Application Note

KNX DALI Gateways Basic MTN6725-0003, MTN6725-0004 - Firmwareupdate 0.2 Release 1

Subject

The KNX-DALI gateways DaliControl gc16 and DaliControl gc16-2 are designed to perform firmware updates easily without having to dissemble the device. The update is performed via an SD card and the corrresponding SD card slot on the device. Any new developments or improvements that may be required can be easily loaded onto the device via updates.
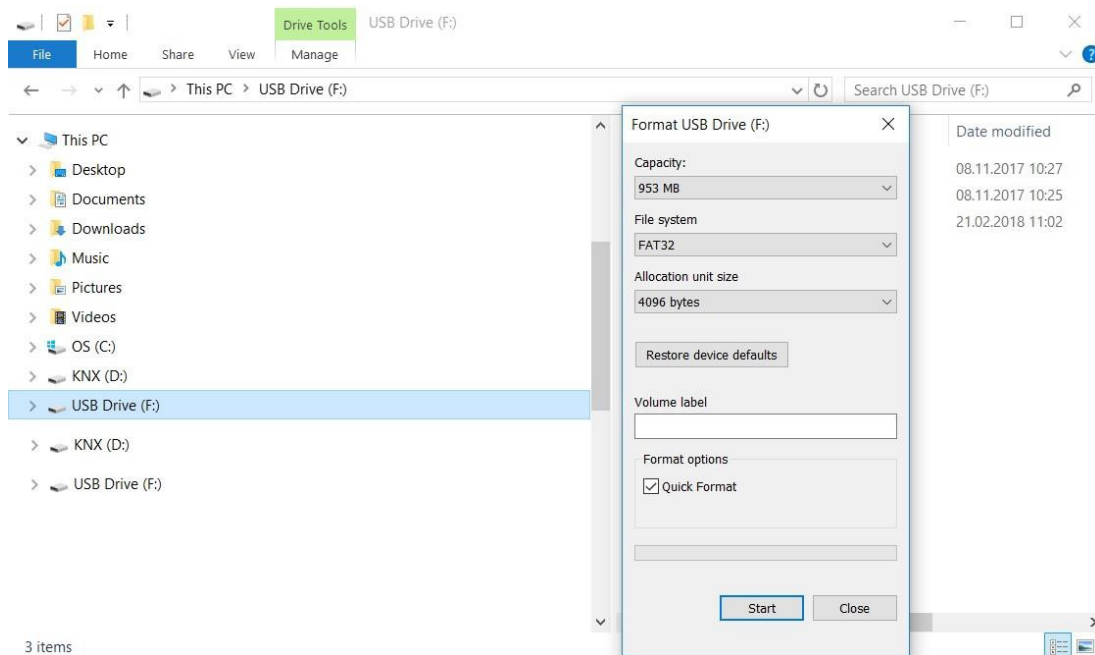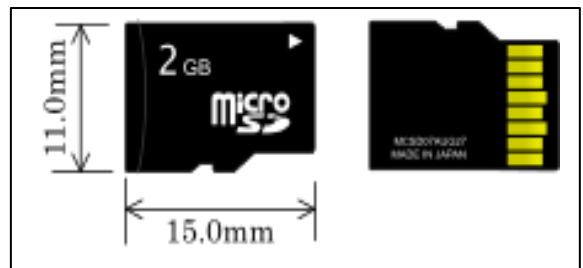
This application note describes the procedure for updating a device to a new firmware version.

Requirements for a firmware update – Formatting the SD card

A firmware update can only be performed via a flash memory card of the type microSD (measurements: 11 x 15 mm). Please purchase the correct card with at least 1GB memory from a computer or photo shop.

An update is only possible if the SD card has the FAT32 format.
Most cards today are sold with the formatting FAT by default.
It is therefore necessary to change the format of the card to FAT32 first.

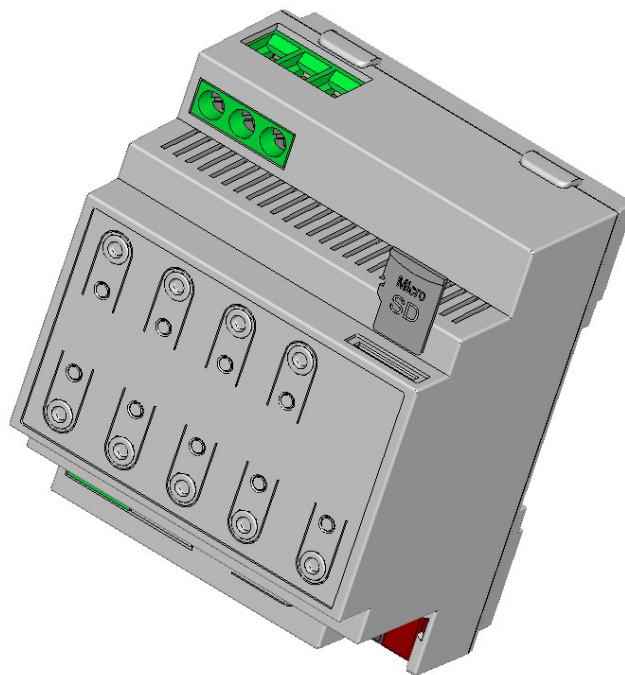Simply use any Windows File –Explorer to change the format.

Application Note

KNX DALI Gateways Basic MTN6725-0003, MTN6725-0004
- Firmwareupdate 0.2 Release 1

Update procedure

To update the firmware version, please first unzip the zip archive that is available with this application note. Depending on the device type, you will have access to file D1_064.bin for the MTN6725-0003 or file D2_064 for the MTN6725-0004. Please copy the required file directly into the root directory of the SD card.

Attention: Please remember to follow all safety regulations when working on an already installed gateway. The gateway, the connected ECGs and any other devices in the system need to be disconnected from the power supply before any work is carried out.

For update purposes, the KNX DALI Gateways Basic MTN6725-0003, MTN6725-0004 are equipped with an SD card slot in the top right- hand corner. On delivery the opening of the slot is covered with an adhesive label.To insert a card, please carefully remove the label.

After the label has been removed, carefully insert the SD card into the disconnected gateway in such a way that the row of contacts points downwards and the recess in the card points towards the left. Please make sure to insert the card straight into the slot without any angle or bend. You will notice a slight pressure when the contact row has snapped into place.

After the card has been inserted, re-connect the gateway to the power supply whilst simultanously keeping the programming button pressed down. After a few seconds, the programming LED starts flashing. You can now let go of the programming button and the update process will start. The process takes only a few seconds. At the end the LED briefly lights up once.

After the update, disconnect the gateway from the power supply and remove the SD card. Please remember to cover the card slot with the previously removed adhesive label before re-connecting the power.

After the update is performed, the device is ready for use again.

The current firmware version can also be checked by exporting the device info.

KNX DALI Gateways Basic MTN6725-0003, MTN6725-0004
- Firmwareupdate 0.2 Release 1

Revision tracking

Firmware version 0.1.0 released 15 October 2017   **delivered with pilot series**

Firmware version 0.1.1 released 21 February 2018   **Firmware version: 0.1.1**

Problem:
- RGB, HSV and RGBW control via Broadcast does not work for Blue=100% (DALI 254 not 255) → corrected
- Saving scenes via an object with MSB set does not work → corrected
- After a power cut, the operating hours are not correctly exported from memory -> corrected
- The plug-in display "operating hours" shows seconds → corrected and changed to hours

Firmware Version 0.1.2 released 06 April 2018   Firmware Version: 0.1.2

Problem:
- If an RGB colour is loaded via scenes and the colour subsequently set via value (single objects) or dimming, an incorrect colour is displayed → corrected
- If the colour values of several groups are dimmed simultanously via a central object, only the last group reacts → corrected
- If the colour values of several groups are dimmed simultanously via different objects, only the last group reacts → corrected
- A running dim process "colour dimming" does not stop when a scene is recalled → corrected

Firmware Version 0.1.3 released 16 May 2018   Firmware Version: 0.1.3

Problem:
- If a HSVW colour is programmed via ETS in a Scene the adjusted colour is not correct → corrected

- If RGBW colour is adjusted by a Scene the status object is not correct (Byte position mismatch) → corrected

- If RGBW colour is adjusted via Broadcast 6 Byte Object in status 6 Byte Object the Bits for validity are not correct (Bit position mismatch) → corrected

Firmware Version 0.1.4 released 03. September 2018   Firmware Version: 0.1.4

Optimized:
- Some DALI-2 Osram ECGs generate short Interruptions on the DALI Bus. Due to this there can appear problems in new installation process → optimized and adapted to DALI-2 standard
- TPUART driver may loose very rarely telegramms or send busy telegrams → optimized
- Max. APDU-Length modified from 15 to 55 → download will become faster → optimized
- If ECG mains power is switched OFF and scenes are activated sometimes scene is not started correctly → optimized, scenes activate ECG power before sending DALI telegram
- If ECG mains power is switched OFF and device is controlled by time control templates ECG power is not switched on → optimized, time control templates activate ECG power before sending DALI telegram

Problem:

- **Only in 2 channel device:** Saving scenes via an object with MSB set does not work → corrected
- On color control via broadcast-object RGBW / HSVW device is not reacting on white telegramm, if white is sent first -> corrected
- Parameter setting „Cycle time for DALI failure request = 0,5 sec." is not working → corrected
- RGBW control via time control (Templates) works only partially → corrected

---

Application Note

KNX DALI Gateways Basic MTN6725-0003, MTN6725-0004
- Firmwareupdate 0.2 Release 1

Firmware Version 0.1.5   released 03. December 2018   Firmware Version: 0.1.5

Problem:
- If Switch-On-Value for groups is adjusted to „Last Value" and additionally behavior on KNX recovery is adjusted to „Go to Switch-On Value" after KNX recovery light is Off, not On-Value → corrected
- If failure object for groups is adjusted to 1 Bit and additional failure objects are used (parameter setting) value of failure object is wrong → corrected

- **Only in 2 channel device:** Communication Object Table is initialized twice. This can cause occasionally problems. Objects "ECG power control" is not sent for all groups → corrected

Firmware Version 0.1.6   released 16. December 2018   Firmware Version: 0.1.6

- For internal usage on

Firmware Version 0.1.7   released 06. February 2019   Firmware Version: 0.1.7

Optimized:
- Adaptation of Firmware to new Hardware Rev. 0B → Downward compatible to Hardware Rev. A as well
- Extended Watchdog activated → Improves reliability on serious interferences

Problem:
- On parameter setting „Send Status Value During Dimming = inactive" status is not sent after stopp object → corrected, Status value is sent correct now

Firmware Version 0.2.0   released 05. April 2019   Firmware Version: 0.2.0

Optimized:
- In connection with the DCA Vers. 2.1.0.0 or greater, the KNX scenes 1 – 64 can be assigned to the DALI scenes 1 to 16.
- 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 0xFFFFFF is not performed anymore, with new DCA Version 2.1.0.0 or greater this feature is adjustable

Problem
- On Post Installation emergency ballasts and LED ballasts are not detected with the correct type information → corrected

Firmware Version 0.2.1   released 31. July 2019   Firmware Version: 0.2.1

- 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 programm or not. → optimized, only ECGs which are used in the time programm are switched ON
- 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.