCB, Inc.**  
**2949 CR 1000 E**  
**Dewey, Illinois**  
**61840**

217.897.6600 Tel  
800.432.2638 Toll Free  
217.897.1331 Fax  
[www.dcbnet.com](http://www.dcbnet.com)

```
LOOP AM3440-A      ===Copy Firmware to Redundant Board=== 22:09:32  
11/10/2010
```

```
Current Firmware Bank: 1  
NextBootFirmware Bank: 2
```

```
Copy firmware to Redundant Board - are you sure ?
```

```
==>> Enter password : XXXX
```

You see a progress screen. This copying process can take up to 5 minutes.

```
LOOP AM3440-A      ===Copy Firmware to Redundant Board=== 21:52:54  
11/10/2010
```

```
Current Firmware Bank: 1  
NextBootFirmware Bank: 1
```

```
==>> Transferring Firmware to Redundant Board  
100% Transfer Complete !
```

```
==>> Programming the Flash in Redundant Board  
76.1%
```

```
==>> Enter password : XXXX
```

Eventually you see that the transfer of firmware is complete, and then a process commences to program the flash in the redundant board. Then this is complete, you again get a reminder to reboot.

The following directions are for a second controller card. The redundant board must have an older version of firmware. If the redundant controller has newer firmware, updating should be done off line in another chassis with the redundant card the only one (primary).

**Redundant controllers must have the same firmware as the primary controller to be recognized by the system and properly backup the primary controller.**



**DATA COMM FOR BUSINESS**



**DCB, Inc.**  
**2949 CR 1000 E**  
**Dewey, Illinois**  
**61840**

217.897.6600 Tel  
800.432.2638 Toll Free  
217.897.1331 Fax  
www.dcbnet.com

```
LOOP AM3440-A      ===Copy Firmware to Redundant Board=== 21:52:54  
11/10/2010
```

```
Current Firmware Bank: 1  
NextBootFirmware Bank: 1
```

```
===> Transferring Firmware to Redundant Board  
100% Transfer Complete !
```

```
===> Programming the Flash in Redundant Board  
100% Programming Complete !  
Remember to Reboot to Run the New Firmware !
```

```
==>> Enter password : XXXX
```

Reboot the main controller first, then the redundant. This rebooting takes minutes again. Use the "Z" command to get to the reboot option. Be patient during reboot.

```
LOOP AM3440-A      === Controller Menu ===                21:58:26  
11/10/2010
```

```
Serial Number      : 173030                               Redundant Controller: Disabled  
Hardware Version:  Ver.H                               Start Time       : 21:45:18  
11/10/2010  
Software Version:  V8.13.01 10/27/2010                 Device Name: LOOP AM3440-A
```

```
[DISPLAY]  
C -> System Configuration  
B -> Clock source Configuration  
Q -> Alarm Queue Summary  
I -> Information Summary  
Configuration  
R -> Redundant CTRL Information  
P -> Performance Report
```

```
[LOG]  
U -> Choose a Slot  
F -> Log Off [SETUP],[MISC] Menu  
O -> Log On  [SETUP],[MISC] Menu  
Default
```

```
[SETUP]  
S -> System Setup  
M -> System Alarm Setup  
W -> Firmware Transfer  
V -> Store/Retrieve  
K -> Clock source Setup  
T -> Bit Error Rate Test
```

```
[MISC]  
A -> Alarm Cut Off  
X -> Clear Alarm Queue  
Y -> Controller Return to
```

```
Z -> Controller Reset
```

```
>>SPACE bar to refresh or enter a command ===>
```



**DCB, Inc.**  
**2949 CR 1000 E**  
**Dewey, Illinois**  
**61840**

217.897.6600 Tel  
800.432.2638 Toll Free  
217.897.1331 Fax  
[www.dcbnet.com](http://www.dcbnet.com)

The reboot takes several minutes. Reboot the Primary first! Pick the Warm Restart! Warm restarts will not bring the system down during reboot. Cold Restart will interrupt the system for a few minutes.

```
LOOP AM3440-A          === Reset Control Board ===          22:16:33
11/10/2010

>> Select ?    Redundant *Primary    Both
>> Restart Mode ?    *Warm Restart    Cold Restart
==>> Enter password : XXXX
==>> Reseting .....
```

Takes several minutes, eventually the telnet session ends, needs to be restarted.  
Restart the redundant controller next. No Warm Restart option here.

```
LOOP AM3440-A          === Reset Control Board ===          21:58:49
11/10/2010

>> Select ?    *Redundant Primary    Both

Reset - are you sure ? [Y/N]

==>> Enter password :
```

During the redundant controller restart, you can try the "R → Redundant CTRL Information" command. Until the redundant controller comes back to life, you see "Redundant Controller: Disabled" and "Redundant Board does not exist!"





**DCB, Inc.**  
**2949 CR 1000 E**  
**Dewey, Illinois**  
**61840**

217.897.6600 Tel  
800.432.2638 Toll Free  
217.897.1331 Fax  
[www.dcbnet.com](http://www.dcbnet.com)

The redundant controller alarm LED is on now, after the R command finds the redundant controller, in a few minutes, you see the following:

```
Redundant is synchronizing with Primary...  
  
(don't insert any card during this synchronizing process)  
  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....
```

When this screen is done, you can press a spacebar or ESC and get the main controller screen. The redundant controller should show as enabled. The main controller and the redundant controller should have the same firmware versions now. Use the "R" command to check the redundant controller firmware. The main controller firmware is shown on the main controller page.