

# DALI-Gateway KNX plus

## Update Tool

### 1 General

DALI-Gateway KNX plus offers the possibility of an easy firmware upgrade without having to demount the devices. The upgrade is performed via an integrated IP interface. Future developments or any adjustments that may be required can be easily imported via the IP connection.

This document describes the process for upgrading a device with our Upgrade-Tool.

#### Firmware Version 3.0.0      March 2019:

The firmware from version 3.x.x supports the control of the light color, brightness and color temperature according to DT-8 according to IEC 62386-209.

This update also publishes a new ETS application (v2.0) and a DCA for configuring the DALI segment.

If a DALI Gateway with firmware 1.2.7 is to be replaced in an existing system, the new DALI Gateway must also contain firmware 1.2.7. Only then can the device be programmed with an existing project.

If the new device has a new firmware from 3.0.0 and later, it can be set to the old firmware version using the downgrade tool. Subsequently, programming with existing project or ETS application v 1.0 is possible.

## 2 Firmware-Update

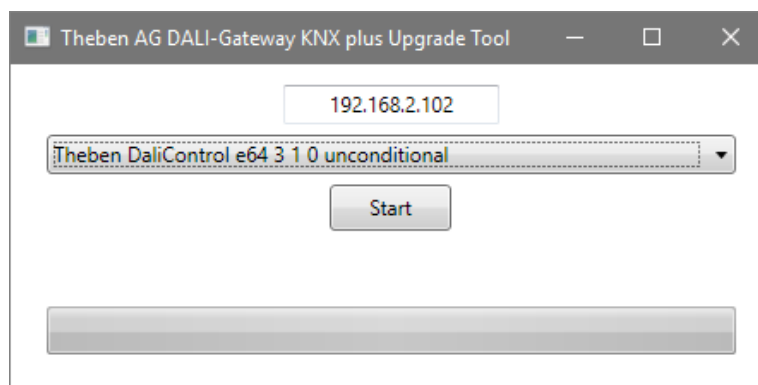
The firmware upgrade is performed via IP. The device therefore needs to be integrated into an IP network. Once the power supply is connected, the gateway is assigned an IP address either via DHCP or via the manual address assignment pre-set in the ETS. To see the IP address, go to menu item "network" on the device display. You will need the address for the subsequent upgrade process. The actual upgrade is performed via a connected PC with Windows XP, Win7, Win8, Win10 or .net.

### 2.1 Update procedure

For an upgrade to version 3.x.x, please first unpack the zip archive „DALI-Gateway KNX plus.zip“.

The archive contains a detailed file „ThebenAG\_DALI\_UpgradeTool\_V3.x.x.exe“ which can be started straight away after unpacking.

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



To start the upgrade, enter the IP address of the device that you would like to upgrade. Double-click on the displayed IP address to open the entry field.

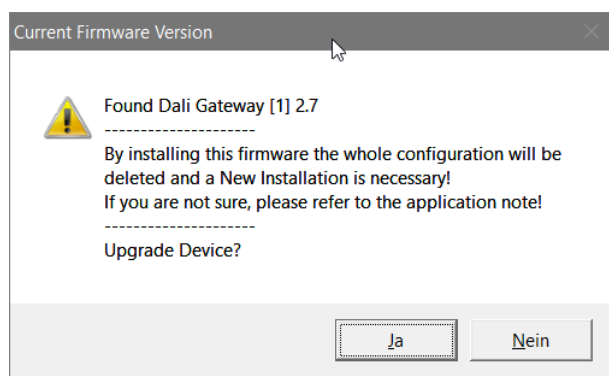
You can now edit the IP address and ensure it is correctly set to the value required. Press the OK button to transfer the address to the main window.

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 . Please remember that in this case, the DALI data cannot be reconstructed unless a previous back-up of the gateway via the backup function of the plugin has been performed (see application program description). If you select unconditional update without backup data, you may need to perform the extensive DALI configuration all over again.

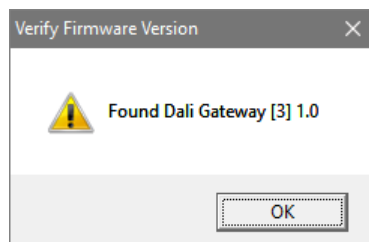
If you select the \_partial upgrade type, the configuration data is preserved and the device does not have to be re-loaded with the ETS and the DALI configuration does not need to be repeated.

After you have selected the type you need, press the start button to begin the upgrade process.

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



After acknowledgement the firmware data are transferred to the device memory via FTP. A progress indicator informs about the current status of the transfer. Once the upgrade files have been successfully transferred, a device reset is required. After the reset the device starts with the new firmware version.



### 3 Versions

#### Information



Production date code:

Firmware v3.1.0 from 1914

Firmware	ETS-Application	DALI-Configuration	Availability	Information
1.2.7	V 1.0	Plug-In for ETS	Until production date March 2019 (code 1913)	
3.0.0	V 2.0	DCA for ETS (v1.0.0.0)	From production date March 2019 (code 1910)	Support of DALI DT-8 (colour control)

Firmware	ETS-Application	DALI-Configuration	Availability
3.1.0	V 2.0	DCA for ETS (v1.1.0.0)	From production date April 2019 (code 1914)

- 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 0xFFFFFFFF 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	ETS-Application	DALI-Configuration	Availability
3.1.1	V 2.0	DCA for ETS (v1.1.0.0)	From production date July 2019 (code 1930)

- 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) can-not used at the same time, because switching telegrams are not sent

→ optimized, energy save function works al-so 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 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	ETS-Application	DALI-Configuration	Availability
3.1.2	V 2.0	DCA for ETS (v1.1.0.0)	From production date August 2019 (Code 1932)

- 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.

Firmware	ETS-Application	DALI-Configuration	Availability
3.1.3	V 2.0	DCA für ETS (v1.1.0.0)	From production date August 2019 (Code 1935)

- 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	ETS-Application	DALI-Configuration	Availability
3.1.4	V 2.0	DCA für ETS (v1.1.0.0)	From production date November 2019 (Code 1948)

- 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	ETS-Application	DALI-Configuration	Availability
3.1.5	V 2.0	DCA für ETS (v1.1.0.0)	From production date March 2020 (Code 2012)

- 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 documenta-tion, in a new revision the byte order in the object was changed → corrected, the object was adapted to the new data point definition.

Firmware	ETS-Application	DALI-Configuration	Availability
3.1.6	V 2.0	DCA für ETS (v1.1.0.0)	From production date August 2020 (Code 2032)

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 dim-ming 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 can-not be unlocked → corrected
- Problem: When using a large number of battery emergency lights (DT-1), the overflow of a table may cause mal-functions 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 set-ting → corrected
- Problem: ECG number in 1 byte DALI failure object (object 29) refers to ECG short address not to ETS ECG num-ber → corrected

Firmware	ETS-Application	DALI-Configuration	Availability
3.1.9	V 2.0	DCA for ETS (v1.1.3.0)	From Production date May 2022 (Code 2220)

- 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