Backup Memory Module for the Lattice Controller

The backup memory module for the Lattice Controller provides a mechanism to backup the entire memory contents of the controller in the event that the Controller is not linked to a PC running LatticeWare. Backing up the contents effectively safeguards the time and effort invested in restoring a Lattice system particularly in the event of a system failure due to for instance an electrical surge, lightning strike etc.

It is important to note that the information stored on the back-up is valid up to the time of the back-up. Any changes made to the system after this time such as tags added or deleted, will be excluded. In addition note that dynamic settings on the system such as limited uses counters, anti passback levels etc could also vary from the time of the back-up to the time if and when the back-up module is used.

Finally when restoring the system where a SMARTSWITCH II has been fitted this unit will have to be re-synchronised with its new controller. Follow the instructions provided with the SMARTSWITCH II to do this.

Procedure to Backup the Contents of a Controller to the Memory Module

See note below before proceeding.
1. Place the memory module on the 6-pin header. (See figure 1)
2. Power up the controller and enter the program menu by presenting an admin tag at the controller for approx. 5s.
3. Proceed to the Cfg menu by presenting and removing the admin tag.
4. Present and hold the admin tag on the Cfg menu item to enter the menu.
5. Proceed to the bnr menu item by presenting and removing the admin tag.
6. Present and hold the admin tag on the bnr menu item to enter the menu.
7. Present and hold the admin tag on the buP menu item.
8. The controller will proceed to backup the contents of the controller to the memory module. The controller will indicate that it is busy with the bSY indicator.
9. In the event that the bSY indicator is not shown, enter the bnr menu again and present and hold on the buP menu item for the second time. The bSY indicator should now be showing. (This procedure applies to certain older versions of firmware only)
10. Once the bSY indicator disappears the backup procedure is complete. Wait for the controller to exit program mode.
11. Remove the memory module and store it in a safe place.

Note: Lattice Controllers with Versions up to and including 1.0.12 must be in the Advanced Menu Mode before proceeding with the back-up or restore operation. The version number of the unit is displayed when powering up the module. The number is preceded by the word CODE. The procedure for configuring Advanced Menu Mode is provided at the end of this instruction.

Procedure to Restore the contents of the Memory Module to a Controller

Refer to note above before proceeding.
1. Place the memory module on the 6-pin header. (See figure 1)
2. Power up the controller and enter the program menu by presenting an admin tag at the controller for approx. 5s.
3. Proceed to the Cfg menu by presenting and removing the admin tag.
4. Present and hold the admin tag on the Cfg menu item to enter the menu.
5. Proceed to the bnr menu item by presenting and removing the admin tag.
6. Present and hold the admin tag on the bnr menu item to enter the menu.
7. Proceed to the \texttt{rSt} menu item presenting and removing the admin tag.
8. Present and hold the admin tag on the \texttt{rSt} menu item.
9. The controller will proceed to restore the contents of the memory module to the controller. The controller will indicate that it is busy with the \texttt{bSY} indicator.
10. In the event that the \texttt{bSY} indicator is not shown, enter the \texttt{bnr} menu again and proceed to the \texttt{rSt} menu item. Present and hold on the \texttt{rSt} menu item for the second time. The \texttt{bSY} indicator should now be showing. (This procedure applies to certain older versions of firmware only)
11. Once the \texttt{bSY} indicator disappears the restore procedure is complete. Wait for the controller to exit program mode.
12. Remove the memory module and store it in a safe place again.

**Procedure to Backup the contents of a Controller to the Memory Module using Hardware links**

1. Power down the controller and remove any inputs connected to the FreeExit Input, Door Input and CHD Output lines.
2. Bridge the Door Input and the CHD Output.
3. Place the memory module on the 6-pin header. (See figure 1)
4. Power up the controller.
5. The controller interface will flash \texttt{buP} 20 times before proceeding with the backup procedure.
6. While the controller is being backed up, the display will indicate \texttt{bSY}.
7. When the \texttt{bSY} indicator disappears, remove power from the controller. Replace the relevant input wires, and store the memory module in a safe place.

**Procedure to Restore the contents of the Memory Module to a Controller using Hardware links**

1. Power down the controller and remove any inputs connected to the FreeExit Input, Door Input and CHD Output lines.
2. Bridge the Door Input, the FreeExit Input and the CHD Output.
3. Place the memory module on the 6-pin header. (See figure 1)
4. Power up the controller.
5. The controller interface will flash \texttt{rSt} 20 times before proceeding with the restore procedure.
6. While the memory module is being restored, the display will indicate \texttt{bSY}.
7. When the \texttt{bSY} indicator disappears, remove power from the controller. Replace the relevant input wires, and store the memory module in a safe place.

**Procedure to configure the Advanced Menu Mode.**

1. Power up the controller and enter the program menu by presenting an admin tag at the controller for aprox. 5s.
2. Proceed to the \texttt{Cfg} menu by presenting and removing the admin tag.
3. Present and hold the admin tag on the \texttt{Cfg} menu to enter the menu.
4. The \texttt{CUS} menu item should be present if the system is in the basic menu mode. If the \texttt{Hds} menu item is visible instead then the system is already configured in the advanced menu mode - Wait 10 seconds for the system to exit program mode and proceed directly with the back-up or restore procedure as described above.
5. Present and hold the tag on the \texttt{CUS} menu item.
6. Change the menu item to \texttt{On} if it is not already in the \texttt{On} state by presenting and removing the tag.
7. Present and hold the tag on the \texttt{On} menu item.
8. This places the controller in the advanced menu mode for 1 hour.
9. Wait 10 seconds for the controller to exit program mode and proceed to the next step.