

sc1000 Software Updates from SD Card

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The sc1000 SD Card Connector/Slot

The sc1000 SD Card Connector is used to connect

- MMC cards up to 1GB,
- SD cards up to 1GB,
- SD cards of 2GB ⁽¹⁾,
- SD cards compliant with the SDHC standard (4 – 32GB) ⁽¹⁾,

Note (1): Cards with capacities of ≥ 2 GB can only be connected, when sc1000 software v3.20 or higher is running

Functionality of the SD Card Connector/Slot

- Update the sc1000 system: All components of the sc1000 controller system and all connected sc sensors can get software updates by uploading new software versions from the card to the instruments.
- Saving and restoring configuration and settings of devices, which are connected to the sc1000 controller. Device data is stored to the card. This data can later be sent back to the devices, to restore the saved status.
Note: Restoring settings and configuration does not restore the content of data and event log.
- Storing diagnostics data for a detailed analysis of error conditions by Service.
Getting (one time action) and logging (continuous action) of Data and Event log files from the connected devices. The files are in <.csv> -format and can be imported to Excel to create curves or to explore the data in detail.

How to get access to the sc1000 using the SD Card Connector/Slot

Required hardware:

- Storage card with a size of 1GB or less for sc1000 Display software version 3.12 or lower.
- MMC Adapter (part no. YAB 902) for old ⁽²⁾ sc1000 Display Modules. This package already contains a 1GB SD card.

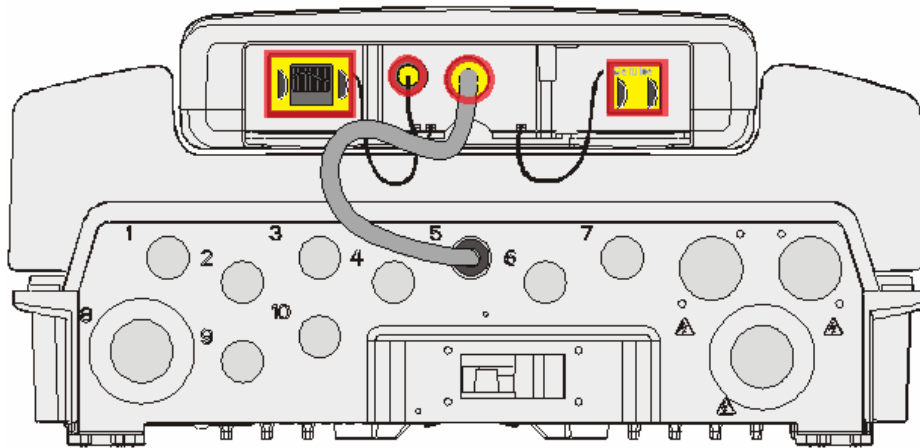


Figure1: sc1000 connectors

Note (2): Old sc1000 controllers with serial numbers less than 1217178 need an extra MMC Adapter (part no. YAB 902) for connecting storage cards – this applies for all types of cards (MMC, SD, and SDHC). See figure2.

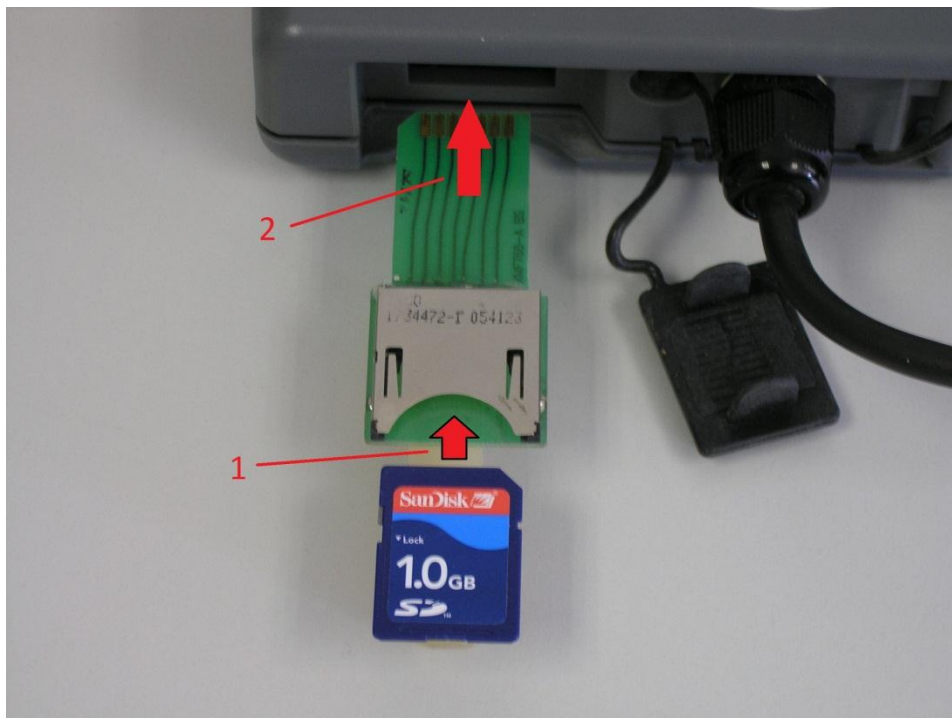


figure2: Connecting storage cards to old sc1000 controllers.

- Connect the Storage Card to the sc1000 Display, contact stripes of the card to the bottom side.
- When an MMC adapter is used (figure2), first insert the card to the adapter, and then insert the adapter into the card slot of the Display Module. Avoid touching the card, while the adapter is inserted.

- On the sc1000 Display navigate to MENU → SC1000 SETUP → STORAGE CARD:

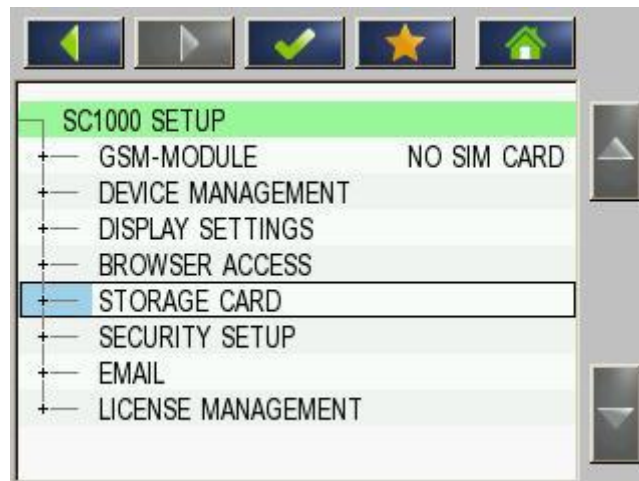


figure3: Entry point for the Storage Card Menu

When no Storage Card is connected, an MMC adapter is missing, or when the card size does not match the running software version of the sc1000 controller, the screen SC1000 SETUP screen will not display the “STORAGE CARD” option.

Note: After a Storage card is connected, it can take from 10 seconds up to several minutes before the “STORAGE CARD” option will be visible in the menu. The time depends on card size and on the number of files that are stored on the card. To minimize wait time, it is recommended to use an SD card which has been cleared or even formatted before using it with the sc1000.

Appearance of the “STORAGE CARD” option indicates that access to the sc1000 SD Card has successfully been established:

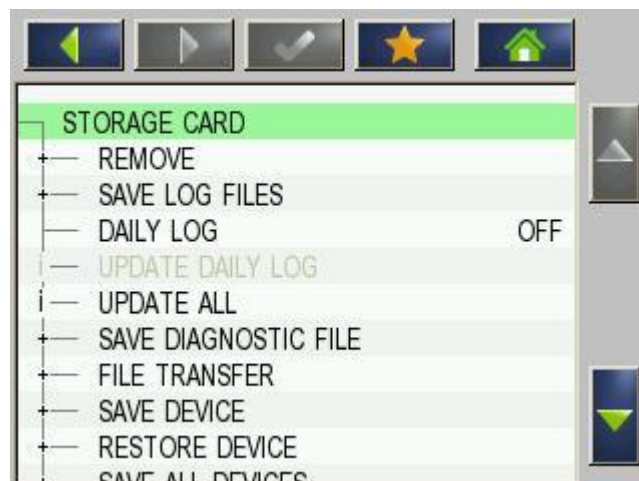


figure4: “STORAGE CARD” menu

Note: Always select the “REMOVE” option before removing the SD card from the sc1000

Software Update of sc1000 Display module (LXV402)

!!! DO NOT SWITCH OFF sc1000 at any time during update. !!!

Copy Updated Software to the Storage card

- Connect the Storage Card to your PC/Laptop.
- Create a folder named “update” immediately at the root of the Storage Card.
- Copy Software Updates to this folder:

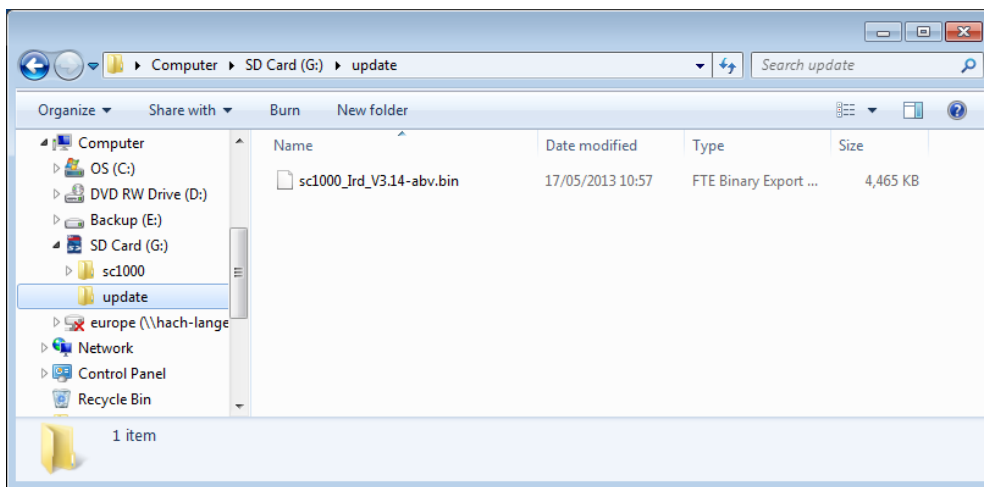


figure5: Software Updates on Storage card

Update Software from Storage Card

Note: The IrdORG.bin and the KernORG.bin files should be upgraded at the same time. Failure to upgrade both files before cycling power will result in instrument damage.

Connector/Slot” have been completed

- Follow the menu tree to access contents of the SD card MENU → SC1000 SETUP → STORAGE CARD
- Select UPDATE ALL (a screen will appear showing a list of Software Update Files, which will be applied):

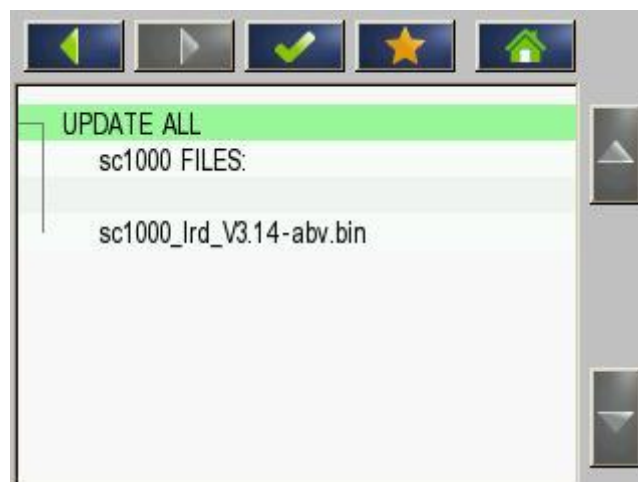


figure6: sc1000 Software Update menu

Note: Before the list of Software Update Files is shown, a progress wheel is shown, which is not moving. This state can last for several minutes and must not be taken as a software abort.

- When the Software Update files are older than the running software, a notification is shown:

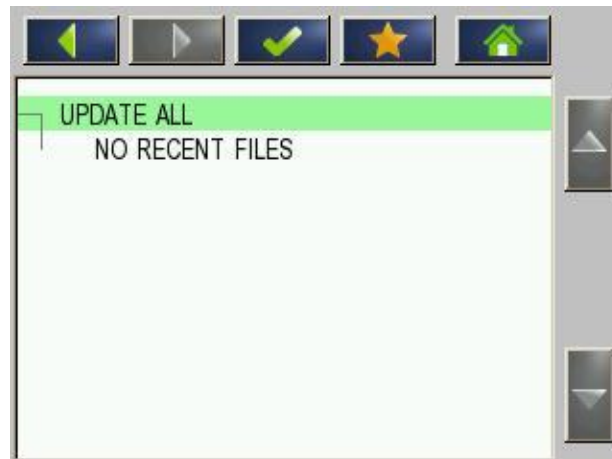


figure7: sc1000 Software Update menu without recent files

- In menu (figure6: sc1000 Software Update menu) press the <OK> button to get to the final confirmation, which starts the update process (figure8):

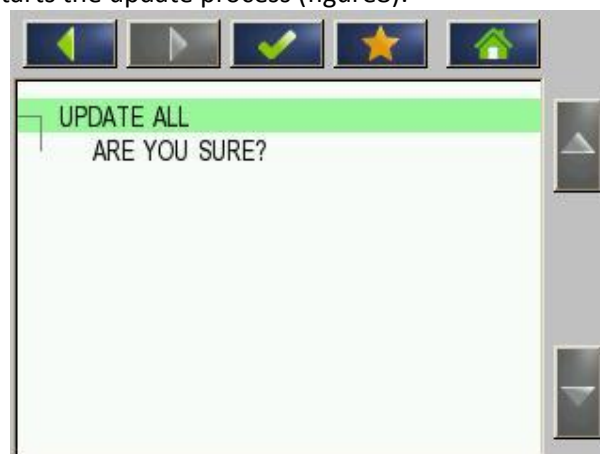


figure8: Confirmation menu before Updates start

Note: Confirming stops the normal operation of the sc1000 controller. From now only the software updates for the sc1000 controller are running until the device is repowered.

Note: **The sc1000 must never be disconnected from power, while the update process is running!**

- During the update a menu with progress messages is shown:

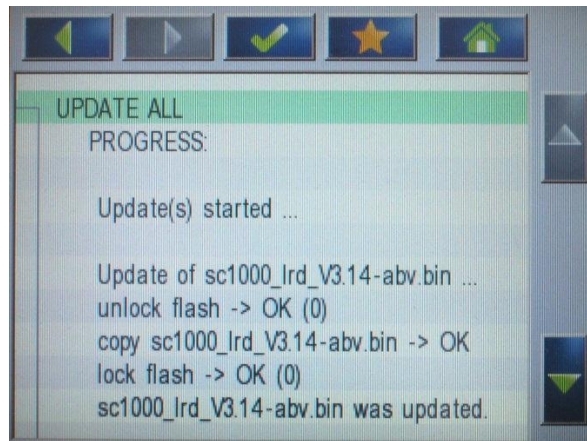


figure9: Progress messages during update

Note: The update process can run for several minutes (up to 15 minutes). Also here a progress wheel is shown, which does not move. **Do not disconnect the sc1000 in this state, because the unit can be permanently damaged!**

Note: Starting from sc1000 Software v3.20, size indicators show the progress during updates. This gives users the possibility, to estimate the remaining update time.

- Look at the end of the progress messages by pressing the <Down> button and verify that the software has finished. When no errors occurred, the following lines are shown

Update(s) complete.
Please reboot now ...

Otherwise

Update(s) failed.

is shown. Both messages indicate the end of the Software Updates. From this point it is safe again, to repower the sc1000.

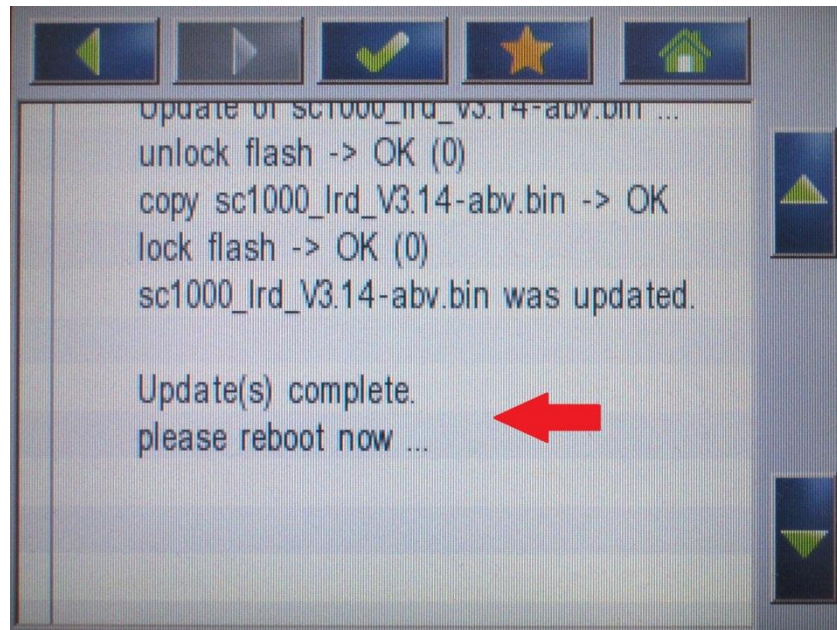


figure10: End of Software Update

- The Software Update is finished. Repower the sc1000 display module.
- Note: **Disconnecting the sc1000 controller during Software Updates will damage the unit!**