

Manual

KNX Driver 1.1 for mControl 2.1

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1.1 Installation

Installation starts via "KNX Driver 1.1 for mControl.msi".
After completed installation, mControl can require a restart.

1.2 Licensing

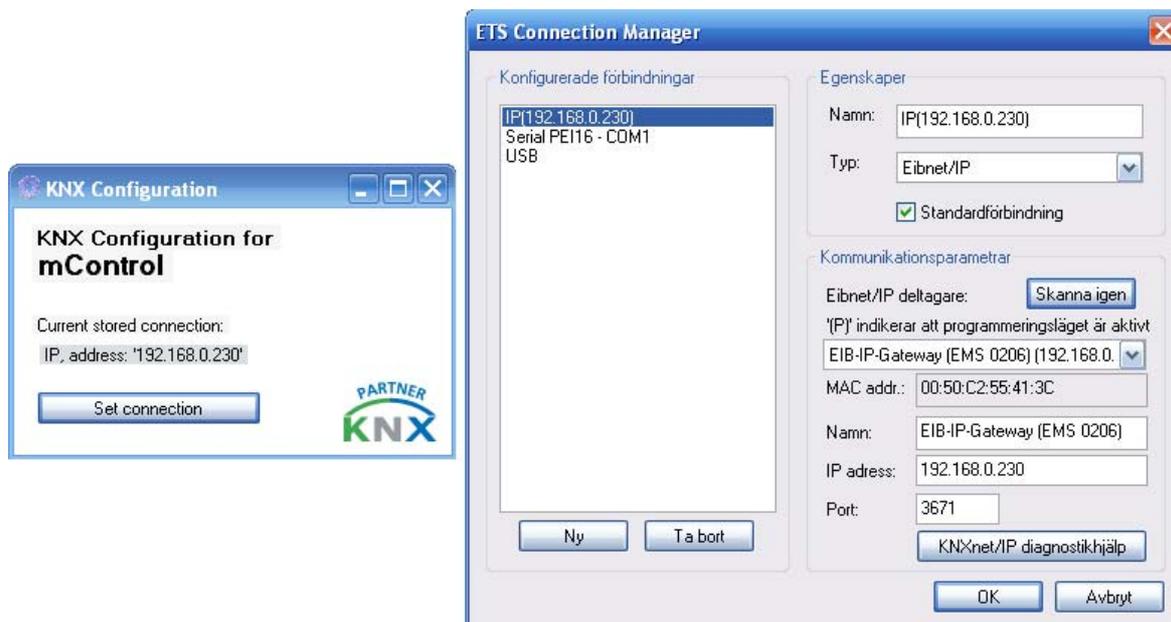
Directly after installation the KNX Driver is in demo mode which means limitations in functionality. These limitations means a maximum run time of 5 min and only the address "15/7/1" can be used.

To order a license key and to unlock the software the tool "KNX Driver for mControl – License" is used.

Fill in your personal information, click on "Request" and follow the instructions.

1.3 Connection to KNX

Before any control can be done in mControl a connection to the KNX interface must be configured. This is done with the tool "KNX Driver for mControl – Configuration" that can be located on Windows start menu.



1.4 Control types in mControl

To add control objects in mControl the tool "mControl Editor" can be used. For KNX the protocol "KNX_A" is used.

The following control types are available in this release.

1.4.1 KNX Switch

Control lights/outlets on/off.
Main address shall be connected to controlled output.



The 'Edit Device' dialog for a KNX Switch. It has three main sections: 'Device Name' (Switch), 'Adapter' (KNX Adptr), and 'Device Module' (KNX Switch). The 'Image' dropdown is set to 'Lights'. The 'Address' section includes 'On/off (1 bit) main' (13), 'middle' (1), and 'sub' (1). The 'Advanced Options' section has 'Status addresses (1 bit) separate like 1/1/1, 2/2/2' (13/1/2). Buttons for 'Save & Close' and 'Cancel' are at the bottom.

1.4.2 KNX Dimmer

Control dimmed lights on/off or up/down in steps.
Main address shall be connected to the light value object (1 byte) for the dimmer.



The 'Edit Device' dialog for a KNX Dimmer. It has three main sections: 'Device Name' (Dimmer), 'Adapter' (KNX Adptr), and 'Device Module' (KNX Dimmable). The 'Image' dropdown is set to 'Track Light'. The 'Address' section includes 'Light value (1 byte) main' (13), 'middle' (1), and 'sub' (1). The 'Advanced Options' section has 'Status addresses (1 byte) separate like 1/1/1, 2/2/2' (13/1/2). Buttons for 'Save & Close' and 'Cancel' are at the bottom.

1.4.3 KNX Scene

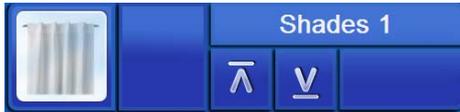
Activates or saves a scene.
Main address shall be connected to controlled scene object (1 byte) with correct scene value. Observe that the function "Save" only works if this is supported in the KNX system.



The 'Edit Device' dialog for a KNX Scene. It has three main sections: 'Device Name' (Scene), 'Adapter' (KNX Adptr), and 'Device Module' (KNX Scene). The 'Image' dropdown is set to 'Fireplace'. The 'Address' section includes 'Scene (1 byte) main' (13), 'middle' (1), and 'sub' (1). The 'Advanced Options' section has 'Scene value (1-64)' (1). Buttons for 'Save & Close' and 'Cancel' are at the bottom.

1.4.4 KNX Shades 1

Control shade fully up/down.
Main address shall be connected to up/down for the shade actuator.

A screenshot of the 'Edit Device' dialog box. The 'Device Name' field contains 'Shades 1'. The 'Adapter' dropdown is set to 'KNX Adptr'. The 'Device Module' dropdown is set to 'KNX Shades 1'. The 'Image' dropdown is set to 'Curtains'. The 'Address' section has 'Up/down (1 bit)' set to 'main/./...', '13' in the main address field, '1' in the middle address field, and '1' in the sub address field. The 'Advanced Options' section is empty. 'Save & Close' and 'Cancel' buttons are at the bottom.

1.4.5 KNX Shades 2

Control shade fully up/down or up/down in steps.
Main address shall be connected to up/down for the shade actuator. The stop address shall be connected to the stop object for the shade.

A screenshot of the 'Edit Device' dialog box. The 'Device Name' field contains 'Shades 2'. The 'Adapter' dropdown is set to 'KNX Adptr'. The 'Device Module' dropdown is set to 'KNX Shades 2'. The 'Image' dropdown is set to 'Curtains'. The 'Address' section has 'Up/down (1 bit)' set to 'main/./...', '13' in the main address field, '1' in the middle address field, and '1' in the sub address field. The 'Advanced Options' section has 'Step time (s)' set to '1' and 'Stop address (1 bit)' set to '13/1/2'. 'Save & Close' and 'Cancel' buttons are at the bottom.

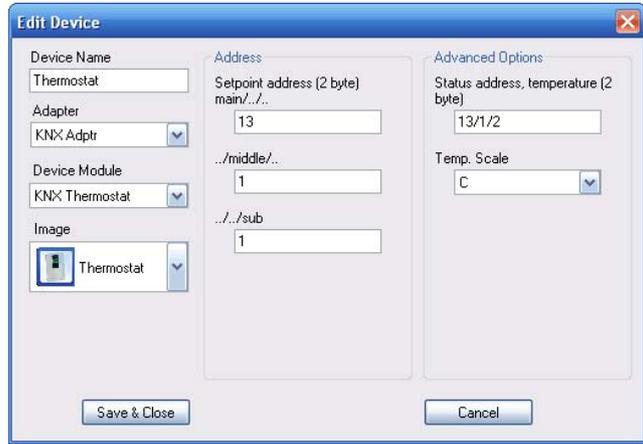
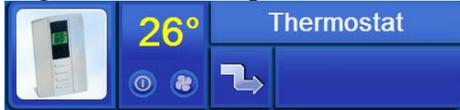
1.4.6 KNX Shades 3

Control shade fully up/down or up/down in steps.
Main address shall be connected to positioning object (1 byte) for the shade actuator. The address "Up/down" shall be connected to up/down for the shade actuator.

A screenshot of the 'Edit Device' dialog box. The 'Device Name' field contains 'Shades 3'. The 'Adapter' dropdown is set to 'KNX Adptr'. The 'Device Module' dropdown is set to 'KNX Shades 3'. The 'Image' dropdown is set to 'Curtains'. The 'Address' section has 'Position (1 byte)' set to 'main/./...', '13' in the main address field, '1' in the middle address field, and '1' in the sub address field. The 'Advanced Options' section has 'Status addresses (1 byte) separate like '1/1/1, 2/2/2'' set to '13/1/2' and 'Up/down address (1 bit)' set to '13/1/3'. 'Save & Close' and 'Cancel' buttons are at the bottom.

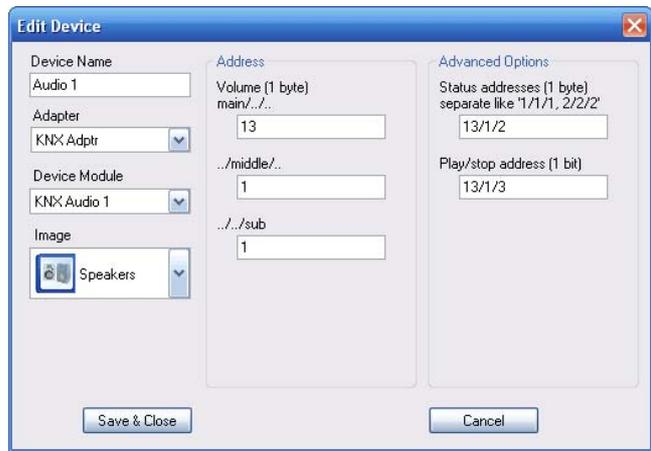
1.4.7 KNX Thermostat

Shows measured temperature and adjust the set point temperature. Main address shall be connected to the object for measured temperature in the KNX thermostat. “Set point” address shall be connected to the KNX thermostats set point object (e.g. “Comfort temperature”).



1.4.8 KNX Audio 1

Control music with play/stop and volume up/down. Main address shall be connected to the volume object (1 byte) for the music controller. The address “Play/stop” shall be connected to play/stop for the music controller.



1.4.9 KNX Audio 2

Control music with play/stop and skip next/previous. Main address shall be connected to play/stop for the music controller. The Address “Skip” shall be connected to skip next/previous for the music controller.



1.5 Configuration in ETS

The KNX objects that are added in mControl communicates with the KNX system in an active and direct way. When a button inside mControl is pushed a telegram is generated in KNX.

When a telegram is sent on the KNX bus (e.g. from a pushbutton) mControl automatically receives the group address and data. All mControl objects that can show status and are connected to this group address will be updated. This communication is asynchronous.

In some cases configuration in ETS have to be done in order to get a working visualization.

1.5.1 Status telegrams

For the status update in mControl to work the KNX products would have to send status telegrams on the bus.

The sending of status telegrams should be configured in ETS. It can either be solved as a separate status object or status sent back on the controlling object.

1.5.2 Read-flags

The most, if not all, visualization systems (such as mControl) read the status from the KNX bus at startup. This so that the correct status can be shown.

For this initialization (read) to work the Read-flag for each status object has be set in ETS.

1.6 Support

If there are any problems with the installation of “KNX Driver 1.1 for mControl 2.1”, Tekniska Byrån can be contacted:

www.tekniskabyran.se
info@tekniskabyran.se

1.6.1 How to set up and test KNX Driver in demo mode

Before you license the software you can test KNX Driver using address 15/7/1.

Follow the steps below to set up the demo:

1. Install mControl (if not already installed) and KNX Driver for mControl.
2. Set up a connection to the KNX bus using KNX_Configuration (found on the start menu).
3. Make sure that a switching actuator has the address 15/7/1 on one of its channels.
4. Start mControl Editor.

5. Insert a KNX module of the type “Switch” with the address 15/7/1, both as the main address and as a status address.
6. Open mControl in Explorer or Media Center.
7. Now you should be able to control your light using the inserted module.

1.6.2 Hints for status troubleshooting

If you have trouble getting the correct status updated to mControl you can check the following:

1. Check in mControl editor for the address connected to the KNX objects and compare these to the addresses in the KNX system (e.g. via ETS).
2. Check your KNX installation and determine that the correct telegrams are sent on the bus.
3. Check the mControl log to determine that the correct telegrams are received in mControl. The log file can be found at “%ProgramPath%\Embedded Automation\mControl\Logs\”.

It is important that the KNX product sends its status at change, i.e. if a KNX pushbutton is used for switching the dimmer on or off a status telegram has to be sent on the address connected to the mControl object (in this case address “1/0/1”).