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EIB Medientechnik Gateway IP driver (GTSGC4ZBBEMTGI)

1. Disclaimer

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By using this driver you accept that you have read and accepted the terms above

2. What is the Gateway driver? What is it used for?

The gateway driver replaces the Control4 knx_network driver and it does provide all basic functionality. Additional to that an extended feature set is provided like additional datapoints and OPC file import

3. Where is the difference to the free implementation from Control4?

3.1. Unique features form this implementation

- Bus management: The Gateway is able to actively manage the traffic on the KNX bus. As well it provides several bus status messages back to the driver which are used to **optimize traffic flows**
- Access speed: Inside the gateway a proved firmware and a native KNX chip provides queues and logic to make sure the KNX bus does not overflow and is used in the fastest possible way. On high bus load this gateway/driver combination **is up to 20 times faster**
- Reliability: As the bus utilization and health is consequently managed and monitored no bus messages are lost. Also repetitions of commands and the complete timing are done on hardware chip basis in real time. Reliability tests over a long time could **not find a single command lost**
- Real time bus communication: Control4 is built on a non-real time Linux and drivers that run in the DriverWorks sandbox are again one step back
No native software implementation on C4 ever will meet the defined KNX standards for bus timing. On high bus traffic all software implementations miss commands or fail to send. Therefore the gateway overtakes the real time job and provides a non-time critical interface for the C4 driver.
- Datapoint support: We can add all datapoints to the driver. No matter how exotic, we can add it very fast. Let us know
- Support: We take calls and help if it's a driver's issue. Do not call us for issues with Tisco or native Control4 drivers.

4. Where can I buy the gateway and driver?

4.1. Gateway:

4.1.1. Dealers in the EU can buy directly from:

b+b Automations- und Steuerungstechnik GmbH
Eichenstraße 38a
64743 Beerfelden-Airlenbach
Germany
Tel.: +49 (0) 6068 47891-0
Fax: +49 (0) 6068 47891-69
Email: info@bb-steuerungstechnik.de
<http://www.bb-steuerungstechnik.de/cms/en/header/contact.html>
Article number E001-H026005

4.1.2. Swiss dealers can buy from Genesis Technologies AG

Genesis Technologies AG
Erlenstrasse 27
2555 Bruegg
Switzerland
Tel.: +41 (0) 32 365 60 60
info@genesis-technologies.ch
<https://technet.genesis-technologies.ch>

4.2. Driver:

The driver can be bought and downloaded from Genesis Technet:

<https://technet.genesis-technologies.ch>.

5. How do I change from the free Control4 knx_network driver to this driver?

- Install Gateway and driver
- Disconnect in Composer all GT or Control4 device drivers from the KNX_Networ driver.
- Connect all device drivers to this driver
- Import the OPC file
- Correct all data points in the webinterface
- Done!

6. How do I change from Tisco drivers to these drivers, the driver suite from Genesis?

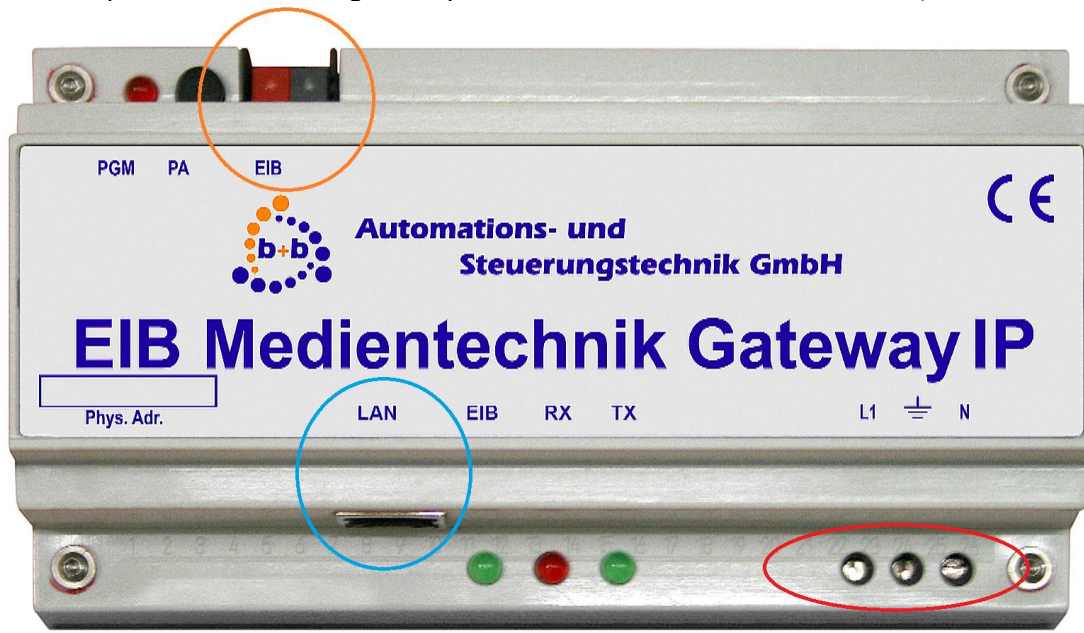
- Replace all drivers with the corresponding equivalents from Control4 or Genesis

7. Which drivers from Control4 and Genesis can be combined together?

All Genesis drivers do work with the Control4 drivers. All Genesis device drivers can be connected to the Control4 knx_network driver, as well all device drivers done by Control4 can be connected to this network driver.

8. Hardware installation

Let a qualified person install the gateway on the Din Rail and connect 240V, network and the KNX bus.



On the front also 3 LED's are present, EIB, RX and TX. They only do flicker if there is traffic flow, so under normal circumstances they are dark.

9. Setting up the gateways network interface

Refer to section 11. Configuration webinterface

10. Software installation Control4

10.1. Prerequisites

Download the driver and placed them in USERPROFILE%\Control4\Drivers.

10.2. Composer

Start Composer, go to System Design and select the tab Search in the right top window. Search for *Medientechnik Gateway IP*



10.3. Driver Properties

-> Info	30.01.2018 14:41 - Driver/Version - 22.0.9 running
Driver name	GTSGC4ZBBEMTGI
-> Licensing	12.02.2018 15:40 - Licensing/Check - Valid until: 07.12.2065
Mac of the Controller	000FF19DF21
Activation key	317281KFMn3Lh29-eihMLVyw+jrc0ht-sj+QkqFVm1asNB-urqZG+yWc20T2HI-tilPBvae
-> Gateway config	
Gateway	
IP address	172.16.40.151
Physical address	1.1.252
-> Website config	
Config website URL (local)	Please launch config website in Actions Tab
Config website URL (4Sight)	Please launch config website in Actions Tab
-> Log	
Lua window	None
Online logserver	None
Log period (h)	50
Log auth	

- 10.3.1. -> Info: Does show the driver health info. If the driver experience issues this line will display it. If Version x.x.x running is shown the driver is fully started and works. If another message appears the driver will not work correct, a decent action is required. (Advises are also displayed in this line)
- 10.3.2. Driver name: The product identification of the driver
- 10.3.3. Mac of the Controller: Not changeable.
- 10.3.4. Activation key: Insert here the license key which is displayed in the driver dashboard after you bought a license and assigned it to the system. Once assigned in the Dashboard the license may jump in automatically once the driver connects to the online services
- 10.3.5. Gateway: List of available gateways on the network. On startup the driver does search for all units and during operation at any time the search process can be started via the Actions tab in Composer *Search for Gateways*. Compare the MAC address of the gateway that should be connected and select it. The property *IP Address* will automatically overtake the IP and the driver does start and run with the selected gateway
- 10.3.6. IP address: Automatically filled out when selected a gateway using the property *Gateway*. Should the gateway not be found and the IP is known it can be directly inserted to start the driver.
- 10.3.7. Physical address: Each bus device must have a unique physical address. Take a free one and insert it, press set. This address will be used to identify data packets on the bus, it really needs to be set and to be unique!
- 10.3.8. Config website URL (local) and (4Sight): To configure available gateways or import OPC files launch the configuration website in Actions using *Launch config website*. Afterwards copy and paste the shown URL into your browser and press enter. More info about the config website in section 11. *Configuration webinterface*
- 10.3.9. -> Log / Lua window: Selects the log level printed out in Lua window from Composer. Use the level Debug to see what the driver does
- 10.3.10. -> Log / Online log server: If a persistent problem appears that cannot be solved from the installer support may ask you to activate a decent level. Do not use until support ask you to do so
- 10.3.11. Log period (h): The time frame the log should output
- 10.3.12. Log auth: Developer can give you a code to see more logs. Usually not really interesting, only for in deep debug

10.4. Driver Actions

- 10.4.1. Bind all KNX drivers: Binds all available KNX device drivers in the project to this driver
- 10.4.2. Unbind all KNX drivers: Unbinds all KNX device drivers from this driver
- 10.4.3. Search for Gateways: Searches the network for available gateways and lists them in Properties page
- 10.4.4. Launch config website: Enables the driver internal config website for IP and datapoint settings.
- 10.4.5. Shutdown config website: Disables the config website
- 10.4.6. Reset driver: Restart the driver and gets all values refreshed from bus
- 10.4.7. Clear all DPT definitions: The driver has a cache for all datapoint definitions. If accidentally a definition changes in an unexpected way this cache can be cleared.
- 10.4.8. Simulate bus devices: Using this bus traffic can be generated as it would origin from a real KNX system. Random read responses will be sent to the address queried, status will be sent to the set address +1. Always a complete Area/Line/0-255 will be activated
Selecting this action opens a new window with this settings:
 - 10.4.8.1. Activate: True and False for active, inactive
 - 10.4.8.2. Area: The first number of the KNX address
 - 10.4.8.3. Line: The second number of the KNX address
 - 10.4.8.4. Datapoint: Datapoint used in status and read repliesExample: To have the driver reply with random values for datapoint 5 to 1/1/x set this: True, 1, 1, 5.

11. Configuration webinterface

Using the button *Launch config website* in the action tab the driver's internal website will be started and the URL will appear in the properties *Config website URL (local) and (4Sight)*.



EIB Medientechnik Gateway IP driver GTSGC4ZBBEMTGI

Driver name: EIB Medientechnik Gateway IP
Driver version: 1055

HomeModify datapoint mappings

KNX OPC file import (.esf)

Select OPC file No file selected.

Gateway IP configuration

MAC (refresh (F5) if empty)

IP address

Subnet mask

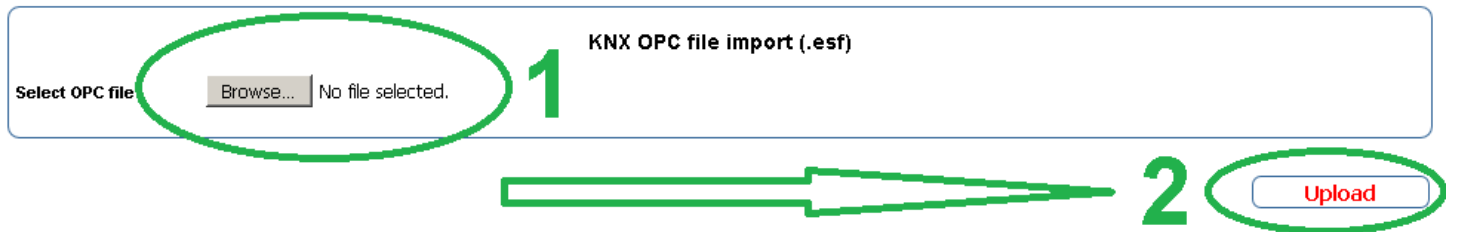
Gateway

The following tasks can be executed on this website:

11.1. Import OPC file

ETS does allow exporting an OPC file. This file contains information about configured devices and datapoint settings. Once finished with the KNX addressing and programming this file should be exported with ETS using *Extras -> Export OPC* and imported into the driver. This will allow the driver to:

- Know the correct datapoint when decoding/encoding data packets on the bus, show correct hardware and group addresses when debugging.
- Initialize all datapoint correct. As all decoding/ encoding is done by the gateway all datapoints have to be set on startup or during operation. To increase the speed during operation it's recommended to set all datapoint info during start.



To import select *Browse* and search for the OPC (.esf) file. Press *Upload*.

After import some datapoint may be unknown, see the section about datapoint mappings to get them corrected!

11.2. Modify datapoint mappings



EIB Medientechnik Gateway IP driver GTSGC4ZBBEMTGI

Driver name: EIB Medientechnik Gateway IP
Driver version: 1055

Clear all datapoint mappings (Be careful!)

Home Modify datapoint mappings

Datapoint mappings for project: Showroom Genesis Technologies				
Address	Main group	Middle group	Group	Datapoint assigned
0/0/1	Dimmers	Office	Light A Dim	DPT_3
0/0/2	Dimmers	Office	Light A Value	DPT_1 DPT_2 DPT_3 DPT_4 DPT_5
0/0/3	Dimmers	Office	Light A Status ON/OFF	DPT_5
0/0/4	Dimmers	Office	Light A Status Value	DPT_5.001 DPT_5.003
0/0/5	Dimmers	Office	Light B ON/OFF	DPT_6 DPT_7 DPT_8
0/0/6	Dimmers	Office	Light B Dim	DPT_9 DPT_10
0/0/7	Dimmers	Office	Light B Value	DPT_11 DPT_12 DPT_13
0/0/8	Dimmers	Office	Light B Status ON/OFF	DPT_14 DPT_16
0/0/9	Dimmers	Office	Light B Status Value	DPT_232.600
0/0/10	Dimmers	Office	Light C ON/OFF	DPT_1
0/0/11	Dimmers	Office	Light C Dim	DPT_3
0/0/12	Dimmers	Office	Light C Value	DPT_5

After import the OPC file some datapoint's still may be unknown and the OPC file itself is not clear enough. To correct this behavior the assignment can be set for each group address. Scroll through the list and

correct to the settings.

Remark:

- For dimmer drivers (GT and Control4) always use DPT_5
- Thermostat setpoints and temperatures usually use DPT_9
- Thermostat 1 Byte values use DPT_5

Refer to the **KNX System Specifications for interworking** to get the correct datapoint

The link marked in yellow allows clearing the complete configuration. Be careful, all datapoint config will be lost.

Reimport: If the KNX configuration was changed a re-import is possible, all new found devices will be added to the existing configuration.

It's not possible to delete out certain elements, only the complete configuration can be cleared.

11.3. Address gateways on local LAN

Instead of providing a separate tool to set the IP address of the gateway from DHCP (Factory default) to a static IP (recommended) the driver's config website does provide similar functionality.

Once the website is shown all gateways on the local LAN should appear in the drop down. (Multiple gateways can exist on the same LAN.)

The screenshot shows a web form titled "Gateway IP configuration" with the following fields: "MAC (refresh (F5) if empty)" with a dropdown menu showing "0080A3A3090D", "IP address" with a text input containing "192.168.1.1", "Subnet mask" with a text input containing "255.255.255.0", and "Gateway" with a text input containing "192.168.1.1". A red circle labeled "1" highlights the MAC dropdown. A red circle labeled "2" highlights the IP address, Subnet mask, and Gateway fields, with a red arrow pointing down from the "1" circle. A red circle labeled "3" highlights the "Save" button, with a red arrow pointing from the "2" circle to it.

Select the MAC address of the gateway you want to change, insert IP, Subnet mask and Gateway and press *Save*.

Remark: This will not change the selected gateway set in Composers Properties page. It's only an addressing tool!

12.Supported datapoints

Up to version 10.5.6 these datapoints are supported:

- DPT_1: 1 bit; 1.001-1.100
- DPT_2: 2 bit; 2.001-2.012
- DPT_3: 4 bit; 3.007-3.008
- DPT_4: 8 bit; 4.001-4.002
- DPT_5: 8 bit; 5.001-5.0006
- DPT_5.001: 8 bit; DPT_Scaling
- DPT_5.003: 8 bit; DPT_Angle
- DPT_6: 8 bit; 6.001.6.020
- DPT_7: 2 Octets; 7.001-7.0.13
- DPT_8: 2 Octets; 8.001-8.0.10
- DPT_9: 2 Octets float: 9.001-9.028
- DPT_10: 3 Octets Time; 10.001
- DPT_11: 3 Octets Date; 11.001
- DPT_12: 4 Octets; 12.001
- DPT_13: 4 Octets signed; 13.001-13.100
- DPT_14: 4 Octets; 14.001- 14.079
- DPT_16: 14 Octets String; 16.000-16.001
- DPT_232.600: 3 Octets DPT_Colour_RGB

13.Known issues

14.Updates and support

Updates are available on: <https://technet.genesis-technologies.ch>

Bugs should be reported to: info@genesis-technologies.ch