

Technical Paper

Overview - *Danfoss Link*[™] and Connect software versions

Danfoss Link[™] CC Mk II (with miniSD card) software

Version Number	Release Date	Changes and New Features
Version 2.1.35	01-12-2010	<p>The initial <i>Danfoss Link</i>[™] CC software:</p> <ul style="list-style-type: none"> • Supports all features from the original Devilink[™] software. • New functionality providing control of Connect radiator thermostats, <i>Danfoss Link</i>[™] HC (Hydronic Controller) and <i>Danfoss Link</i>[™] Repeater Unit (CF-RU). • Includes a Danfoss Design Line background as default skin setting.
Version 2.3.27	04-10-2011	<ul style="list-style-type: none"> • Austria, Belgium and Switzerland added in the Country List. • Flush functionality to force Connect and TWA actuators fully open in order to flush and remove air in the system. • Control of Thermia and Danfoss Heat Pumps with DCM02 (code no. 086L0474). • Support of <i>Danfoss Link</i>[™] BR (Boiler Relay) - only Automatic On/Off control is supported. <i>Note: It is recommended to use software version 2.4.51 or later for boiler control.</i>
Version 2.4.51	20-03-2012	<ul style="list-style-type: none"> • Support of <i>Danfoss Link</i>[™] BR with TPI (Time Proportional Interval) control. A duty cycle is calculated by the <i>Danfoss Link</i>[™] CC and is used to control the boiler. • Improved network test to make sure that there is sufficient signal strength between to/from the devices communicating with the <i>Danfoss Link</i>[™] CC. The requirements for getting a valid and positive network test is higher than in the previous software versions. • Disable rooms for cooling (via a <i>Danfoss Link</i>[™] HC). If the consumer uses his hydronic floor heating to cool down the house during warm days the disabling function makes it possible to deselect single rooms and keep a higher temperature in some rooms. Rooms not selected for cooling are not heated. The <i>Danfoss Link</i>[™] HC can only be in heating mode or cooling mode, but it is possible to enable different modes for the different <i>Danfoss Link</i>[™] HCs in the same <i>Danfoss Link</i>[™] system. • User selectable load management on a <i>Danfoss Link</i>[™] HC where it is possible for the user to select between "Spreading" and "Stacking" for <i>Danfoss Link</i>[™] HC load management. When spreading is enabled the <i>Danfoss Link</i>[™] HC will spread the load of hot water between the TWA. A feature also known from CF2+. • Turkey added in the Country List.
Version 2.5.57	12-06-2012	<ul style="list-style-type: none"> • Remote sensor support, so temperature control using Connect and <i>Danfoss Link</i>[™] RS can be configured for special heating needs. • External Away functionality: Support of <i>Danfoss Link</i>[™] SCM (Simple Communication Module). The <i>Danfoss Link</i>[™] SCM can wirelessly enable and disable Away mode (Holiday mode) on the <i>Danfoss Link</i>[™] CC. <i>Danfoss Link</i>[™] SCM will be introduced in September/October 2012. • The Away icon (suitcase) is only displayed for 10 minutes to avoid showing that nobody is at home. After 10 minutes the normal standby screen with the clock is shown.
Version 2.7.42	01-02-2014	<ul style="list-style-type: none"> • During installation in a room with both Connect and <i>Danfoss Link</i>[™] RS, the user will be prompted to select "Visible" or "Covered" radiators. This only applies if there's no Connect with version 2.06 in the room. The existing radiator mode "Trench" will no longer be available and in systems with this setting, it will be changed from "Trench" to "Covered" upon upgrading the software on the <i>Danfoss Link</i>[™] CC. • During installation the user will be prompted to select Moderate or Quick heating control after adding the last Connect or <i>Danfoss Link</i>[™] RS to the room. This only applies if there's no Connect with version 2.06 in the room. In rooms with Connect 3.04 it only applies if the room has a <i>Danfoss Link</i>[™] RS. • Improved room sensor application. • Improved network test algorithm. • Added set-point functionality, so the user can select whether or not a change to a set-point in economy and/or comfort modes should be saved for next economy/comfort period in the room. • Italian language added.

Danfoss Link™ CC Mk III (with USB) software

Version Number	Release Date	Changes and New Features
Version 3.0.12	09-09-2013	<ul style="list-style-type: none"> • New faster hardware with USB-port for software upgrades. • Added Setpoint Memory functionality, so the user can select whether or not a change to a setpoint in economy and/or comfort modes should be saved for next economy/comfort period in the room. • Support for Danfoss Air units.
Version 3.1.42	01-02-2014	<ul style="list-style-type: none"> • During installation in a room with both Connect and <i>Danfoss Link™</i> RS, the user will be prompted to select "Visible" or "Covered" radiators. This only applies if there is no Connect version 2.06 in the room. The radiator setting "Trench" will no longer be available and in systems with this setting, it will be changed from "Trench" to "Covered" upon upgrading the software on the <i>Danfoss Link™</i> CC. • During installation the user will be prompted to select "moderate" or "quick" heating control after adding the last Connect or <i>Danfoss Link™</i> RS to the room. This only applies if there is no Connect version 2.06 in the room. In rooms with Connect version 3.04 it only applies if there is a <i>Danfoss Link™</i> RS in the room.
Version 3.2.4	29-05-2014	<ul style="list-style-type: none"> • Added support for Danfoss Link Gateway <ul style="list-style-type: none"> • DLG v. 1.01 can be connected to the <i>Danfoss Link™</i> CC if connected to the ECL 110. • Integration with ECL 110 Comfort Weather Compensator <ul style="list-style-type: none"> • ECL 110 can be connected using the Danfoss Link Gateway. • ECL 110 outdoor temperature statistics are available on the Central Controller. • ECL 110 is activated when flushing. • ECL 110 is controlled based on system demands <ul style="list-style-type: none"> • ECL is automatically adjusted based on system demands and schedule. • ECL temperatures are reduced when there is no need for heating in system. • ECL 110 alerts and issues are displayed on the CC <ul style="list-style-type: none"> • Alert is displayed if return temperature is too high for a period of 2 hours. • Alerts are displayed if sensors or sensor cables are faulty. • Various bug fixes.
Version 3.3.1	17-11-2014	<ul style="list-style-type: none"> • Improvements on Heat Pump integration <ul style="list-style-type: none"> • It is possible to exclude rooms for heat pump optimization. • Increases of heat pump curve is logged • System informs about rooms, which causes problems for the heat pump optimization. • ECL 110 complete language pack • Various bug fixes

Danfoss Link™ CC Mk IV (with Wi-Fi connectivity) software

Product Code	Name	Description
Version 4.0.12	01-07-2015	<ul style="list-style-type: none"> • New hardware with build in Wi-Fi module • App connectivity • Automatic software update • Added Living Zone functionality - Multiple rooms with the same weekly schedule • The following terms have been changed: <ul style="list-style-type: none"> • Comfort to At Home • Economy to Away/Asleep • Away to Vacation • Frost Protection to Pause • Added functionality of room temperature visible for rooms with living connect only • Historic Alarms - in the service area it's possible to see either the active alarms or a log of historic alarms • Added functionality of alarms marked as read meaning that if all alarms are read, the yellow exclamation mark no longer appears on the screensaver.
Version 4.0.13	13-07-2015	<ul style="list-style-type: none"> • Translation fixes for the following languages: Danish, Estonian, German and Swedish.
Version 4.0.36	19-10-2015	<ul style="list-style-type: none"> • Improved Wi-Fi functionality • Better Wi-Fi status overview • Changing actual set-point now only affects current period and is not stored • New feature added - Link CC automatically reconnects to a router if it has been turned off and on again • Improved translations for all languages
Version 4.0.42	13-01-2016	<ul style="list-style-type: none"> • Improved Wi-Fi stability • No longer possible to downgrade to 3.X • Various bug fixes

Version 4.0.45	20-04-2016	<ul style="list-style-type: none"> • Added special characters to keyboard • Faster connection to internet • The correct MAC Address is shown under system information • User interface no longer freezes when a <i>Danfoss Link™</i> HC is added • Changing vacation temperature now affects already started vacation mode • Activating 'At Home' from Link App now affects HRV system • Improved Wi-Fi stability • Various bug fixes
Version 4.0.54	30-06-2016	<ul style="list-style-type: none"> • <i>Danfoss Link™</i> will now synchronize time and date with an internet time server • It is now possible to re-test and get approval for one failed device in the network test • Fixed a bug where <i>Danfoss Link™</i> CC could restart in rare conditions • Fixed a bug where heat curve in HP applications was reset after restart of <i>Danfoss Link™</i> • Low battery warning is now showed on <i>Danfoss Link™</i> CC • Fixed a bug where alarm was showed after restart of <i>Danfoss Link™</i> CC in ECL application(DLG) • Improved Wi-Fi stability • Various bug fixes
Version 4.1.0	30-11-2016	<ul style="list-style-type: none"> • It is now possible to lock <i>Danfoss Link™</i> CC with a pin code • <i>Danfoss Link™</i> CC now supports control of On/Off devices from <i>Danfoss Link™</i> App • <i>Danfoss Link™</i> CC now supports control of Dynamic Boiler relay • Improved Wi-Fi stability - New Wi-Fi driver • Various bug fixes
Version 4.1.4	30-01-2017	<ul style="list-style-type: none"> • It is now possible to choose reference rooms for <i>Danfoss Link™</i> Boiler Relay • Various bug fixes
Version 4.2.1054	01-05-2017	<ul style="list-style-type: none"> • Alarms from the Link CC can now also be viewed in the Danfoss Link App for iPhone or Android based devices. • Native iPhone or Android notifications are generated for paired apps when new alarms occur on the Link CC (Push Notifications) • A "temperature too low" alarm is generated if the temperature drops to a level where there is a risk of frost damage (Temperature Watchdog) • On/off devices can be configured to randomly simulate activity while Danfoss Link is in Vacation mode during nighttime period between 19:00 and 8:00 (Activity Simulation) • Fixes a bug where Danfoss Link App was showing wrong temperature if the App was used in different time zone than Link CC. • Fixes a bug where an alarm was stated after reboot of Danfoss Link CC in combination with Danfoss Link DLG • Minor bug fixes
Version 4.2.1061	12-05-2017	<ul style="list-style-type: none"> • Minor bug fixes
Version 4.2.1135	01-09-2017	<ul style="list-style-type: none"> • 2nd generation PR relay is now supported as On/Off device - Smart Plug • Heat Pump control algorithm has been optimised to stop the heat pump when there is no heat demand • Default heat curve for Heat Pumps has been changed to match customer expectations • Various bug fixes

Danfoss Link™ Heat Pump kits

Product Code	Name	Description
086L2381	<i>Danfoss Link™</i> 2.1 HP kit	Heat pump integration kit, for integration with <i>Danfoss Link™</i> CC. Supports Danfoss DHP OPTI-range produced from year 2009, from software version 1.34.
086L2383	<i>Danfoss Link™</i> 2.1 kit AQ	Heat pump integration kit, for integration with <i>Danfoss Link™</i> CC. Supports Danfoss DHP AQ-range from software version 2.2.

Danfoss Link™ Air Unit Integration

Version Number	Release Date	Description
CCM 2.07	09-2013	CCM unit, for integration with <i>Danfoss Link™</i> CC. Supports Danfoss Air Units A2, A3, W1, W2.

Danfoss Link™ Gateway for ECL

Product code	Release Date	Description
087H3241	05-2014	<i>Danfoss Link™</i> Gateway (DLG) for ECL integration. Supports ECL Comfort 110.

Danfoss Link™ Compatibility Overview

	Danfoss Air Unit older than Sept. 2013	Danfoss Air Unit newer than Sept. 2013	Danfoss Heat Pump older than 2009	Danfoss Heat Pump DHP OPTrange after 2009 SW v1.24 ->	Danfoss Heat Pump DHP-AQ SW v2.2 ->	Danfoss Link™ Connect Thermostat	Danfoss Eco™	Danfoss Link™ HC / Danfoss Link™ RS	Danfoss Link™ FT(S)	Danfoss Link™ HR	Danfoss Link™ PR	Danfoss Link™ BR/ DBR 4	Danfoss Link™ SR Smart Plug	CF-RU	Danfoss Link™ MPB (incl. Danfoss Link™ SCM)	Danfoss Link™ SCM	Danfoss Link™ Gateway for ECL	Built-in Wi-Fi module and App connectivity
Danfoss Link™ CC SW v2.1.35	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v2.3.27	●	●	●	●	●	●	●	●	●	●	●	3	●	●	●	●	●	●
Danfoss Link™ CC SW v2.4.51	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v2.5.57	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v2.7.42	●	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v3.0.12	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v3.1.42	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v3.2.4	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v3.3.1	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v4.0.12	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v4.0.13	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v4.0.36	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v4.0.42	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v4.0.45	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v4.0.54	1	●	●	2	2	●	●	●	●	●	●	●	●	●	●	●	●	●
Danfoss Link™ CC SW v4.1.0	1	●	●	2	2	●	●	●	●	●	●	4	●	●	●	●	●	●
Danfoss Link™ CC SW v4.1.0	1	●	●	2	2	●	●	●	●	●	●	4	●	●	●	●	●	●
Danfoss Link™ CC SW v4.1.1054	1	●	●	2	2	●	●	●	●	●	●	4	●	●	●	●	●	●
Danfoss Link™ CC SW v4.1.1061	1	●	●	2	2	●	●	●	●	●	●	4	●	●	●	●	●	●
Danfoss Link™ CC SW v4.2.1135	1	●	●	2	2	●	●	●	●	●	●	4	●	●	●	●	●	●

Notes:

1. Requires that CCM is version 2.07 or newer.
 2. Separate heat pump kit required (see section: "*Danfoss Link™ Heat Pump kits*" for product code).
 3. Update to software version 2.4.51 or later for optimized boiler control (see section: "*Version 2.3.27*").
 4. Danfoss Link™ CC now supports control of Dynamic Boiler relay
- *If your DHP-AQ software is older than 2.2., please contact your installer in order to change the display card.

Connect software

Version Number	Release Date	Changes and New Features
Version 1.06	12-07-2010	<ul style="list-style-type: none"> • The first batches of Connect are marked with SW 1.06, but the software version is actually version 2.06.
Version 2.06	11-03-2011	<ul style="list-style-type: none"> • The initial software for Connect - can be controlled by <i>Danfoss Link™</i> CC or by a 3rd party Z-wave controller.
Version 3.02	25-05-2012	<ul style="list-style-type: none"> • Standard Z-wave functionality removed, meaning that Connect no longer can be controlled by a 3rd party controller. • Improved (quicker) temperature control. • Works also in covered radiator applications (this requires use of <i>Danfoss Link™</i> CC with software version 2.5.57 or later - temperature control in Installation Mode must be set accordingly).
Version 3.04	04-11-2012	<ul style="list-style-type: none"> • Valve exercise function changed to minimize the risk of motor stalling.
Version 4.02	01-02-2014	<ul style="list-style-type: none"> • Heating control include capability to select between Moderate (no overshoot on room temperature, low return temperature) and Quick (fast reaction with room temperature overshoot, high return temperature). Heat control is selected from <i>Danfoss Link™</i> CC. • Improved room sensor application. • New motor design with modification to software.

Connect Z software

Version Number	Release Date	Changes and New Features
Version 2.50		<ul style="list-style-type: none"> • Includes standard Z-wave functionality, but can not communicate with <i>Danfoss Link™</i> CC. • Improved (quicker) temperature control.
Version 2.51		<ul style="list-style-type: none"> • Valve exercise function changed to minimize the risk of motor stalling.
Version 1.00	01-01-2014	<ul style="list-style-type: none"> • New code number: 014G0013 • Z-wave module updated to version 4.55 • Quick guide updated
Version 1.01	07-03-2014	<ul style="list-style-type: none"> • Faster heat response with manual interactions. • General PID improvements • New motor design

Overview of differences between Connect and Connect Z

Feature	Connect old 014G0002	Connect new 014G0002	Connect Z 014G0012 / 13
SW version	2.06	3.02 / 3.04 / 4.02	2.50 / 2.51 / 1.00 / 1.01
Z-wave protocol	Yes	No	Yes
To be controlled by <i>Danfoss Link™</i> CC	Yes	Yes	No

To be controlled by 3rd party	Yes	No	Yes
Hidden radiator application	No	Yes	No
Temperature control algorithm	Good	Better	Better

Danfoss Eco™ software

Version Number	Release Date	Changes and New Features
Version 1.12	12-07-2010	<ul style="list-style-type: none"> Initial software version for Eco™
Version 1.13	19-09-2011	<ul style="list-style-type: none"> Fixing leap year problem.
Version 1.14	07-11-2011	<ul style="list-style-type: none"> Display improvements: <ul style="list-style-type: none"> Extra clock numbers and dots in display. Saving period is no longer highlighted as an empty box in the "wheel". When turning the thermostat to MAX or MIN the according icon is displayed.
Version 1.15	24-07-2012	<ul style="list-style-type: none"> Child lock preserved during battery change. Optimized constants for PID control. Adaptive learning (forecast) algorithm updated to latest version.
Version 1.19	19-11-2012	<ul style="list-style-type: none"> Valve exercise function changed to minimize the risk of motor stalling. Optimized constants for PID control. Adaptive learning (forecast) algorithm updated.
Version 1.20	01-06-2013	<ul style="list-style-type: none"> No functional changes, from customer point of view. Orientation functionality is changed, ensuring that Eco™ cannot accidentally be programmed to vertical.
Version 1.22	Not produced	<ul style="list-style-type: none"> Special version with the Intelligent Control (Forecast) deactivated as default. Can be enabled by using the menu.
Version 1.24	01-02-2014	<ul style="list-style-type: none"> Faster reaction to user change to set temperature. Changes of more than 1°C and two consecutive changes within two hours are considered a big change and will result in immediate reaction. Frost protection changed to an individual programme. Heating control include capability to select between Moderate (no overshoot on room temperature, low return temperature) and Quick (fast reaction with room temperature overshoot, high return temperature). Heat control is selected in the Advanced Menu by choosing Hc. Behaviour at low battery is changed, the unit displays the word "SAFE" when the batteries have reached critical voltage. The Frost protection icon is no longer shown in this situation.
Version 1.25	01-02-2014	<ul style="list-style-type: none"> Special version with the Intelligent Control (Forecast) deactivated as default (can be enabled by using the menu). Quick Heating Control is activated as default.
Version 1.26	13-03-2014	<ul style="list-style-type: none"> Replaces version 1.24. New motor design.
Version 1.27	25-02-2014	<ul style="list-style-type: none"> Replaces version 1.25. New motor design.
Version 1.61	07-08-2015	<ul style="list-style-type: none"> Improved user interface Programming wizard Easy Pause function Default quick regulation Forecast off
Version 1.62	07-08-2015	<ul style="list-style-type: none"> Improved user interface Programming wizard Easy Pause function Default moderate regulation Forecast off
Version 1.63	07-08-2015	<ul style="list-style-type: none"> Improved user interface Programming wizard Easy Pause function Default moderate regulation Forecast on

Danfoss Link™ App (Android)

Version Number	Release Date	Changes and New Features
Version 1.0.5	02-02-2016	<ul style="list-style-type: none"> • Additional languages - Italian, Czech, Lithuanian • Copy schedule for all weekdays – bug fixed • Various bug fixes
Version 1.0.7	20-04-2016	<ul style="list-style-type: none"> • No longer possible to send debug log • Right side of room overview is now active to scroll • Red arrows indicating heat demand is now synchronized in room overview • Various bug fixes
Version 1.0.8	29-06-2016	<ul style="list-style-type: none"> • It is now possible to plan vacation period with same start and end date • Supports UA and TR language • Various bug fixes
Version 1.0.11	30-10-2016	<ul style="list-style-type: none"> • New introduction screens for demo mode • Various bug fixes
Version 1.1.0	13-12-2016	<ul style="list-style-type: none"> • It is now possible to control Danfoss Link on/off relays • Fixes a bug where outdoor temperature was not present at the room overview • Various bug fixes
Version 1.2.0	05-05-2017	<ul style="list-style-type: none"> • It is now possible to see status messages in Danfoss Link™ App (Alarms and warnings) • If you enable PUSH notifications in the Danfoss Link™ App then errors and warnings will be received as native PUSH notification • It is possible to select which type of warning that should be received as PUSH Activity simulation can be enabled for PR/HR relays • Minor bug fixes

Danfoss Link™ App (iOS)

Version Number	Release Date	Changes and New Features
Version 1.0.5	02-02-2016	<ul style="list-style-type: none"> • Additional languages - Italian, Czech, Lithuanian • Various bug fixes
Version 1.0.6	16-02-2016	<ul style="list-style-type: none"> • Fixed a bug that caused graphic error on iOS 7.x and 8.x
Version 1.0.7	20-04-2016	<ul style="list-style-type: none"> • No longer possible to send debug log • The red arrow indicating heat demand was not always active - bug fixed • It is possible to plan a future vacation mode on iPhone 6S • It is possible to save daily schedule without comfort periods • Various bug fixes
Version 1.0.8	29-06-2016	<ul style="list-style-type: none"> • Supports UA and TR language • Fixed a bug where the outdoor temperature disappears when it measures 0,0 degrees • Various bug fixes
Version 1.0.9	06-07-2016	<ul style="list-style-type: none"> • Detailed system information removed
Version 1.0.10	12-09-2016	<ul style="list-style-type: none"> • Supports iOS 10
Version 1.0.11	30-10-2016	<ul style="list-style-type: none"> • New introduction screens for demo mode • Various bug fixes
Version 1.1.0	13-12-2016	<ul style="list-style-type: none"> • It is now possible to control Danfoss Link on/off relays • If there is a planned vacation mode, dates are now shown on the home screen • Various bug fixes
Version 1.2.0	05-05-2017	<ul style="list-style-type: none"> • It is now possible to see status messages in Danfoss Link™ App (Alarms and warnings) • If you enable PUSH notifications in the Danfoss Link™ App then errors and warnings will be received as native PUSH notification • It is possible to select which type of warning that should be received as PUSH Activity simulation can be enabled for PR/HR relays • Minor bug fixes