

Updating E2 Controller Firmware Using UltraSite32

Scope

This bulletin outlines the steps necessary to use UltraSite32 to update E2 units. If multiple E2 units are present at a site, update the non-gateway units first and the gateway unit last.

Before Updating The Site

Step 1: Upgrade UltraSite32 to Version 5.01 or Higher

Before beginning, verify that the version of UltraSite32 being used to update the site is version 5.01 or higher. This version of UltraSite32 contains an added feature to Firmware Update that identifies and clearly labels which unit is the gateway unit for this site.

Identifying which E2 unit is the gateway unit is critical: If multiple E2 units are present at a site, the gateway E2 unit must be applied *last*. Versions of UltraSite32 before 4.10 do not offer a way of determining which unit is the gateway. (NOTE: If the gateway unit is updated before the non-gateway unit(s), refer to the ***Recovering from Gateway Upgrade Before Non-Gateway Upgrade if Running 2.01 or Earlier*** section of this technical bulletin.)

Step 2: Obtain the Correct Package (.PKG) File

UltraSite32 requires a .PKG (package file) for updating E2 controller firmware:

1. Go to the Emerson Climate Web site to download the package file (http://www.emersonclimate.com/en-US/products/electronics_systems/Pages/e2_facility_management_system.aspx)
2. Note that for all E2 Enhanced versions 4.01 and later, the package file from the Web site is a “meta-package” that can be used to upgrade the firmware of both E2 Standard (3.01 and later) and E2 Enhanced (4.01 and later) controllers.

Procedure

Step 3: Navigate to the UltraSite32 Firmware Update Interface

1. Launch UltraSite32.
2. Log in to UltraSite32 using the level 4 username and password. This level password will give the user access to the system feature that allows firmware update. The UltraSite32

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username and password must match the E2 level 4 or the **Update Firmware** option will not be available.

3. On the UltraSite32 directory tree, right-click the site name for the site you wish to update, and select the menu option **Connect**. Allow UltraSite32 to complete site synchronization with the site before proceeding to the next step.
4. *It is highly recommended that you back up all units at the site.* Right-click the site name, and select the menu option **Backup All Units**. Allow UltraSite32 to complete all backups before proceeding to the next step.
5. Right-click the site name, and select the menu option **Update Firmware**. (NOTE: If this option is not visible, you may not be logged in as level 4.)
6. You will be prompted to point to the location of the package file you wish to use. Browse for and click on the package file you wish to use, and click **Open**. After validating and preparing the package for transfer, the Update E2 Controller Firmware dialog box should appear, similar to *Figure 1*. The unit that is marked with the letter **G** is the gateway unit for this site. The other units are the NON-GATEWAY UNITS.

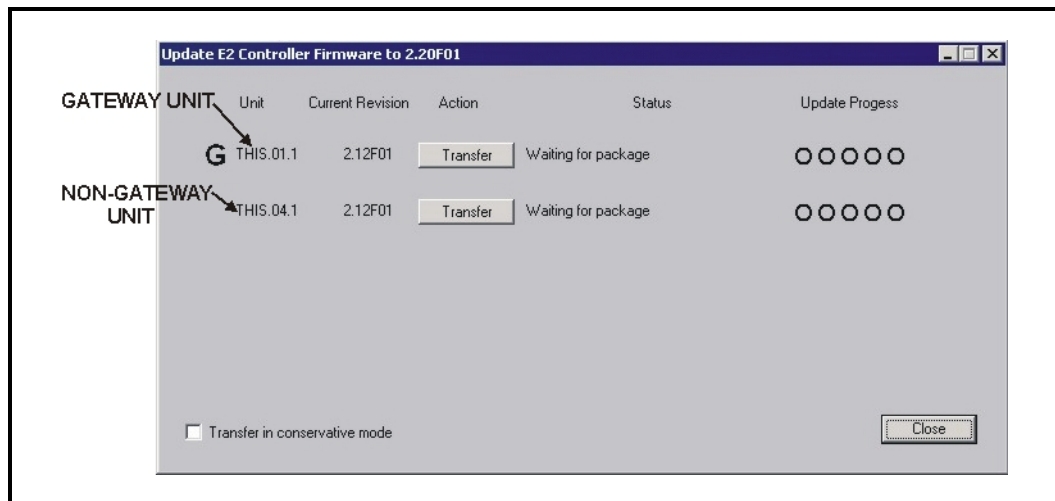


Figure 1 - Update E2 Controller Firmware Dialog Box Showing Gateway and Non-Gateway Units

7. Click the **Transfer** button for the gateway unit. UltraSite32 will begin transferring the package to the gateway unit. When the transfer is finished, the **Transfer** button will change into a button labeled **Apply** (*Figure 2*). **DO NOT CLICK APPLY**. Proceed to step 8.

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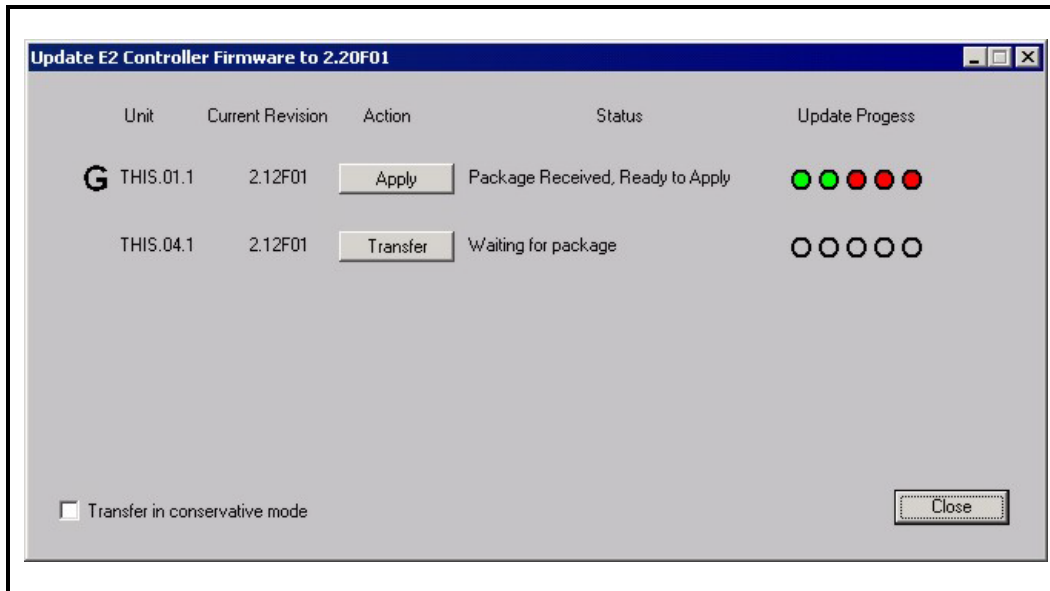


Figure 2 - Click The Transfer Button For Each Unit

- For each non-gateway unit, click the **Transfer** button to upload the packages to each of the other units. (NOTE: If the units are using the Echelon network, transferring to a non-gateway unit may be considerably slower than transferring to a gateway unit and may take a considerable amount of time to complete.)

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Continue until the package has been transferred to all units. When the transfers are finished, all buttons should be labeled **Apply** (Figure 3).

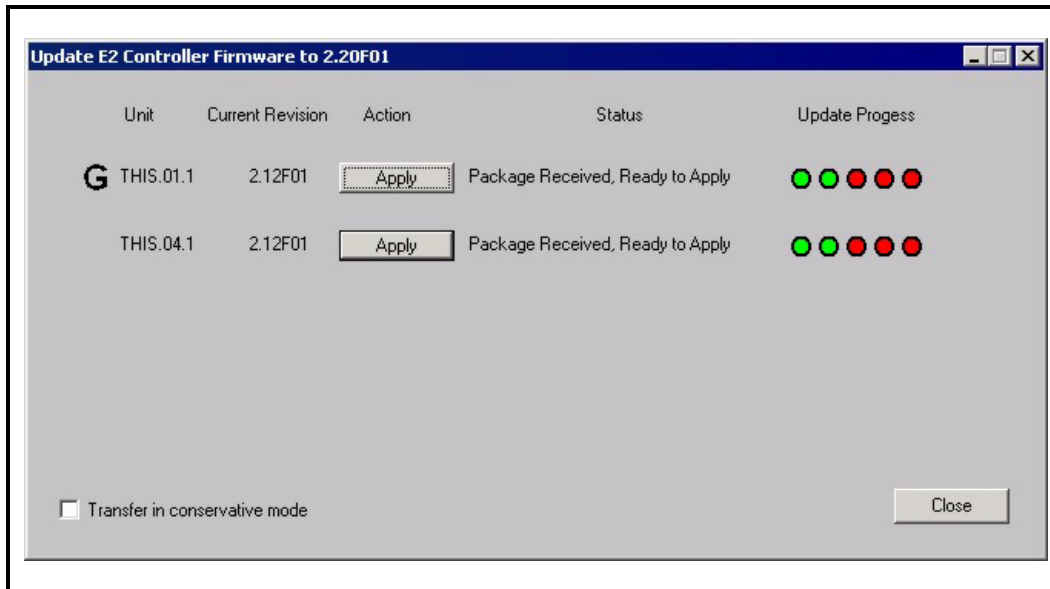


Figure 3 - Apply The Update To All Non-Gateway Units

- Choose any non-gateway unit and click its **Apply** button. *DO NOT* click the gateway unit's **Apply** button yet (the gateway unit must be updated last).

UltraSite32 will disable all apply buttons, and begin applying the package to the selected unit.

NOTE: After the Status of the upgraded unit says **Resetting Controller**, UltraSite32 will spend about ten minutes listening for the unit to come back online. During this time, the controller will reboot and apply the package file. UltraSite32 will continue to listen for the controller for ten minutes. If you are a remote user, it is *highly recommended* that you wait until the unit comes back online before proceeding.

If you are upgrading the controller on-site, or if a repair technician is on-site who can troubleshoot any possible problems, you may choose to bypass the ten-minute delay by hitting the **Close** button and re-selecting Update Firmware.

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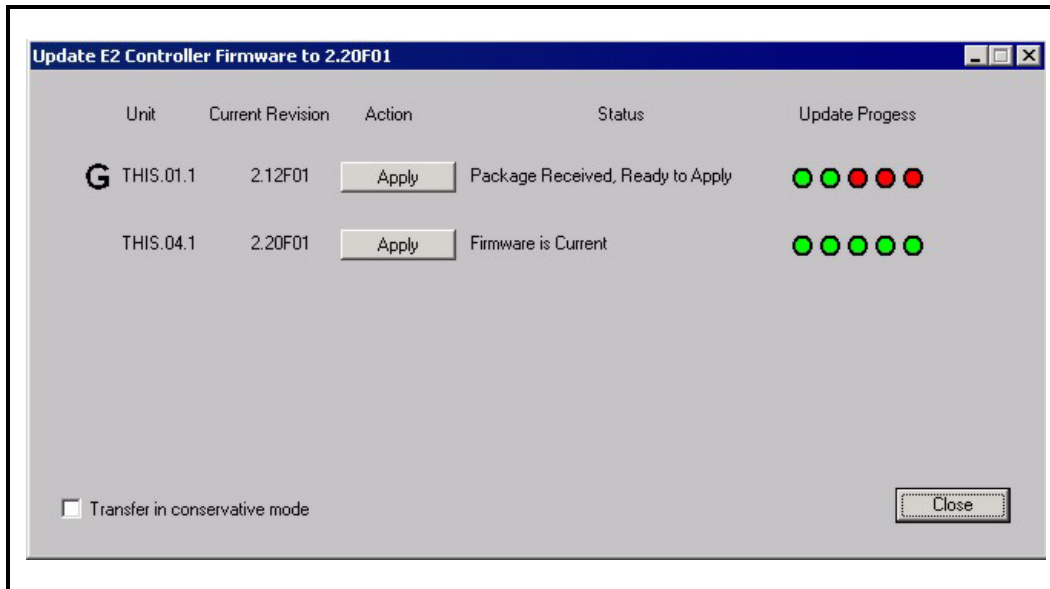


Figure 4 - All Non-Gateway Units Have Been Updated

10. Repeat step 9 until all non-gateway units have been updated (**Firmware is Current** will show as the Status). The Update E2 Controller Firmware dialog box should look similar to Figure 4. When all units *except* the gateway have been updated, proceed to step 11.
11. Click the **Apply** button on the gateway unit. During the reboot of the gateway unit, you will be disconnected. A message will appear (Figure 5) to inform you of being disconnected from the site. Click **OK**.

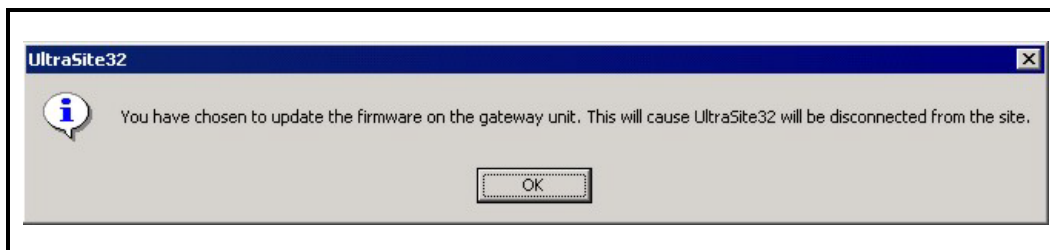


Figure 5 - UltraSite32 Disconnect Message

12. Wait about 15 minutes for the upgrade to complete, and reconnect to the site (right-click on the site in the UltraSite32 directory tree and click **Connect**).

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If the site upgrade was successful, UltraSite32 will connect to the site and successfully get alarm, logging, and cell data from each unit during site synchronization. Verify that each unit is online and operating normally.

NOTE: If multiple E2 units are present at a site, all units must be updated at the same time. After the update has been completed, make sure all units are running the same firmware version. If multiple units are running different firmware versions after the firmware is updated, the E2 units at the site will not function properly.

Recovering from Gateway Upgrade Before Non-Gateway Upgrade if Running 2.01 or Earlier

If the gateway unit is upgraded before all non-gateway units have been upgraded, the gateway unit may not be able to communicate with the older-version E2s, and thus you will not be able to upgrade them. It is possible to recover from this situation in either of two ways:

1. Restore the Gateway to the Previous Version

If you are upgrading this site remotely (via modem or TCP/IP), your only choice is to downgrade the gateway unit to the version it was before upgrading.

NOTE: Downgrading the version of an E2 will result in a clean-out of the box. If you already have a backup of the pre-2.06 configuration, do not back up the upgraded E2 before downgrading; proceed with downgrading the unit, and then restore.

If you do not have a backup of the pre-2.06 configuration, back this unit up before downgrading the unit, and contact Retail Solutions technical service for instructions on how to restore downgraded set-points to an E2.

1. Contact Retail Solutions Technical Support at 1-800-829-2724 and obtain the package file for the old version.
2. Launch UltraSite32, and log in as a level 4 user.
3. Connect to the site, allow site synchronization to complete (you will receive several error messages related to the failure to communicate; click **Ignore** to bypass these error messages and proceed with site synchronization). Right-click the site name to select **Update Firmware**.
4. In the Update E2 Controller Firmware dialog box, click the **Transfer** button next to the gateway unit (the unit labeled **G**). This will transfer the old-version package to the new box.

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5. After the transfer, click **Apply**. You will be prompted to disconnect. Wait 15 minutes to allow the upgrade to complete, and reconnect to the site. Proceed with the update procedure outlined on page 1, updating all the non-gateway units first before updating the gateway unit.

2. Make a Different Unit the Gateway

If you are on-site and upgrading from a local PC or laptop via direct-connect or TCP/IP, you may simply designate a different older-version E2 as the gateway. If using direct connect or direct TCP/IP connection via crossover cable, move the serial or network cable to a unit with the old version of firmware, and reconnect to the site. With this unit as the gateway, you will be able to upgrade the remaining units as outlined in the procedure on page 2.

Resuming Site Upgrade After Unexpected Disconnection

If you become disconnected from the site before all units could be upgraded, you may reconnect and resume the upgrade process. You may safely cancel site synchronization upon reconnecting, and resume the upgrade process.