

**MTN6725-0001 KNX DALI-Gateway IP1 - Firmwareupdate 3.1 Release 10  
Release Note****Topic**

The KNX DALI-Gateway IP1 offer the possibility of an easy firmware update without having to demount the device. The update is performed via an integrated IP interface. New developments or any amendments that may be required can be easily imported via the IP connection.

This application note describes the process for updating a device to firmware version 3.x.x by means of the DaliControl e64 Update Tool.

**General information about firmware 3.x.x**

Firmware 3.x.x is a new generation of the operating software for DaliControl e64 devices. It replaces the previously used firmware versions 1.x.x. Some major enhancements and additions have been made compared to versions 1.x.x. The main changes are:

- Possibility to control DT-8 colour control devices via KNX communications objects (only for DALI groups)
- Enhanced possibilities to use DT-8 devices in scenes.
- Enhanced scene assignment (Mapping of 64 KNX scenes into 16 DALI scenes)
- Use of DT-8 devices in effects
- Control of DT-8 devices via Broadcast
- Additional objects to control the ECG power supply via actuators (Energy Saving Mode, only for DALI groups)
- New data point types for DT-1 emergency test lights (optional use)
- Enhanced IP security (Digest)
- Support of KNX long frame telegrams reduces download times

In addition, numerous small changes and bug fixes have been integrated into the firmware. Please refer to the application program description for these.

As the changes have had an impact on the object and memory structure, firmware 3.x.x. can only be used with the corresponding application program DaliControl e64-01-0310. In addition to the application program, the DCA is also needed for the DALI configuration.

**The old application DaliControl MTN6725-0001, 7307 with Plug-In cannot be used with firmware 3.x.x!**

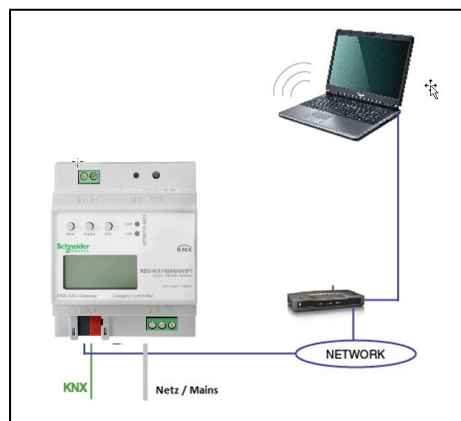
If a DaliControl e64 is updated from firmware version 1.x.x to 3.x.x, you have to carry out an “Unconditional” update. A partial update is only possible when another version 3.x.x is already loaded on the device, e.g. from update 3.0.0 to 3.3.1.

**All configuration data is lost with an “Unconditional” update. If any ECGs were previously programmed and configured, they need to be re-programmed after the update.**

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**Requirements for the firmware update**

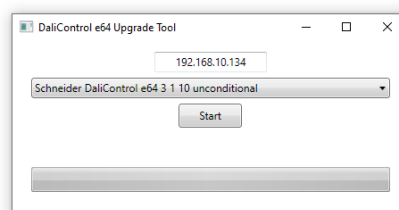
The firmware is updated via IP. The device therefore needs to be integrated into an IP network. Once the power supply is connected, the gateway is assigned an IP address either via DHCP or via manual address assignment in the ETS. To see the IP address, go to menu item “network” on the device display. You will need the IP address for the subsequent update process. The actual update is performed via a PC that is connected to the network.



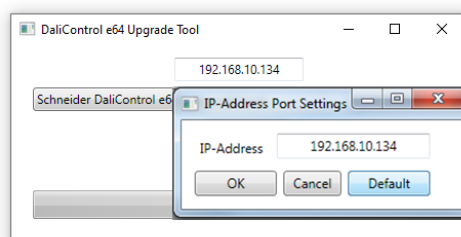
**Update procedure**

For an update to version 3.x.x, please unpack the zip archive "MTN6725-0001\_DALI\_IP1\_UpgradeTool\_V3\_x\_x.zip" depending on the device type. The archive, which is provided with this application note, contains a detailed file "MTN6725-0001\_DALI\_IP1\_UpgradeTool\_V3\_x\_x.exe" which can be started straight away after unpacking

After the programme has been started, the following window appears:



To start the update, enter the IP address of the device that you would like to update. Double-click on the displayed IP address (here 192.168.10.134) to open the entry field.



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You can now edit the IP address and ensure it is correctly set to the required value. After pressing the OK button, the address is shown in the main window. Before you start the update, please select the required update type from the pull-down menu. The following types are usually available:

- DaliControl\_e64\_Version\_unconditional
- DaliControl\_e64\_Version\_partial

If you select “unconditional”, all data (ETS parameters, DALI configuration data, scenes, effects, etc.) that may already be stored on the device are deleted and the physical address is re-set to 15.15.255 .

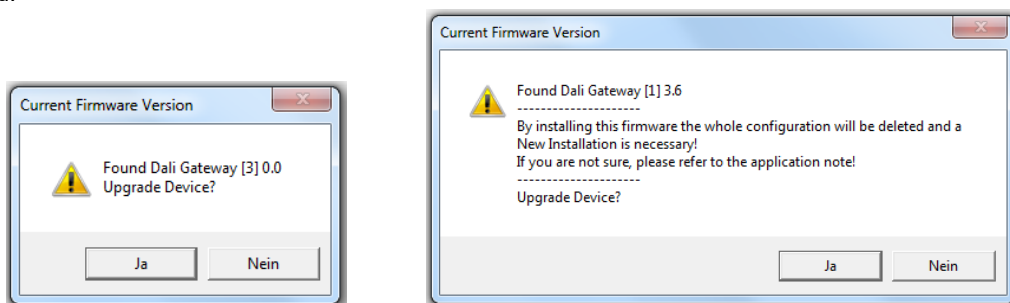
If you select “partial” update, the configuration data is preserved and the device does not have to be re-loaded with the ETS and no new DALI configuration is required.

**If a device is updated from firmware version 1.x.x to 3.x.x, please remember that you have to carry out an “Unconditional” update.**

After you have selected the required type, press the start button to begin the update process

The update tool first checks the current firmware version of the Dali gateway and informs the user via an information window of the version that has been used up to now.

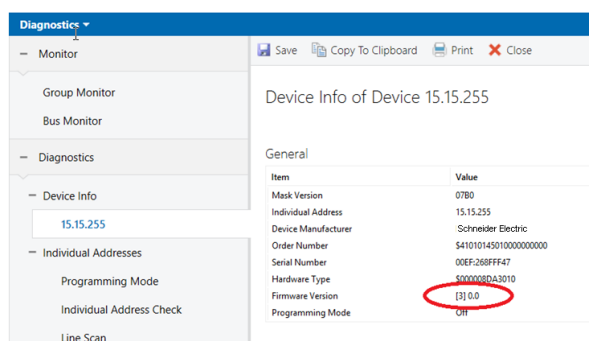
If you select “Unconditional” update, a further message appears in the window warning the user that the configuration data will be deleted.



After an acknowledgement, the firmware data will be transferred to the device memory via FTP. A progress indicator informs about the current status of the transfer. Once the update files have been successfully transferred, the device is automatically re-set.

After the reset the device starts with the new firmware version.

The device display only shows the first two parts of the version (not the revision), e.g. Vers. 3.0. The full firmware version is available via the device info in the ETS.



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Alternatively, you can also check the current firmware version on the device website. The text box at the bottom of the ECG field displays the current firmware version in addition to the MAC address and the physical address of the device:



**Revision tracking**

Firmware Version 3.1.10 released 16/08/2022      Changes

- Optimisation: There are non conform switchable Emergency-ECGs (DT-1) in the market, which do not support ARC-Power command to switch. Firmware now support also those ECGs by a workaround. Only switch on/off is possible for those non conform ECGs, by using "Goto Max Level" command.

Firmware Version 3.1.9 released 26/04/2022      Changes

- Optimisation: When using energy saving objects with power supplied ECGs, some ECGs are too slow and one time delayed sending of the scene object is not sufficient → Scene object is sent 3x after switching on, 1x immediately and 2x delayed
- Optimization: For time programs (templates), the setting of a dimming time is also possible for the action: "Max On Value" (only in connection with DCA from version 1.1.3.0).
- Optimization: In the web server the action "Max On Value" is not displayed in time programs → corrected
- Problem: In the web server the time can only be set in 10 minute steps in the time programs → corrected display and setting in 1 minute steps is possible

Firmware Version 3.1.8 released 25/08/2021      Changes

- Optimisation: When using the 6-byte object XY colour setting (DPT242.600), the brightness setting does not work with some ECGs, because the ACTIVATE command is sent too fast → optimised, ACTIVATE was replaced by SET VALUE

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Firmware Version 3.1.7 released 15/06/2021 Changes

- Optimisation: Time Programms (Templates) are prepared for an additional action „Set Switch-On Value“
- Optimisation: If the time programmes (templates) are used for colour control and the energy-saving function (switching off ECGs via switching actuator) is used at the same time, the gateway switches all switched-off ECGs ON regardless of whether they are used in the time programme or not → optimised, only the ECGs that are used in the time programme are switched ON.
- Optimisation: After a device reset, all energy-saving objects are switched ON and the energy-saving function is first activated when the light is switched OFF for the first time → optimised: 5 minutes after switching on, the energy-saving function is automatically activated and the channel is switched off when the light is OFF.
- Optimisation: The energy-saving objects are not switched on when an ECG is set to the blinking mode for identification via DCA → corrected, ECG energy-saving object is switched on.
- Problem: Set-Value via Templates is working with dimmtime on individual ECGs only when ECG assignment is 1:1 → corrected
- Problem: Set-Value via Communication Object with Dimmtime (DPT22.001) is possible despite panic mode → corrected, in panic mode object will be ignored
- Problem: If DT-8 XY-Subtype is used, with PowerOn colour adjusted by parameter in ETS, colour is not correct → corrected, ETS PowerOn colour is adjusted

Firmware Version 3.1.6 released 23/07/2020 Changes

- Optimisation for DALI-2 compatibility: Ping-Command implemented
- Optimisation for DALI-2 compatibility: Timing for DALI short circuit detection adjusted to 600 msec. and for re-start after short circuit adjusted to 5 sec.
- Optimisation: Some DT-8 ECGs (Lumitech, Bega) react only when receiving second OFF-telegram, because dimming process is stopped by ACTIVATE → modified, for colour adjusting no ACTIVATE is used anymore
- Problem: When using individual ECGs, the lock object for locking the individual ECG under certain conditions cannot be unlocked → corrected
- Problem: When using individual ECGs, the parameterizable switch-on value / switch-off value is not sent when the disable object is released → corrected
- Problem: When parameterising "Switch-On only via value object" the value is not be set correctly → corrected
- Problem: When dimming individual ECGs, the value object is not updated at the end of the dimming process when the parameterisation "Send status while dimming = inactive" is set → corrected
- Problem: When using a large number of battery emergency lights (DT-1), the overflow of a table may cause malfunctions in time program actions → corrected
- Problem: 4 byte objects for on/off status (objects 23-27) are not sent automatically after device reset and corresponding setting → corrected
- Problem: 1 byte DALI failure object (object 29) is not sent automatically after device reset and corresponding setting → corrected
- Problem: ECG number in 1 byte DALI failure object (object 29) refers to ECG short address not to ETS ECG number → corrected

Firmware Version 3.1.5 released 11/03/2020 Changes

- Problem: Error objects of ECGs are only sent after bus reset if ECGs are assigned to a group not for individual ECGs → corrected
- Problem: If single ECGs are used in effects the function is only given for DT-8 ECGs, DT-0 and DT-6 devices work only limited → corrected
- Problem: Initial value of the communication objects for operating hours is not correct, only after the luminaire is switched on for the first time → corrected, value is also correct when the luminaire is off
- Optimization: When defining the data point types for XY (DPT 242.600) there is an error in the Konnex documentation, in a new revision the byte order in the object was changed → corrected, the object was adapted to the new data point definition.

Firmware Version 3.1.4 released 07/11/2019 Changes

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- Problem: If DT-1 legacy datapoints are used after a battery test the communication object with the test result is not sent on KNX → corrected
- Optimisation: In the definition of datapoints for RGBW (DPT 251.600) there is a failure in KNX documentation. In a new release the byte order has changed. → object is now adapted to the new definition.
- Optimisation: For scenes there are in total 256 entries with values and colours possible, which can be assigned to the 16 scenes. If individual ECG control is used this is sometimes not sufficient (i.e. 4 scenes with 64 entries is max). → optimized, the table has been extended to 1024 entries. Therefore now even 16 scenes with 64 entries are possible.

Firmware Version 3.1.3 released 19/08/2019      Changes

- Problem: If DT8 devices are used with adjustment RGBW or HSVW, the test function in DCA for Scenes, Effects and Time Control Templates is not working → corrected
- Problem: If DT8 devices are used with adjustment RGBW or HSVW, Scenes and Time Control Templates are working only with restrictions → corrected
- Problem: If DT-8 devices are used in Effects and Value 0% is adjusted in combination with “Keep Value Flag” the colour change is not working → corrected
- Problem: If function „Easy Replacement” is activated via Web browser the browser is running into a time-out and has to be refreshed → corrected, webpage can be operated after “Easy Replacement” normally
- Problem: General failure objects for converter failures (object 21 and object 22) are not sent on failure event → corrected
- Problem: Failure status object 1 Byte is not reset back to 0 after a converter failure → corrected

Firmware Version 3.1.2 released 08/09/2019      Changes

- Problem: If DALI groups with DT-8 ballasts are used in effects the fade time is working for the light value only. For colour change fade time is not working. In this case colour is adjusted immediately. → corrected, fade time is working for light value and colour change.
- Problem: If effects are adjusted via webpage, after reload a wrong light value is displayed and the effect cannot start immediately, but only after a device reset → corrected
- Problem: Object value for failure rate % in DALI groups is not correct → corrected
- Problem: In communication objects 24-27, switching status ECGs, only bit0..bit3 have correct state, higher bits are not displayed correct → corrected, all status bit are displayed
- Optimisation: In communication object 23, switching status groups, all status bits are changed on broadcast switching, even if the groups are not used in the gateway → corrected, the status bits are changed only if groups are in use
- Optimisation: If “Switch On Value” is adjusted to “Last Value” after receiving an ON-telegram always the last value before last switch OFF is sent, even if the light was always adjusted to a different value via set-value → changed, last value on ON-telegram is only adjusted when the light is OFF. If already a value > 0% was adjusted by set-value or relative dimming before the ON-telegram is ignored.

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Firmware Version 3.1.1 released 06/26/2019 Changes

- Problem: Latest KNX Interfaces (i.e. Zennio) are using Long Frame KNX Telegrams up to 256 Byte length. Those frames cannot be handled by the KNX driver. If such a telegram appears the gateway will generate a reset. → corrected.
- Optimisation: If scenes are used and at the same time the energy save function (switch off ECG power with switching actuator) is used, all ECGs which are switched OFF are activated and switched to ON again. Whether the ECG is used in the scene or not. → optimized, only ECGs which are used in the scene are switched ON
- Optimisation: If time programs (for colour control) are used and at the same time the energy save function (switch off ECG power with switching actuator) is used, all ECGs which are switched OFF are activated and switched to ON again. Whether the ECG is used in the time program or not. → optimized, only ECGs which are used in the time program are switched ON
- Optimisation: When effects are used the energy save function (switch off ECG power with switching actuator) cannot be used at the same time, because switching telegrams are not sent → optimized, energy save function works also in combination with effects
- Optimisation: When colour control via HSVW is used, the white channel cannot be controlled individually, because there is only one common value object in the DALI standard for all colour channels. If saturation is 0% usually all channels RGB are set to 100%. That means white can never be adjusted individually → optimized: If saturation = 0% all RGB channels are switched OFF (0%) and white is switched ON (100%). With the object white can be adjusted independently.

Firmware Version 3.1.0 released 05/04/2019 Changes

- Optimisation: In connection with the DCA Vers. 1.1.0.0 or greater, the KNX scenes 1 – 64 can be assigned to the DALI scenes 1 to 16.
- Optimisation: more and more problems with ECGs from China, which are not DALI conform (ballasts are deleted on post installation) → Bugfix delete of short address if long address 0xFFFFF is not performed anymore, with new DCA Version 1.1.0.0 or greater this feature is adjustable
- Problem: Dimm-Time for effects is not functioning with DALI groups → corrected, Dimm-Time is functioning for groups and individual ECGs.

Firmware Version 3.0.1 released 11/02/2019 Changes

- Problem: Operating hours are not displayed on the website → corrected

Firmware Version 3.0.0 released 19/12/2018 Delivered with pilot series