



E-Series Firmware Update Process

This document is an outline of the firmware update process for the E-Series system and is intended to be used as a best practices overview. More detailed instructions can be found in the SCS-E5 Help files (once the software has been updated to version 3.xx.xx). In the Help menu under the Contents tab, expand Help topic and view Using the Menus>Tools Menu.

Please be aware of the time involved in updating each product to set an expectation for your customers on the length of the service call. The approximate recommended times are noted below:

SCS-E5 Software	5 minutes
ACA-E5 Main Processor	5-10 minutes
ACA-E5 Co-processor	1 minute
KLK-E5 Keypad	5-10 minutes (each)
TSV-E5 Touchscreen	5-10 minutes (each)

E-Series updates should be performed in the following order:

1. SCS-E5
2. ACA-E5 Software
3. ACA-E5 Co-processor
4. KLK-E5 keypads
5. TSV-E5 touchscreens

Important: When performing updates, it is recommended to disconnect RNET links and keypads. In a multiple controller systems for each controller to be updated, set the Controller ID to #1. Once updated, set the Controller ID # back to the original setting. It is also recommended that a complete system backup be performed before beginning updates.

All firmware must be extracted from the zip folder **before** performing updates.

SCS-E5 Software Update (Internet connection required)

1. Launch SCS-E5 in online or offline mode.
2. From the Tools menu, select Check for Updates Now.
3. SCS-E5 will indicate if an update is available and ask if you would like to update.
4. Select Yes and SCS-E5 will update to the latest version.

ACA-E5 Main Processor Update with SCS-E5 (Internet connection required)

1. Launch SCS-E5 and perform a Read from Device for the Controller to be updated.
2. When the SCS-E5 Project window has opened select Firmware Updates in the left hand tree view.
3. On the Firmware Updates screen select Check for Updates.
4. If an update is available it will be displayed with its version number.
5. Select the Perform Updates button.
6. The ACA-E5 will perform the update and reboot automatically when completed.

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Sphere Technical Support: 1-866-604-5245 M - F 8:30 a.m. - 7 p.m. EST



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E-Series Firmware Update Process (continued)

ACA-E5 Co-Processor Firmware Update with Device Update

1. Launch SCS-E5 in Online or Offline Mode.
2. Select Tools>Device Update.
3. Configure the appropriate COM port for your computer.
4. In the Target Info box select ACA-E5H from the Product drop-down.
5. Select the . . . button and browse to the extracted ACA-E5H firmware image on your computer.
6. Take a DB9 serial cable connected to a PC and connect to the RS232A port on the back of the ACA-E5.
7. Make sure ACA-E5 Controller ID is set to 1.
8. Select Update to begin updating the co-processor. (Update takes approx. 1 min.)
9. When the update is complete the ACA-E5 Power LED will be flashing rapidly.
10. Cycle power on the ACA-E5.

KLK-E5 Firmware Update with Device Update

1. Launch SCS-E5 in Online or Offline Mode.
2. Select Tools>Device Update.
3. Configure the appropriate COM port for your computer.
4. In the Target Info box select KLK-E5 from the Product drop-down.
5. Select the . . . button and browse to the extracted KLK-E5 firmware image on your computer.
6. Take a DB9 serial cable connected to a PC and connect to the RS232A port on the back of the ACA-E5.
7. All RNET Link connections and other keypad connections must be removed from controller.
8. With the ACA-E5 powered on and set to Controller ID 1, plug the KLK-E5 into Keypad Port 1.
9. Select Update to begin updating the keypad. (Update takes approx. 1 min.)
10. When the update is complete disconnect the keypad and repeat steps for next keypad.
11. When all keypads have been updated reconnect all appropriate RNET Link and keypad cables.

TSV-E5 Firmware Update

1. On the TSV-E5 select the System button.
2. On the System Screen press the Enter button under Firmware Update.
3. The TSV-E5 will check for Firmware Updates and perform any available.
4. When the update is complete hit the Reboot button on the screen.

Alternate Firmware Updates (if necessary)

Note: Bootloader updates are not required for the 11/02/09 E-Series Release 4.

ACA-E5 Update using a USB Drive

1. Insert USB stick into a USB port on your PC.
2. Copy the extracted file "***aca_e5_v###.###.###.img***" to the USB stick.
3. Safely remove USB stick from the PC.
4. Power down the ACA-E5.
5. Insert the USB Update stick into the USB slot located next to the Ethernet port on the back of the ACA-E5.
6. Verify ACA-E5 is set to Controller 1 and power back on.
7. This will automatically initiate the update for the ACA-E5 which will take about 5 minutes.
8. Observe the front panel of the ACA-E5. Once the update has finished, the 8 zone LEDs will all light up and remain lit, indicating the update is complete.
9. Power down the ACA-E5 and remove the USB stick.
10. Power the ACA-E5 back on and wait for it to complete the boot-up process.

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E-Series Firmware Update Process (continued)

ACA-E5 Co-Processor Bootloader Update with Renesas

NOTE: This update should not be interrupted. Interrupting this process may require a call to Russound Tech Support or return of product.

1. Power off the ACA-E5.
2. Set the Controller ID switch to Firmware Update position.
3. Take a DB9 serial cable connected to a PC and connect to the RS232A port on the back of the ACA-E5.
4. Power on the ACA-E5.
5. Follow the Renesas FDT Basic Program update procedure to complete the update process.
6. Use the device H8S/2328F and CPU Crystal Frequency of 22.1184 MHz.
7. When the Bootloader update is complete power off ACA-E5 and return Controller ID switch to appropriate setting.
8. Follow the steps for updating the co-processor through Device Update.

KLK-E5 Bootloader Update with Renesas

NOTE: This update should not be interrupted. Interrupting this process may require a call to Russound Tech Support or return of product.

1. Disconnect the KLK-E5 from the ACA-E5.
2. Set the jumper on the back of the KLK-E5 to the OS UPDATE position.
3. Take the Advanced Programming cable (P/N 2500-521065) connected to a PC and connect to the OS Update header located on the back of the KLK-E5.
4. Follow the Renesas FDT Basic Program update procedure to complete the update process.
5. Use the device H8S/2328F and CPU Crystal Frequency of 22.1184 MHz.
6. When the update is complete disconnect the KLK-E5 from the ACA-E5 and return the jumper to the Run position.
7. Follow the directions for updating the KLK-E5 Firmware using Device Update.

Troubleshooting

Problem:

ACA-E5 Co-processor hangs on "Erasing external flash memory"

Recommendation:

Perform ACA-E5 Co-processor Bootloader update and then retry ACA-E5 Co-processor update

Problem:

KLK-E5 cables do not reach Controller 1 Port 1 for updating in multicontroller configurations

Recommendation:

Set slave controllers to Controller 1 to perform KLK-E5 updates and return to proper Controller ID when complete.

Problem:

KLK-E5 "Update failed"

Recommendation:

Wait 20 seconds and try again. If update will not complete, follow KLK-E5 Bootloader update and retry KLK-E5 firmware updates.