PERFECTION IN AUTOMATION
A MEMBER OF THE ABB GROUP

SuperTrak
Distribution Package V5.7

Date: 01.02.2024

I Versions

Version	Date	Comment	Edited by
1.0	Jul 7, 17	First Edition	Kohl Sebastian
2.0	Sept 7, 17	Added mappView visualization	Kohl Sebastian
2.1	Nov 15, 17	Changed SuperTrak library and ST_Main task	Kohl Sebastian
2.2	Jan 8, 18	Changed mappView visualization and added new error handling	Kohl Sebastian
5.3	Aug 23, 18	Added Information how to upgrade the SuperTrak and mappView help	Kohl Sebastian
5.4	Jul 7, 20	Update to newest SuperTrak Controller version	Philipp Henhapl
5.5	Feb 22, 21	Update to newest SuperTrak Controller version	Philipp Henhapl
5.6	Jul 8, 22	Update to newest SuperTrak Controller version; Update to mappMotion; Documentation updates	Philipp Henhapl
5.6.1	Jul 29, 22	Exchanged mapp versions due to issues in combination with SuperTrak functions	Philipp Henhapl
5.6.2	Aug 28, 22	Bugfix within StCom library	Philipp Henhapl
5.6.3	Jan 12, 23	Maintenance release of SuperTrak version	Philipp Henhapl
5.7	Feb 1, 24	Update to newest SuperTrak Controller version	Philipp Henhapl

Table 1: Versions

II Distribution

Name	Company, Department	Amount	Remarks

Table 2: Distribution

III Safety Notices

Safety notices in this document are organized as follows:

Safety notice	Description
Danger!	Disregarding the safety regulations and guidelines can be life-threatening.
Warning!	Disregarding the safety regulations and guidelines can result in severe injury or heavy damage to material.
Caution!	Disregarding the safety regulations and guidelines can result in injury or damage to material.
Information:	Important information used to prevent errors.

Table 3: Safety notices

IV Table of Contents

1 Introduction

This is an example project which contains normal movements, coupling to another axis and Anti-Sloshing. For Diagnosis a read functionality for errors is implemented. Additionally, all the temperatures of the segments are read and displayed.

Important!

This package needs at least one shuttle.

2 Upgrade SuperTrak to newest Version

To upgrade to the newest version of the SuperTrak Software some steps need to be done. Follow the guide to properly upgrade an existing project.

Information

If you have to create a new project, please use the getting started inside the StCom library help. A step-by-step guide is available there.

2.1 Update the ST_Main task

Due the fact that there are some changes on the ServiceChannel the ST_Main task need to be exchanged with the latest one. The newest version can be found inside the StCom help in chapter Examples. This task can be saved out of the help file and imported with the common Automation Studio process.

Information

The ST_Main task will not be changed with every version.

There might be some changes if additional functionalities have been added

Important!

The ST_Main task need to be placed in cyclic task class #1!

2.2 Timing of cyclic task class #2

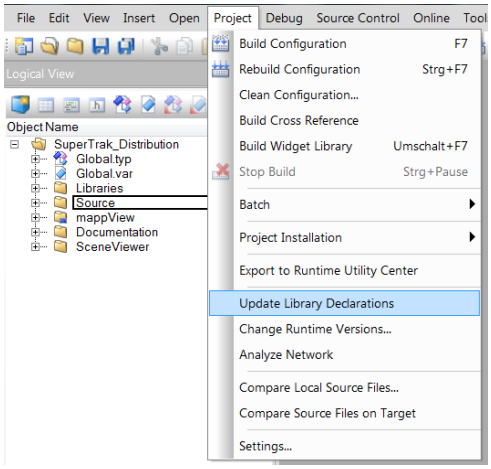
With StCom Version 5.4 some additional device detection has been shifted to the background of cyclic task class #2. With this new functionality it is mandatory to change the timing of cyclic task class #2 to a minimum of 1.6ms or slower to guarantee a working system. No further actions are needed the rest will be handled in the background.

Information

If a faster cycle time for task class #2 is required, the tolerance can be adjusted to get a total time of 1.6ms or greater. This will guarantee that all the webserver operations will work accordingly.

2.3 Check minimum required Automation Runtime Version

Inside the ST_Main task the DiagCpuIsARSim function is used. This function requires at least Automation Runtime version A4.71. After upgrading the Automation Runtime version, the library declarations for the AsIODiag library need to be updated. After this process the new function will be available. Additionally, the library can be deleted and added again.



With SuperTrak Version 3.0.36.0 an additional library was added to the dependencies.
Library AsIOMMan requires at least Version 4.90.0.

Information

Additionally, the DiagCpuIsSimulated can be used (Not working with StandardPC configuration)

Important!

Due to dependencies of the SuperTrak library with version 3.0.36.0 and greater, Automation Runtime Version 4.90 or greater need to be used.

2.4 Update the firmware files

With every new software update the firmware files need to be updated. The newest firmware files can be found in the Distribution Package 5.5 inside the “Firmware Files” folder. To import these new files (2000.dat, 3001.dat, 3002.dat, 3101.dat, 3102.dat, 6001.dat and 6002.dat) just copy them inside the folder you have specified inside the ST_Main task (E.g., C:\Temp\SuperTrakUser) and replace the existing ones.

Information

All the firmware files can be placed on the user partition. The software is automatically choosing the right firmware files for the boards.

Important!

Wrong firmware files will cause major issues on the communication!

3 Change between Simulation and Hardware

To move from Hardware to Simulation the “Activate Simulation” must be switched on.

With the “DiagCpuIsARsim ()” the task is checking if the simulation is switched on or not. The needed file device is then selected.

```
// SuperTrak initialization
   IF DiagCpuIsARsim() THEN
       (* This path can be customized as needed *)
       StoragePath := '/DEVICE=C:\Temp\SuperTrakUser';
   ELSE
       (* CFast card USER partition *)
       StoragePath := '/DEVICE=F:\';
   END_IF;

   // SuperTrak Init function call
   SuperTrakInit(StoragePath, ARSimIPAddress, EthernetInterfaces);
```

4 ST_Visu task

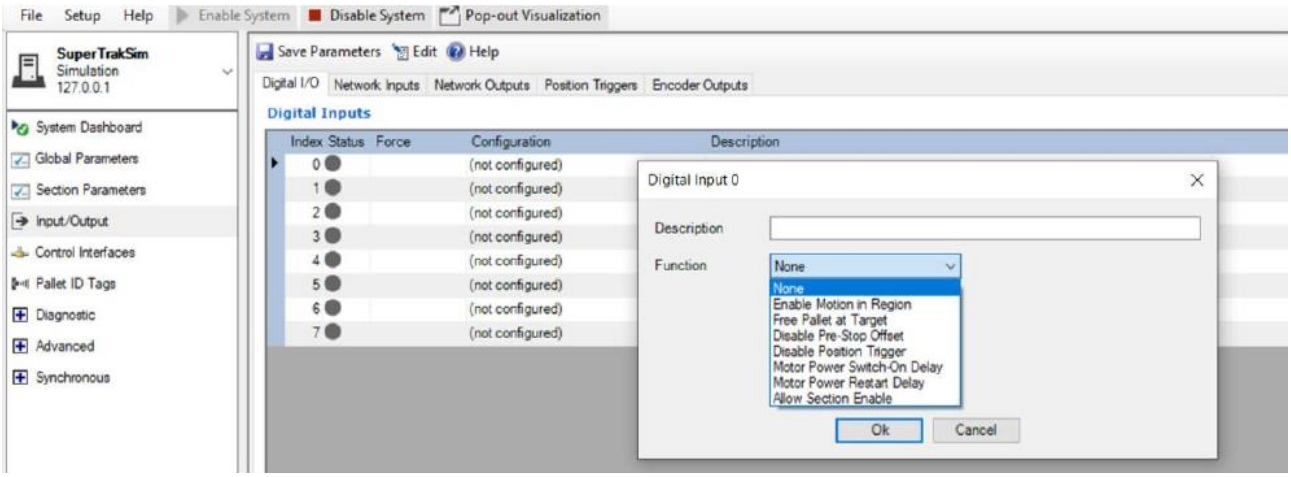
With this task it is possible to use the SceneViewer also while using the Hardware.

Important

To use the ST_Visu task the library AsBrMath must be included.

5 Digital IO Interface

On the SuperTrak system so called Digital Input Functions are available. These functions can be used to trigger specific operations on the system. If the functionality is configured it can be triggered with the assigned digital inputs from the application.



5.1 Default Configuration

If a new system is configured the default settings for these inputs include the “Allow Section Enable” function through all sections. In most of the cases this function is not used and for this reason the function will be de-configured in the Init part of the ST_Main task to avoid unnecessary interaction.

```
(* De-configure any "Allow Section Enable" inputs *)
(* Parameter 1092: Parameter Array Length (UDINT) *)
(* Parameter 1200: Digital Input Function (UINT) *)
status := SuperTrakServChanRead(0, 1092, 1200 - 1024, 1, ADR(udintValue), SIZEOF(udintValue));

IF (status = scERR_SUCCESS) THEN
    count := MIN(UDINT_TO_UINT(udintValue),
    SIZEOF(digitalInputFunction) / SIZEOF(digitalInputFunction[0]));

    status := SuperTrakServChanRead(0, 1200, 0, count, ADR(digitalInputFunction), SIZEOF(digitalInputFunction));

    IF (status = scERR_SUCCESS) THEN
        FOR i := 0 TO count - 1 DO
            (* Input Function 25: Allow Section Enable *)
            IF (digitalInputFunction[i] = 25) THEN
                (* Input Function 0: Not Configured *)
                digitalInputFunction[i] := 0;
                status := SuperTrakServChanWrite(0, 1200, i, 1, ADR(digitalInputFunction[i]), SIZEOF(digitalInputFunction[i]));
            END_IF;
        END_FOR;
    END_IF;
END_IF;
```

> **Important!**
>
> **If the Digital Input Functions are not used nothing need to be changed in the existing task and the following steps can be ignored!**

5.2 Configuration of Digital Input Functions

Inside the Automation Studio project only a few steps are needed to configure the function properly. The function should be placed in the cyclic part of the ST_Main task due to the highest priority.

```
// Digital IO Interface
SuperTrakProcessInputs(ADR(SuperTrakDigitalInput), SIZEOF(SuperTrakDigitalInput));
```

Parameter	Description	Datatype
SuperTrakDigitalInput	This parameter is representing the Digital Input interface. This array will be used to force the Digital Inputs on the system.	BOOL[0..7]

If the SuperTrakProcessInputs function is implemented the next step is to delete / comment the piece of code which de-configures the Digital Input Function inside the ST_Main task.

```
(* De-configure any "Allow Section Enable" inputs *)
(* Parameter 1092: Parameter Array Length (UDINT) *)
(* Parameter 1200: Digital Input Function (UINT) *)
status := SuperTrakServChanRead(0, 1092, 1200 - 1024, 1, ADR(udintValue), SIZEOF(udintValue));

IF (status = scERR_SUCCESS) THEN
    count := MIN(UDINT_TO_UINT(udintValue),
    SIZEOF(digitalInputFunction) / SIZEOF(digitalInputFunction[0]));

    status := SuperTrakServChanRead(0, 1200, 0, count, ADR(digitalInputFunction), SIZEOF(digitalInputFunction));

    IF (status = scERR_SUCCESS) THEN
        FOR i := 0 TO count - 1 DO
            (* Input Function 25: Allow Section Enable *)
            IF (digitalInputFunction[i] = 25) THEN
                (* Input Function 0: Not Configured *)
                digitalInputFunction[i] := 0;
                status := SuperTrakServChanWrite(0, 1200, i, 1, ADR(digitalInputFunction[i]), SIZEOF(digitalInputFunction[i]));
            END_IF;
        END_FOR;
    END_IF;
END_IF;
```

If this step is completed the setup for the Digital Input Functions are completed. The configuration of the single functions is done inside the Trakmaster in chapter “Input/Output”.

Important!

If the mentioned code will not be deleted the Digital Input Functions will be overwritten after every restart of the PLC!

Information

Additional information can be found in the help file of the SuperTrak library and the general Trakmaster help

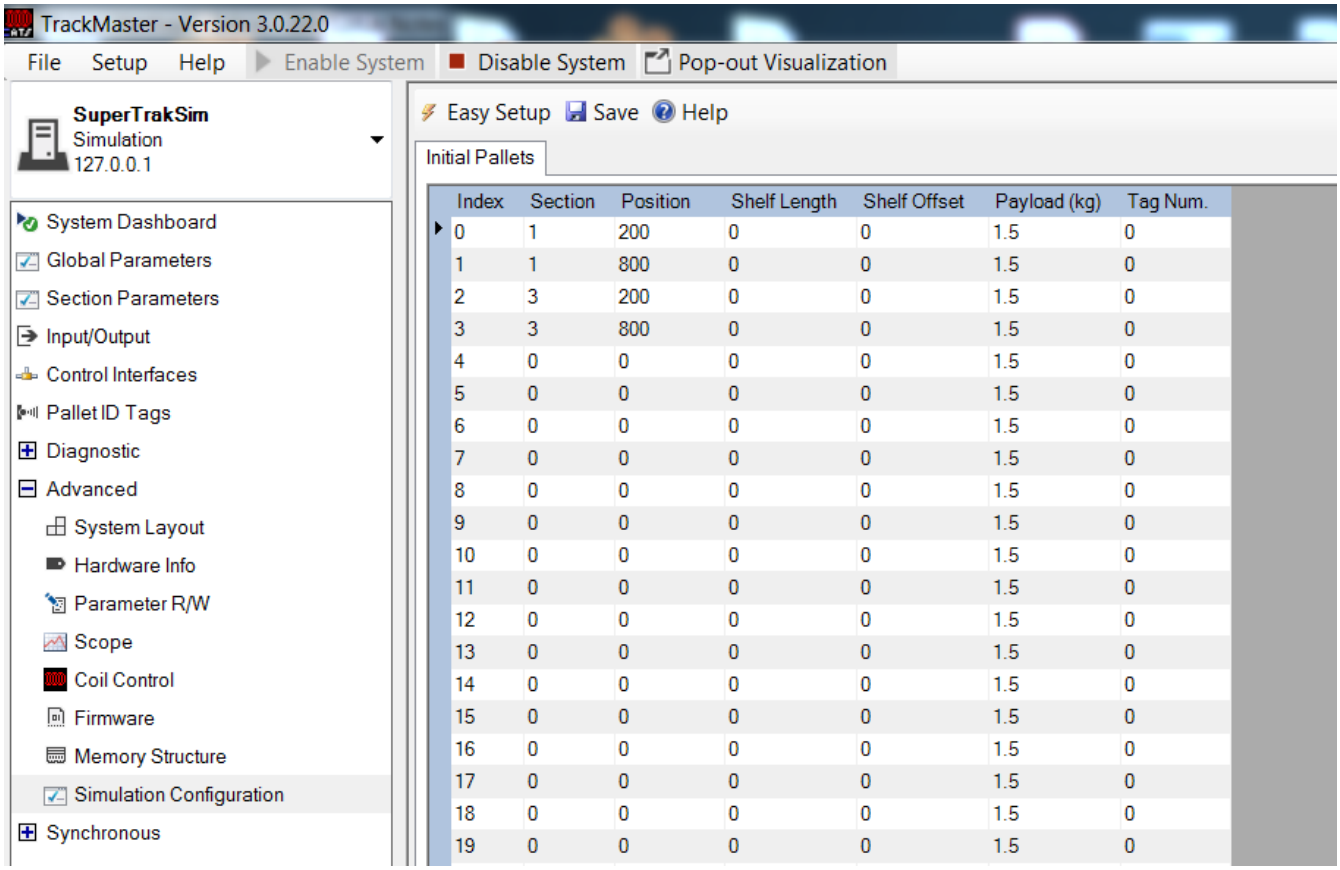
6 Add/Delete shuttles to the simulation

There are two options to add /delete shuttles:

- TrakMaster
  - Pro: Simple configuration
  - Con: Needs restart
- Automation Studio project
  - Pro: Can be changed during runtime
  - Con: Only working during section is disabled

Open the TrakMaster and navigate to the “Advanced” --> “Simulation Configuration” and enter the position of the shuttle.
To remove a shuttle set the Section and Position to 0.

After configuration is done, a restart is required to apply the changes.



Index	Section	Position	Shelf Length	Shelf Offset	Payload (kg)	Tag Num.
0	1	200	0	0	1.5	0
1	1	800	0	0	1.5	0
2	3	200	0	0	1.5	0
3	3	800	0	0	1.5	0
4	0	0	0	0	1.5	0
5	0	0	0	0	1.5	0
6	0	0	0	0	1.5	0
7	0	0	0	0	1.5	0
8	0	0	0	0	1.5	0
9	0	0	0	0	1.5	0
10	0	0	0	0	1.5	0
11	0	0	0	0	1.5	0
12	0	0	0	0	1.5	0
13	0	0	0	0	1.5	0
14	0	0	0	0	1.5	0
15	0	0	0	0	1.5	0
16	0	0	0	0	1.5	0
17	0	0	0	0	1.5	0
18	0	0	0	0	1.5	0
19	0	0	0	0	1.5	0

A shuttle can also be added by using the “SuperTrakSimCreatePallet” function

SuperTrak - SuperTrakSimCreatePallet()

Creates a simulated pallet.

The section should be disabled while adding or removing pallets. Otherwise, faults might occur.

If the function fails, it returns 65535.

Graphic view▸

Table▾

I/O	Parameter	Data Type	Description
IN	tagID	USINT	IR tag serial number (may be zero if IR tags are not used)
IN	section	UINT	Section number where the pallet will be created
IN	position	REAL	Position on the section, in millimetres, where the pallet will be created
IN	shelfWidth	REAL	Shelf width, in millimetres
IN	shelfOffset	REAL	Shelf offset from center, in millimetres
IN	mass	REAL	Payload mass, in kilograms
OUT	Return Value	UINT	Create a simulated pallet

To delete a shuttle the “SuperTrakSimDeletePallet()” function is used.
hSimPallet --> shuttle ID

SuperTrak - SuperTrakSimDeletePallet()

Removes a simulated pallet.

The section should be disabled while adding or removing pallets. Otherwise, faults might occur.

When a simulated pallet is removed, the simulated encoder feedback is affected immediately. The conveyor software recognizes the removed pallet after five seconds, and then the section can be enabled again.

Graphic view▸

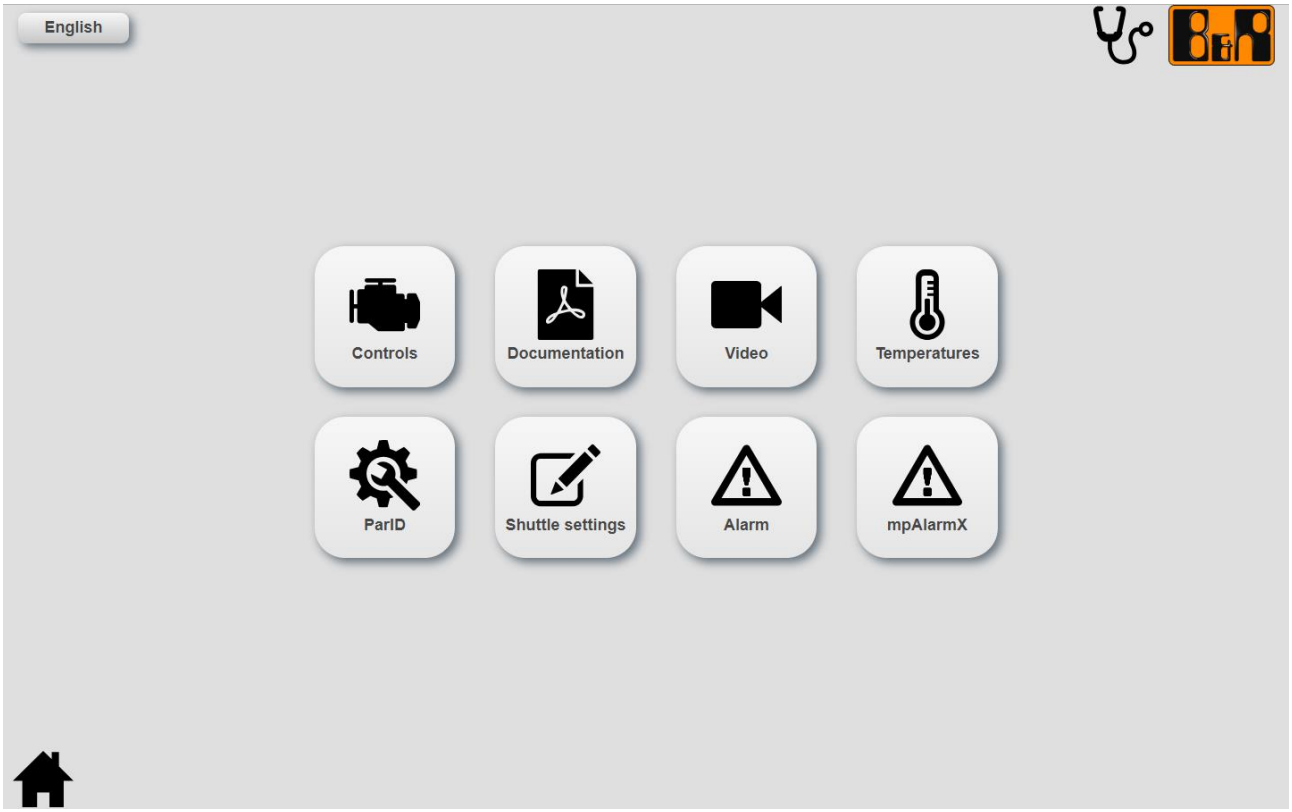
Table▾

I/O	Parameter	Data Type	Description
IN	hSimPallet	UINT	Handle value for the simulated pallet to be removed
OUT	Return Value	BOOL	Remove a simulated pallet

7 mappView visualization

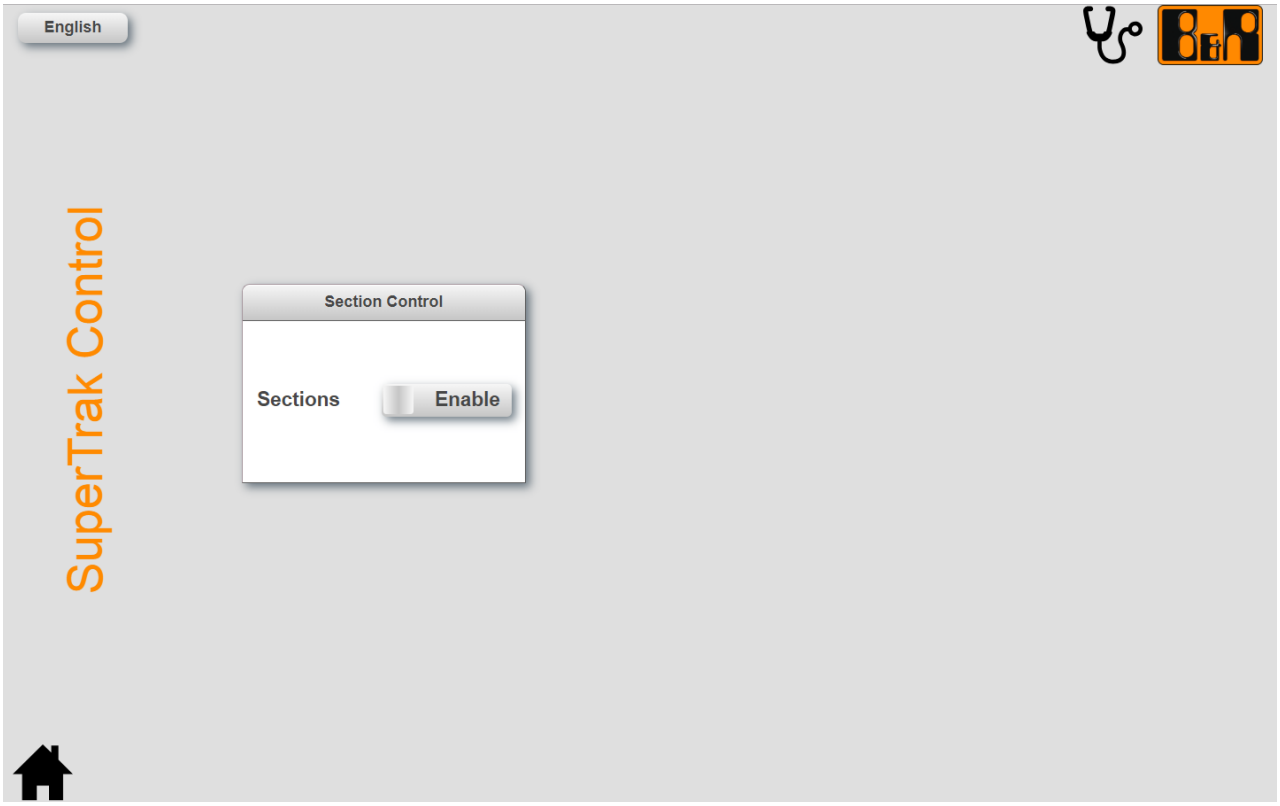
Inside the project a mappView visualization has been inserted. This can be used to control the Super-Trak. The URL for simulation is http://127.0.0.1:81/index.html?visuId=SuperTrakDemo and on hardware http://192.168.13.3:81/index.html?visuId=SuperTrakDemo.

7.1 Main page

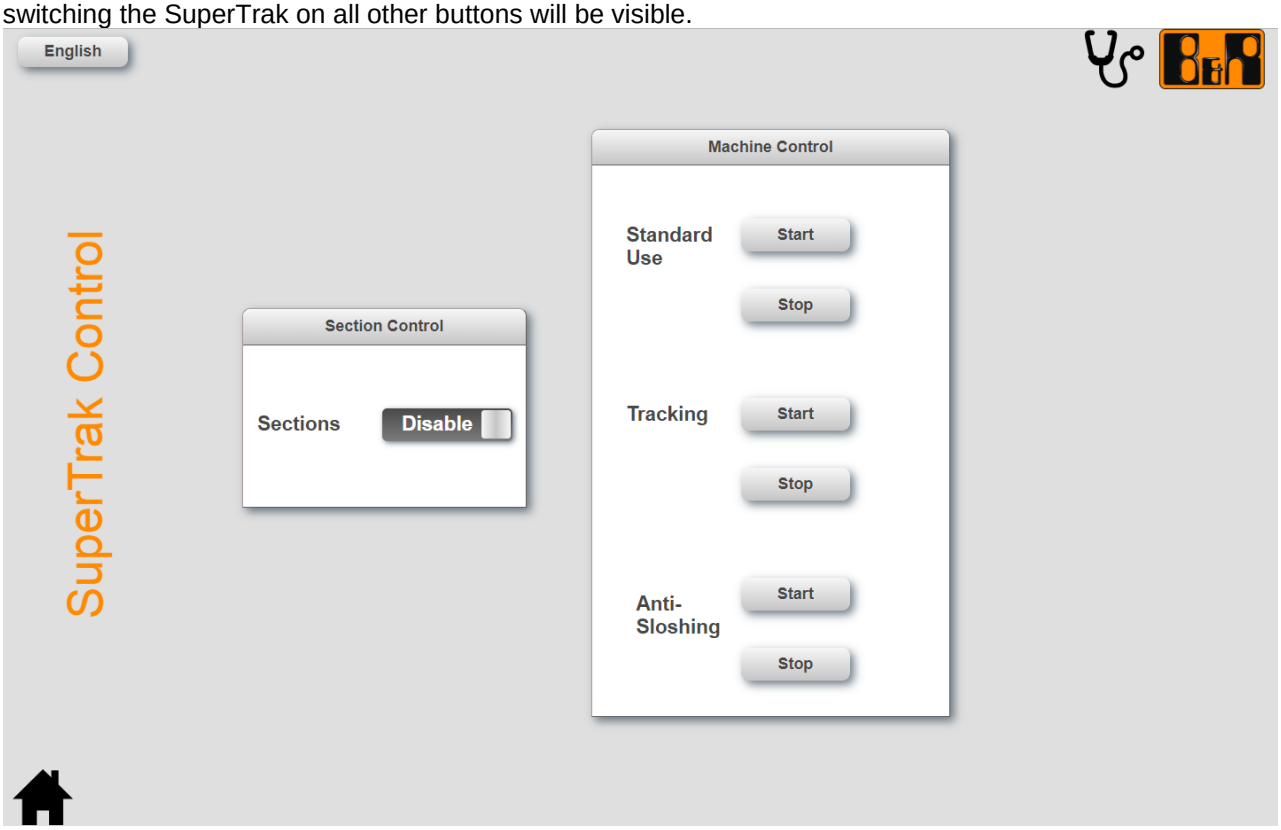


From this page all other pages can be accessed.
On the bottom of every page the “Home” button is available. This button switches to the “Main page”.
On the top bar the language can be selected. (English and German).

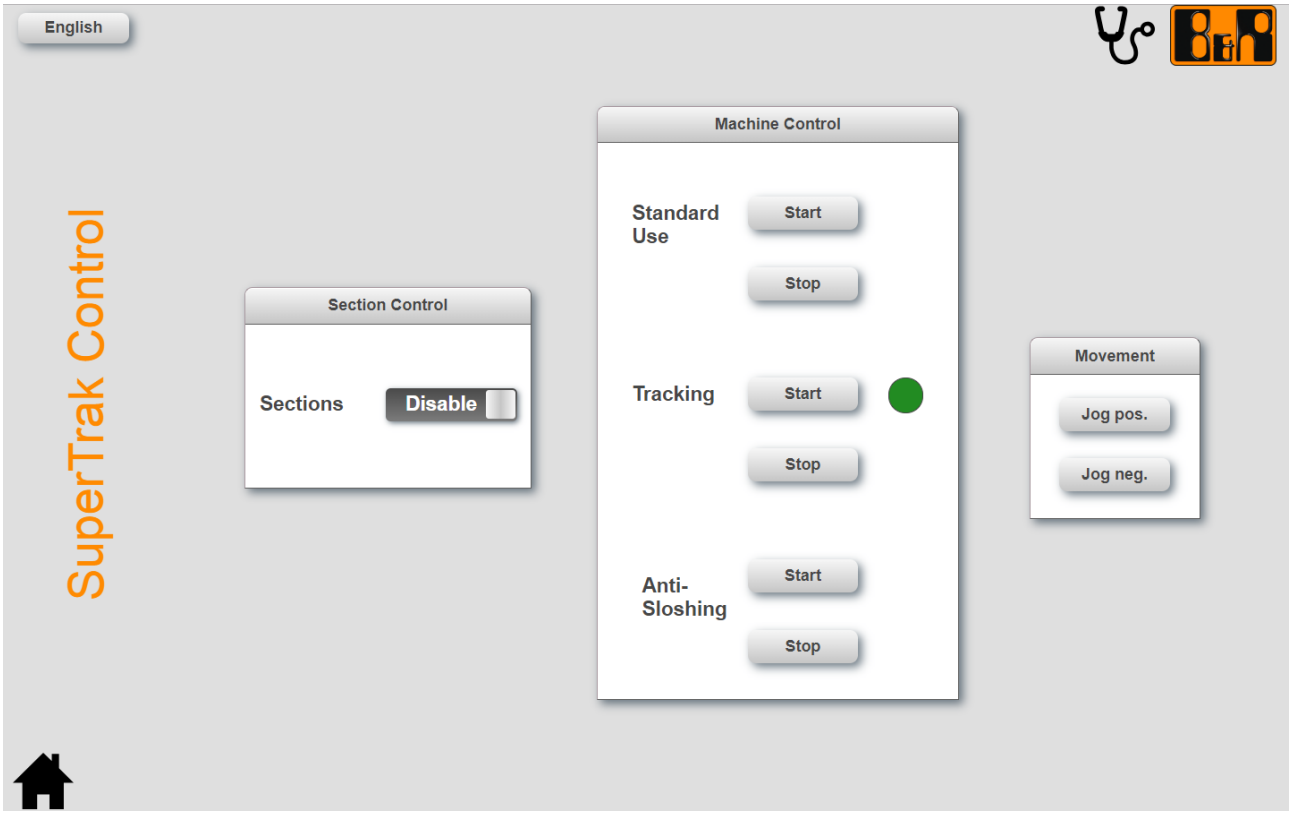
7.2 Controls page



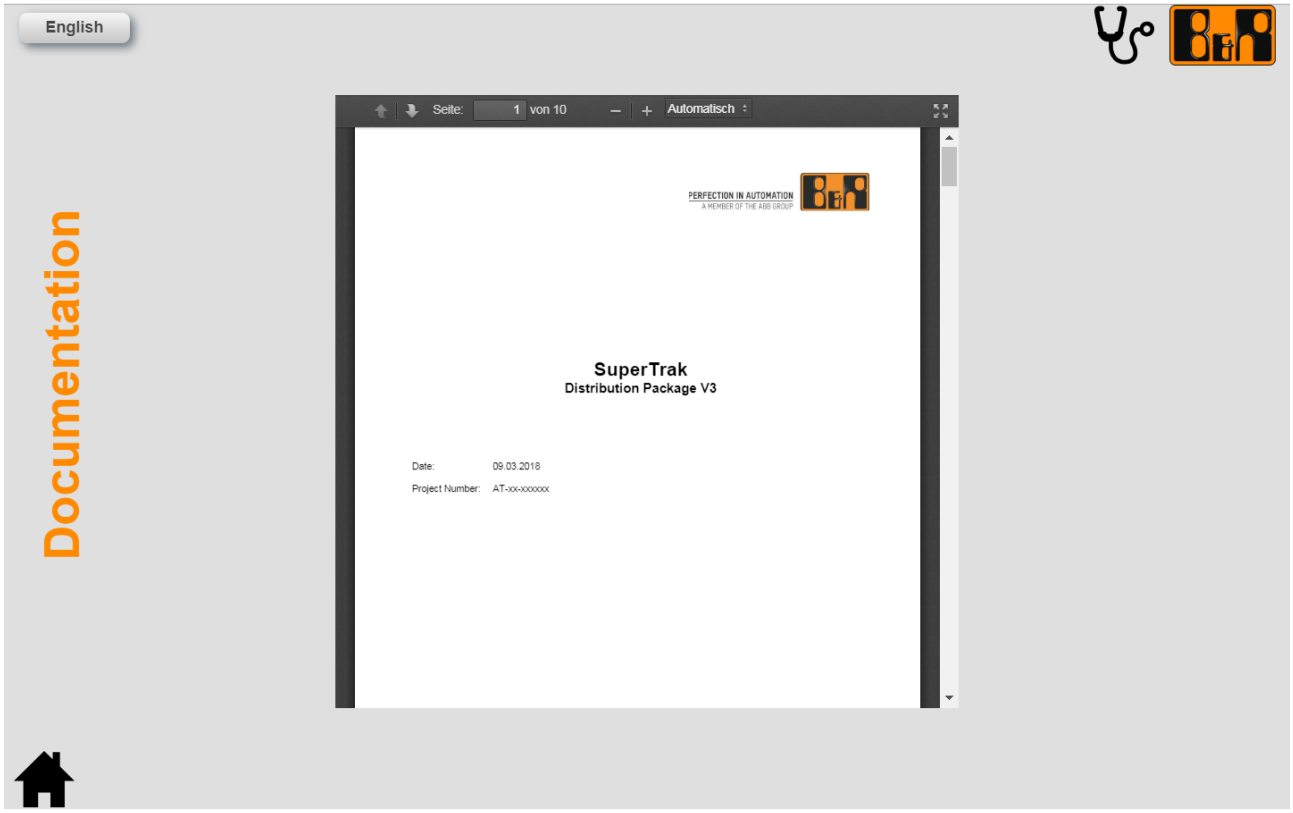
At the first start of the system only the “Sections Enable” button is available. After pressing the button and switching the SuperTrak on all other buttons will be visible.



To enable one mode the “Start” button must be pressed. To stop the mode press “Stop”. If you start the Tracking function a pop-up window will appear. With this window the shuttle can be jogged.

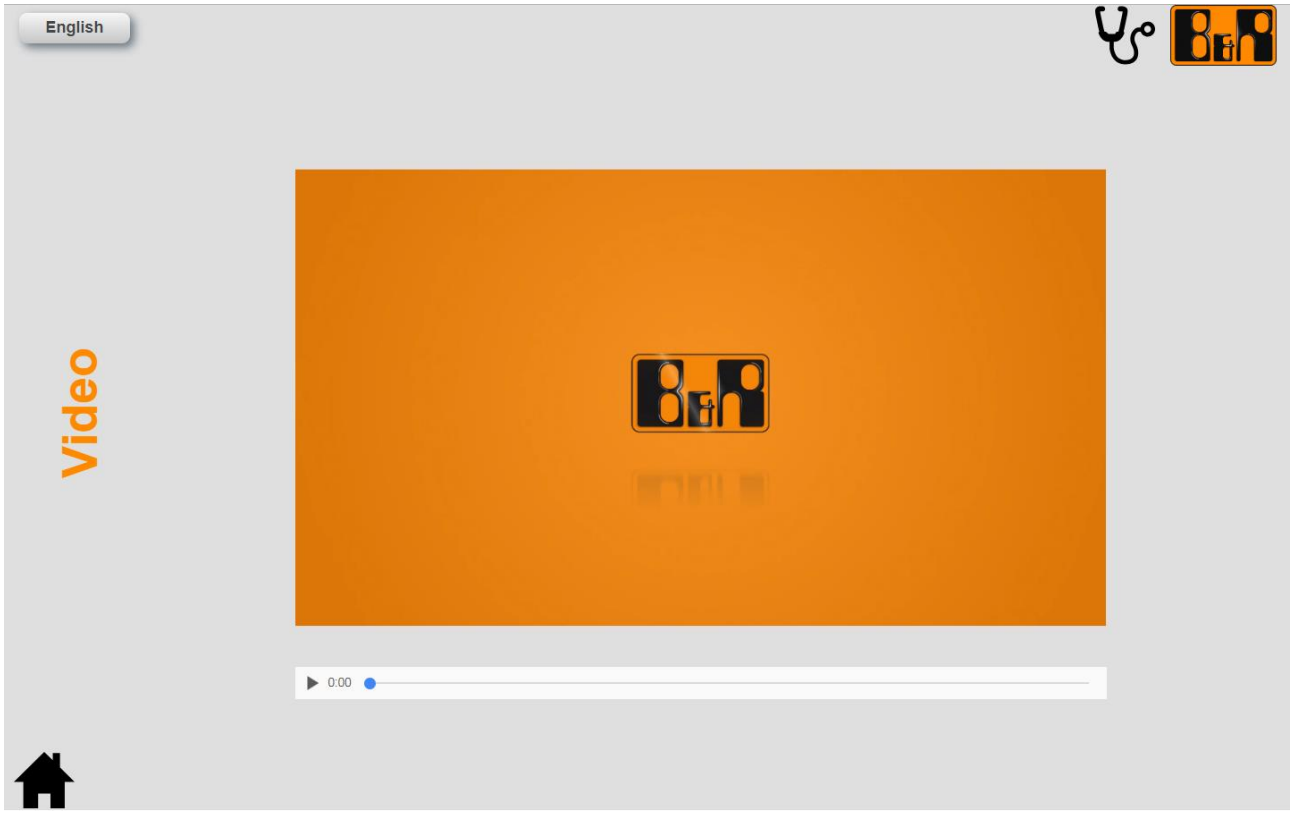


7.3 Documentation page



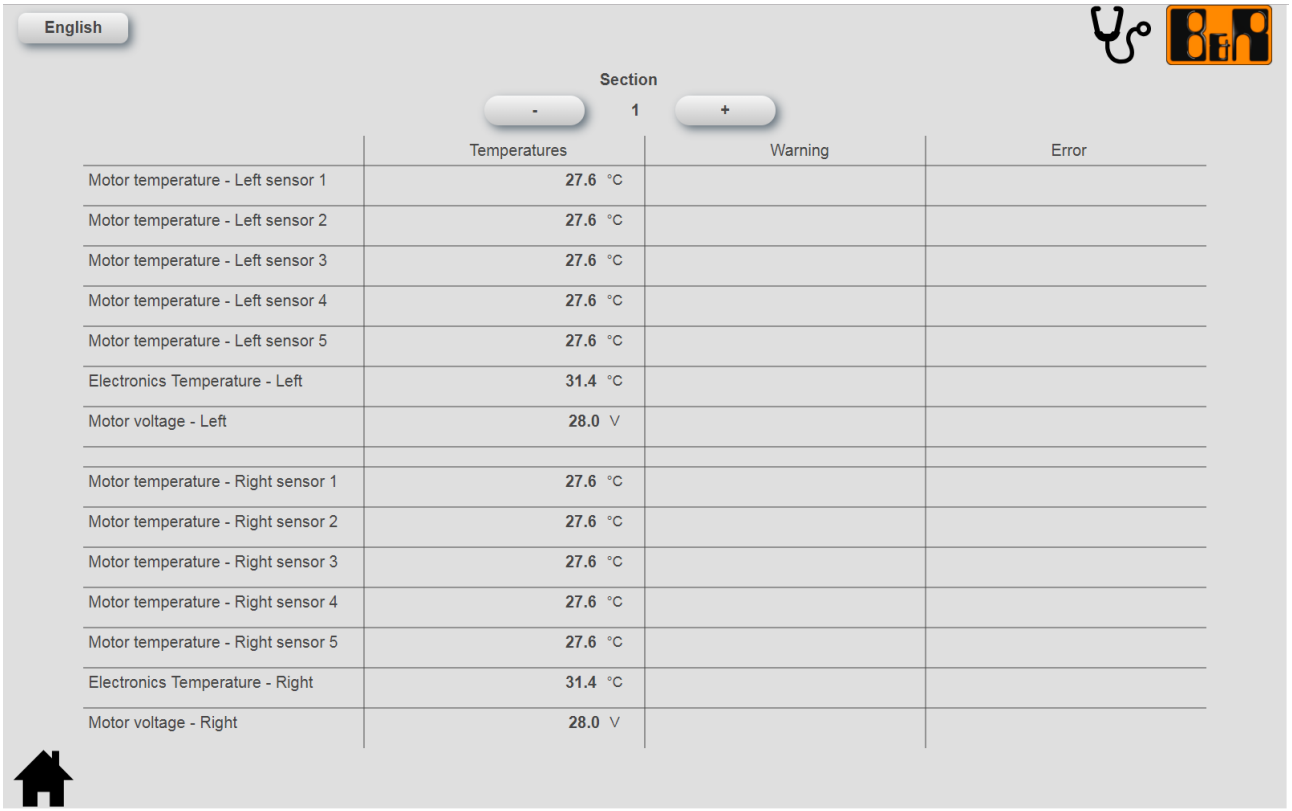
On this page the documentation for the Distribution package is displayed.

7.4 Video page



This video shows a demo version of the SuperTrak.

7.5 Temperature page



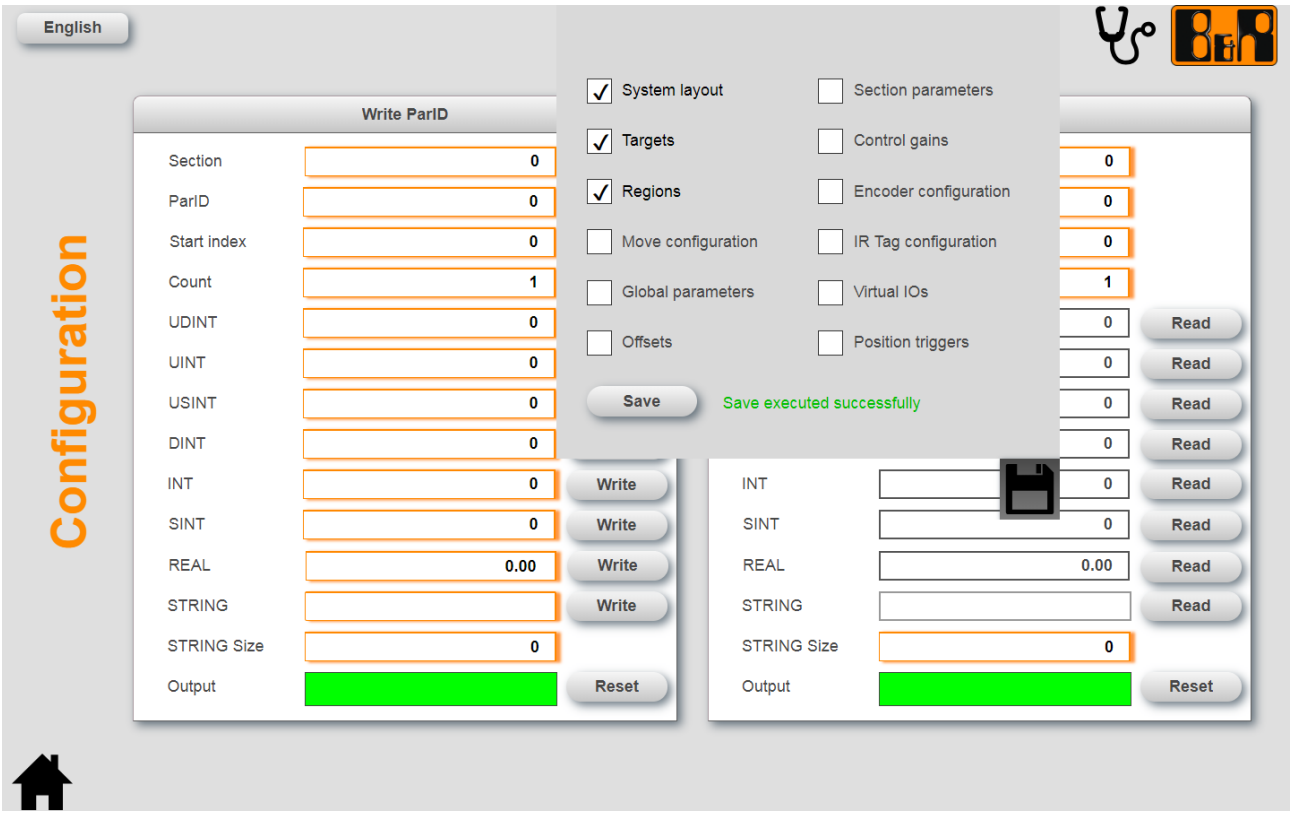
	Temperatures	Warning	Error
Motor temperature - Left sensor 1	27.6 °C		
Motor temperature - Left sensor 2	27.6 °C		
Motor temperature - Left sensor 3	27.6 °C		
Motor temperature - Left sensor 4	27.6 °C		
Motor temperature - Left sensor 5	27.6 °C		
Electronics Temperature - Left	31.4 °C		
Motor voltage - Left	28.0 V		
Motor temperature - Right sensor 1	27.6 °C		
Motor temperature - Right sensor 2	27.6 °C		
Motor temperature - Right sensor 3	27.6 °C		
Motor temperature - Right sensor 4	27.6 °C		
Motor temperature - Right sensor 5	27.6 °C		
Electronics Temperature - Right	31.4 °C		
Motor voltage - Right	28.0 V		

On this page the temperature sensors of the SuperTrak are visible. Additionally the voltage of the motor on the left and right side are shown.
The column “Warning” will display a yellow box if the temperature rises above a limit and the column “Error” a red box.

7.6 ParID page

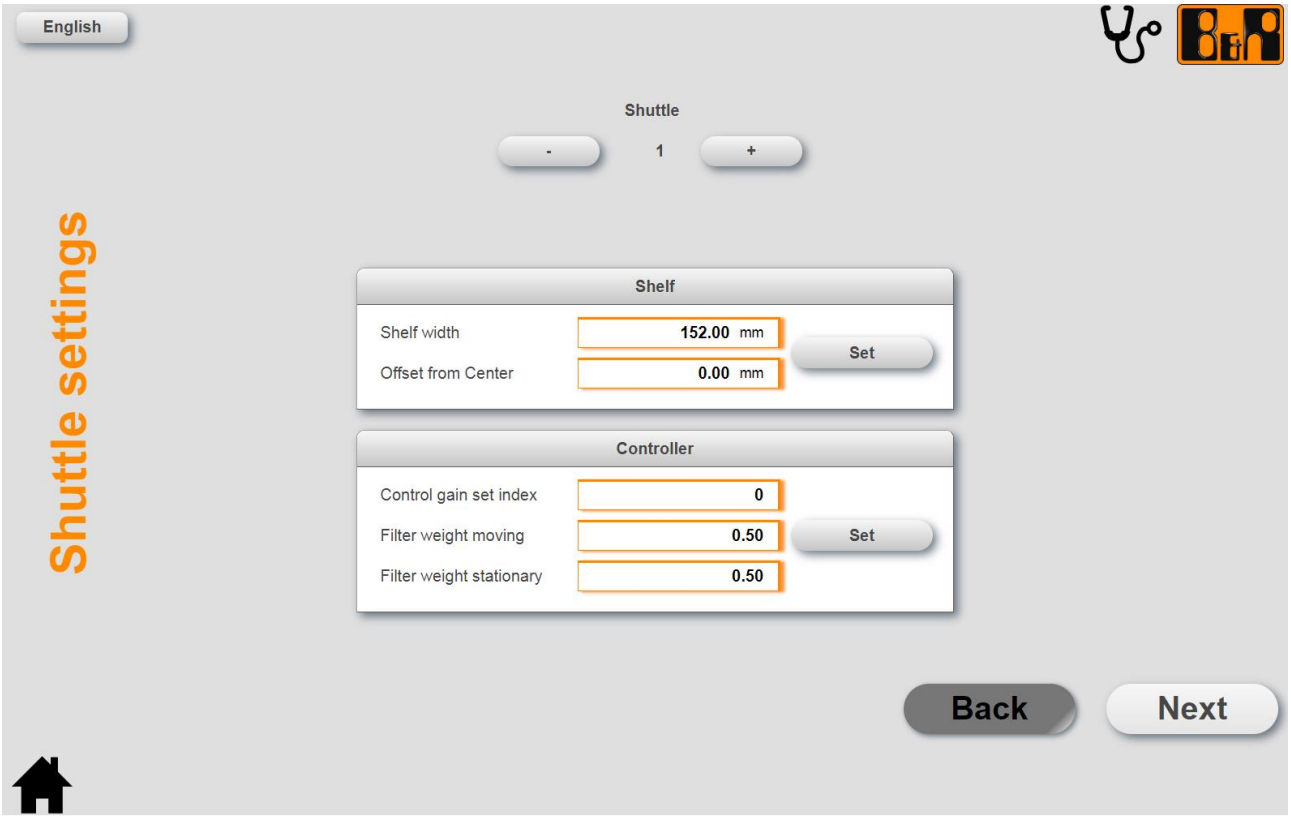
On this page ParIDs can be written and read. Depending on the ParID the right settings must be chosen. --> Section, ParID, StartIndex, Count and the type that should be written / read. The green box on the bottom will change to red if parameters were wrong and the FUB has an error. With the reset button the error can be reset.

7.6.1 Save parameter



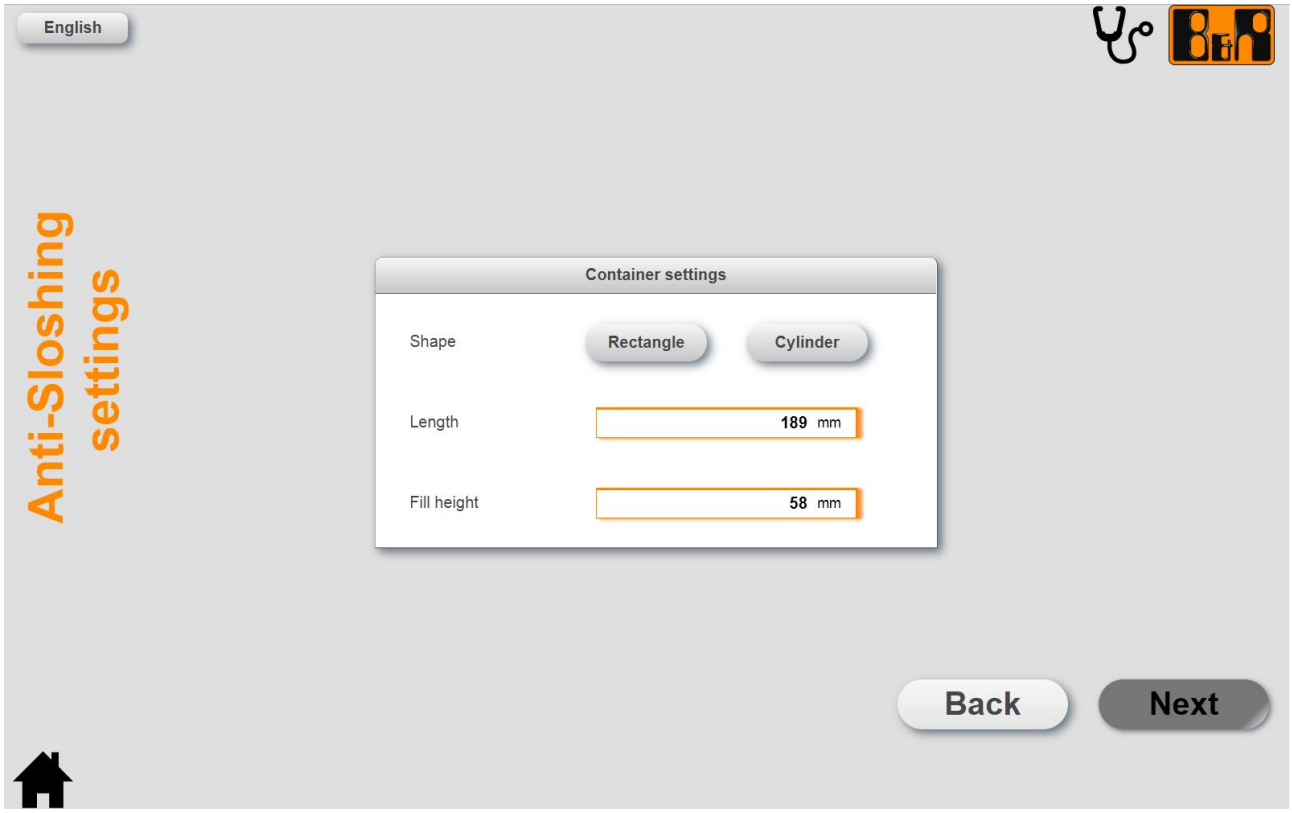
The save icon in the top bar contains a save fly out. There are all parameters, that should be saved, can be selected. With the “Save” button on the bottom the parameters will be saved. A status will display if all parameters are saved correctly. This message will disappear after the next parameter is written.

7.7 Shuttle settings page



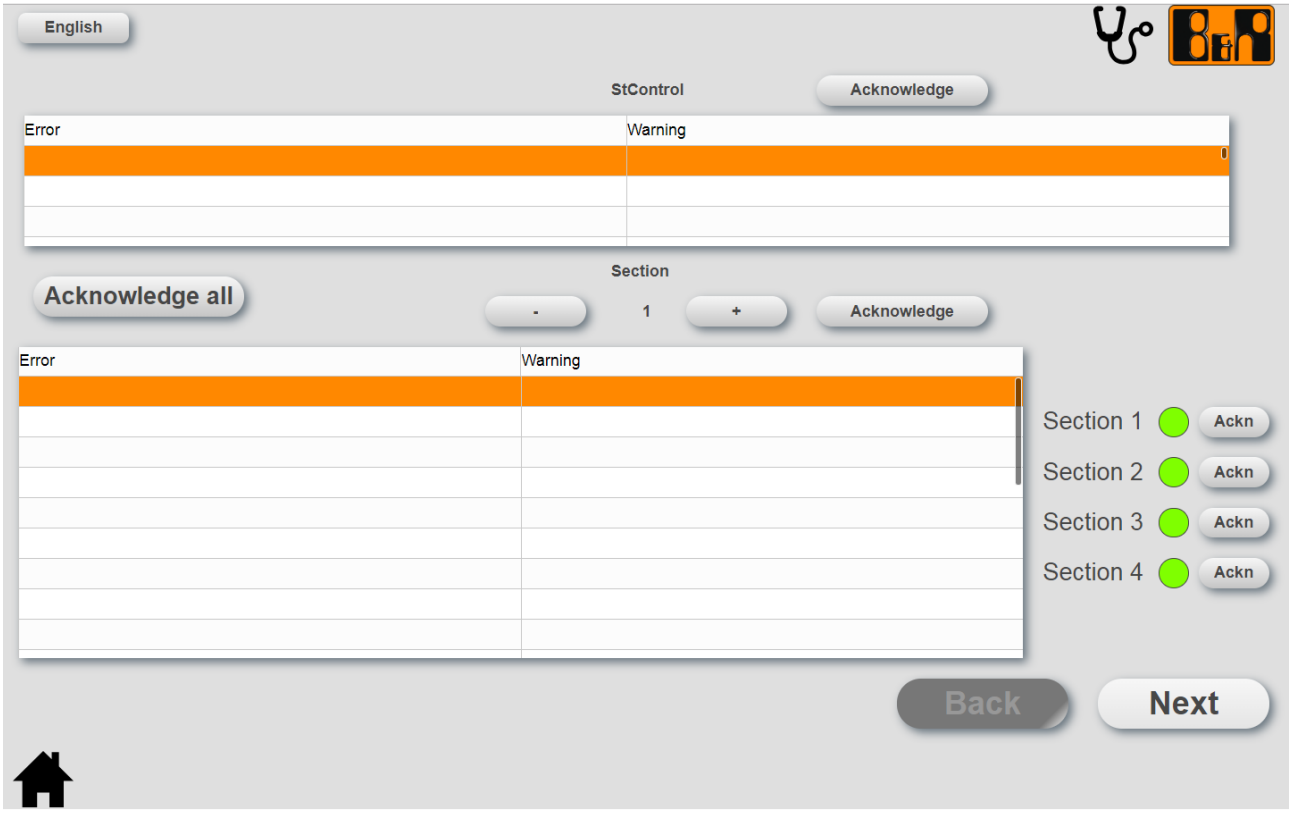
Here the shuttle settings can be configured. The “shelf width”, the “Offset from Center”, “Control gain set index”, “Filter weight moving”, “Filter weight stationary” can be set.

7.8 Anti-sloshing settings page



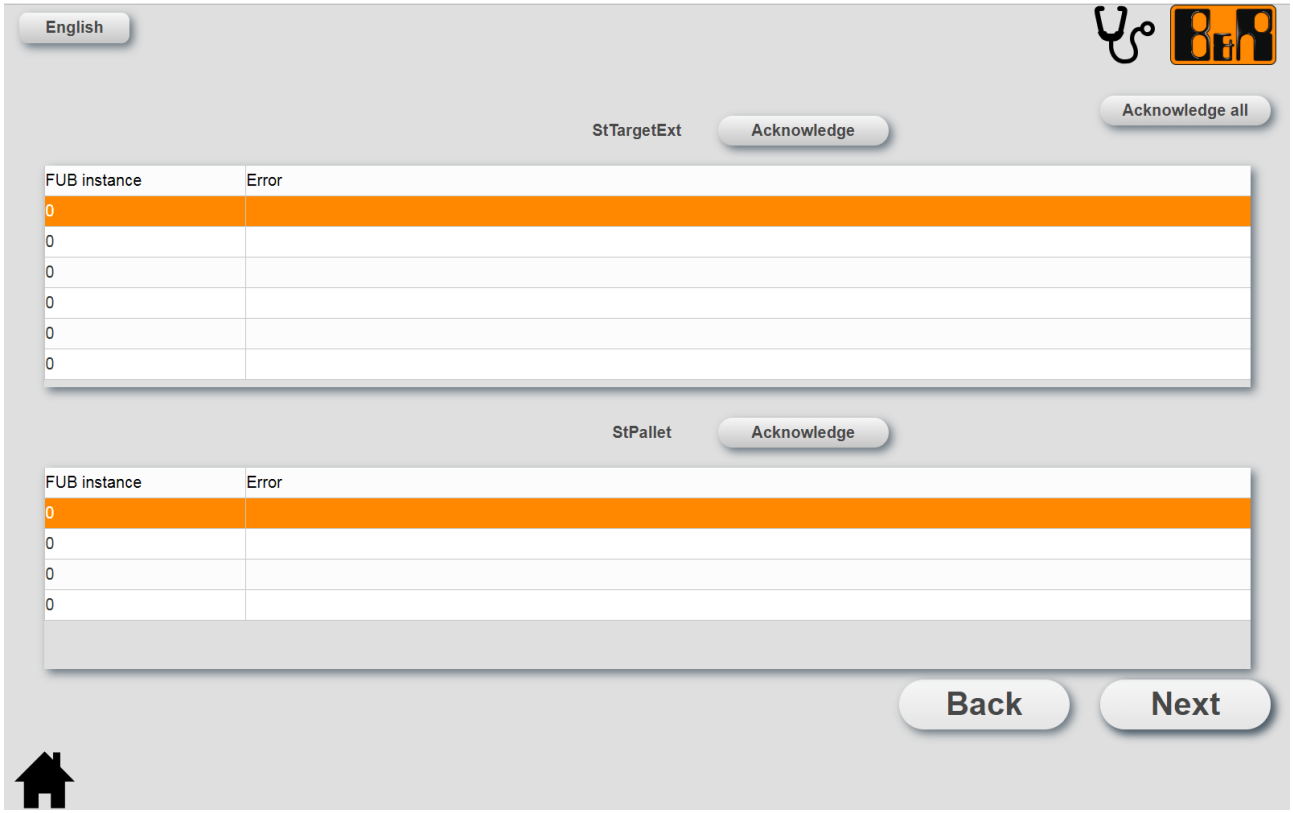
On this page container settings can be made. The new parameters will be used when the Anti-Sloshing function is started again.

7.9 Alarm page #1



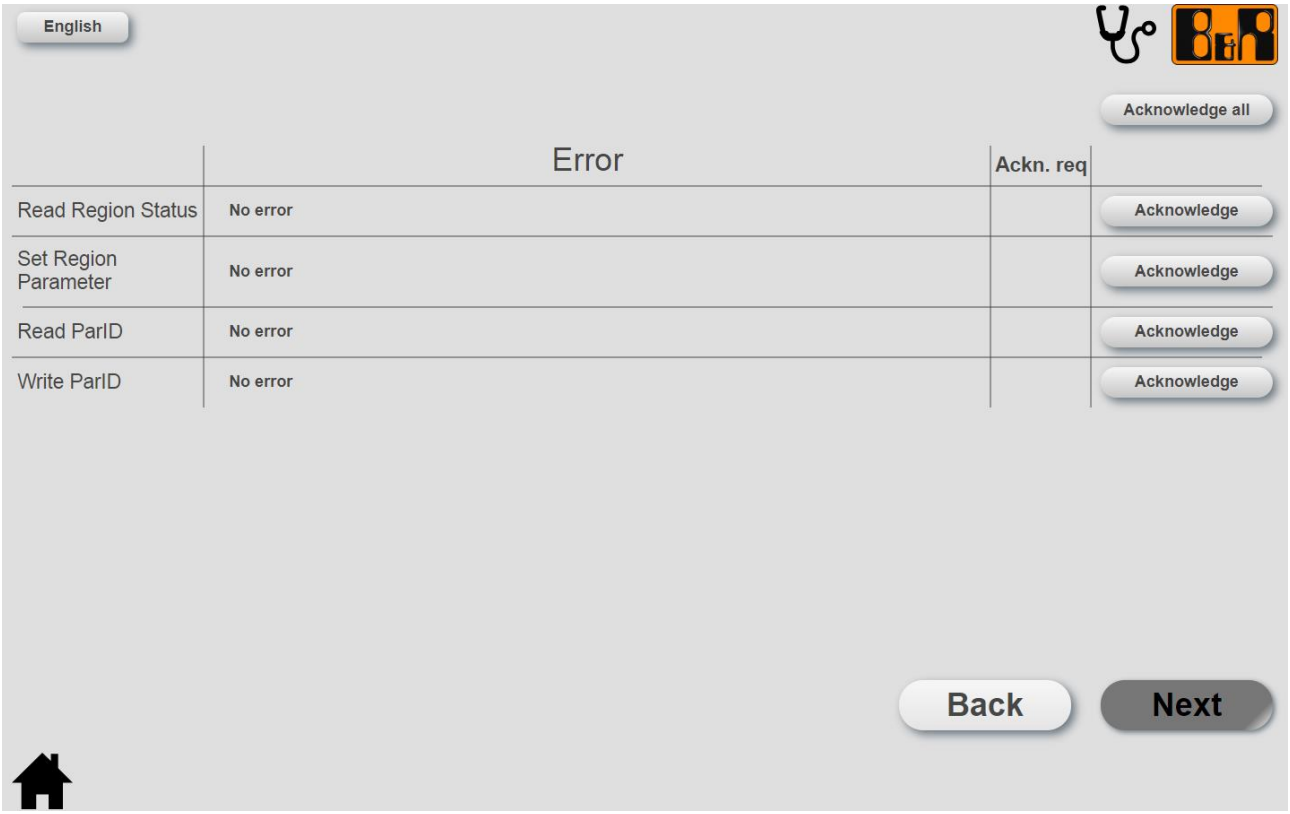
On the first “Alarm” page the “StControl” FUB and the “StSection” FUBs can be handled. This FUBs control the errors and warnings appearing on the system and on the sections.

7.10 Alarm page #2



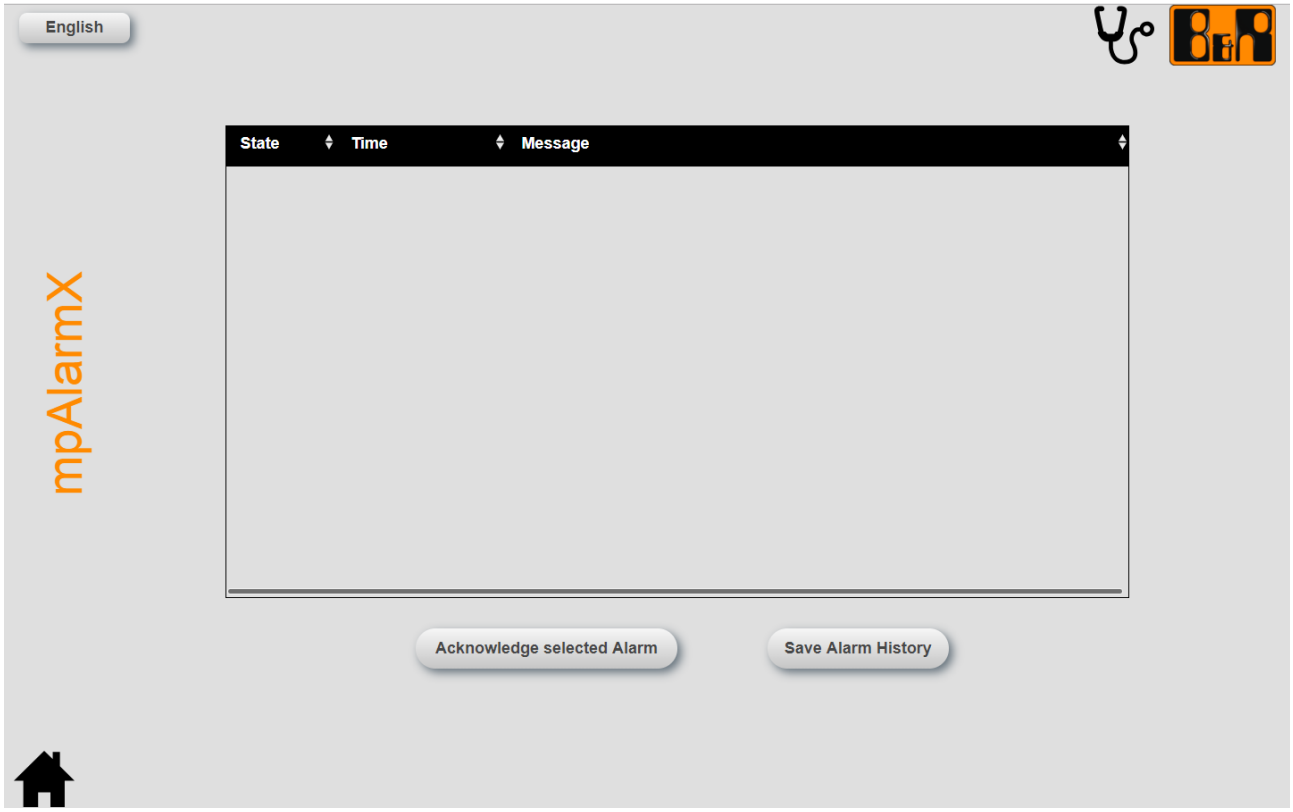
On the second “Alarm” page the StTargetExt and StPallet FUBs can be acknowledged. This FUBs will handle only FUB specific faults. No SuperTrak errors and warnings!

7.11 Alarm page #3



On the last “Alarm” page the StReadPnu and StWritePnu for enabling/disabling the region can be acknowledged. Furthermore the StHmiReadParID and StHmiWriteParID can be handled.

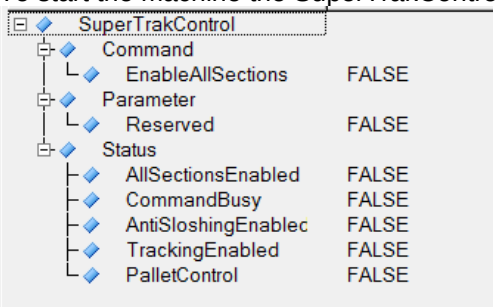
7.12 AlarmX page



mappAlarmX is implemented in this Distribution package and can be used on the “AlarmX” page. The “Acknowledge selected Alarm” button allows the HMI user to acknowledge the previous selected alarm. With the “Save Alarm History” the error list will be saved at the CFast card that is inserted in the APC.

8 Starting the machine

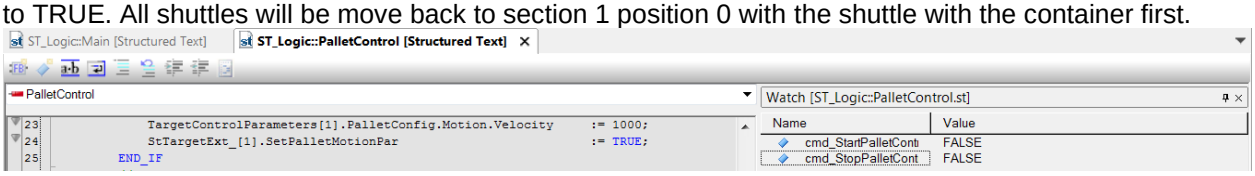
To start the machine the SuperTrakControl variable should be inserted into the watch window.



The SuperTrak can be switched on with the command EnableAllSections. After that the shuttles will move to section 1 position 0. To power off put the command to FALSE.

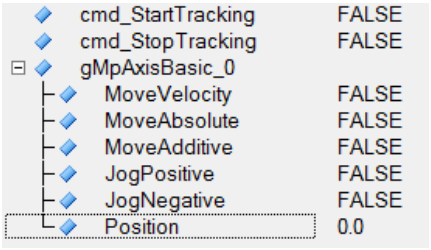
9 Control shuttles

After powering the machine it is possible to move the shuttles. To start this movement, the variable cmd_StartPalletControl should be set. To stop this mode the variable cmd_StopPalletControl must be set to TRUE. All shuttles will be move back to section 1 position 0 with the shuttle with the container first.



10 Expert mode

A pure virtual axis is inserted to use it as Master. The shuttle will be the slave and move the 1:1 the same way as the Master. To start this cmd_StartTracking must be set. Then you can use the gMpAxisBasic_0 FUB to move the shuttle. To stop it cmd_StopTracking should be used.



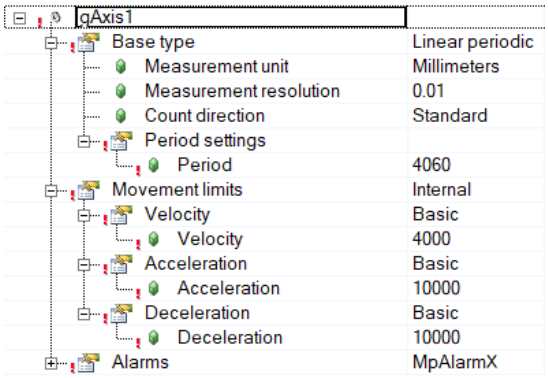
After resetting the fault, the shuttle tries to get to the position that is set by the SuperTrakPalletControl function.

Types of errorhandling:

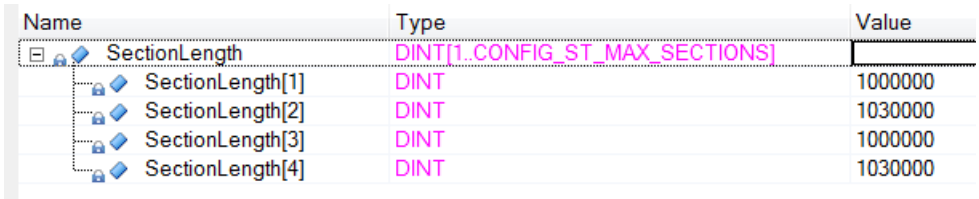
- Do not call the SuperTrakPalletControl function. Use the StPallet FUB to release the shuttle after you reset the fault.
- Read the position of the shuttle with SuperTrakGetPalletInfo. Calculate the position of your shuttle to an axis position. Move the axis to the shuttles location and acknowledge the fault. After that the axis can be moved. (No SuperTrakBeginExternalControl needed) Otherwise send the shuttle to a target with StPallet.

Caution!

No Collision avoidance active during Expert mode!



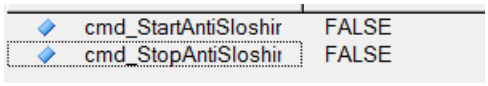
The Limits and the period must be set for every type of SuperTrak.
4060 --> 4m SuperTrak, 6060 --> 6m SuperTrak



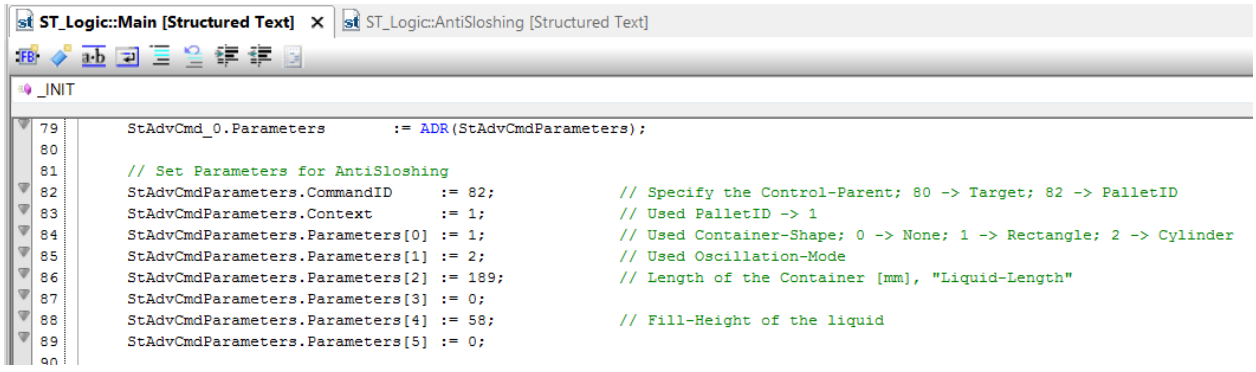
The SectionLength have to be configured for every section. The length must be in µm, otherwise it will start to vibrate.

11 Anti-Sloshing

To switch on/off the variables cmd_StartAntiSloshing and cmd_StopAntiSloshing must be used.



The shuttle with the container will move between section 3 positions 100 and 800.
The length of the container on the shuttle should be 189mm and the fill height 58mm. The shape should be Rectangle. If this condition is not fulfilled, the Anti-Sloshing will not be working fine.
Adjustments have to be done.



When this mode is switched off the shuttles will move until the container will be on the target 1. (Section 1 position 0)

12 Error Messages

To read error messages the bits must be read.
Additionally the StatusID of the function block can be used.

The bit can be found at **`StSection[Index].Info.SuperTrak.SectionFaultBits.5 (e.g. Bit 5)`**
The right error text can be found in TrakMaster help.
In this project the error messages are already implemented.

ErrorTexts	STRING[80][0..31]	☐	☑	☐	☐	'No error','Motor supply voltage out of range',2('Not specified'),'Ex... coil current','High temperature','... specified','Ga... network error','Excessi... coil current(I²T)','E... current loop error','Not specified','Coil driver(s) shut down',2('Not specified'),'En... calibration required','Exc... pallet following error','Unreco... pallet(s) detected',2('N... specified'),'T... pallets in
WarningTexts	STRING[80][0..31]	☐	☑	☐	☐	'No warning','Appl... warning',2('Not specified'),'Th... sensor malfunction','... temperature','... specified','Ga... network warning','Exc... coil current (I²T)',2('Not specified'),'P... ID tag warning','Dupl... Pallet ID detected',2('N... specified'),'C... out of range during encoder handoff','Cons... encoder readings out of range','Invalid

This can be used for StSection and StControl.
For other FUBs there is the StatusID. The StatusID can be checked with constants inside the StCom library.

```
CASE ErrorInfo.StTargetExt.StatusID[Index] OF
    stCOM_ERR_FB_INSTANCE_REG:
        ErrorInfo.StTargetExt.ErrorText[Index]  := 'Instance of this function block already registered';

    stCOM_ERR_WRONG_PARAMETER:
        ErrorInfo.StTargetExt.ErrorText[Index]  := 'Wrong parameter';

    stCOM_ERR_COMMUNICAITON_TIME_OUT:
        ErrorInfo.StTargetExt.ErrorText[Index]  := 'Timeout for communication to SuperTrak';

    stCOM_ERR_NO_STCONTROL_REG:
        ErrorInfo.StTargetExt.ErrorText[Index]  := 'There is no instance of StControl registered';
```

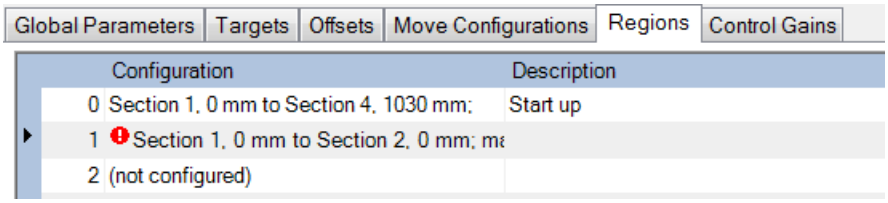
12.1 Region not active

If a problem with region occurred on the system the Warning 17 will be displayed.
In Automation Studio WarningBit 17 is set.

```
StSection[Index].Info.SuperTrak.SectionWarningBits.17 = TRUE
```

Inside TrakMaster there will be a red warning symbol displayed. This means that the region is not active.

If “(not configured)” is displayed the region is not enabled. It is possible that parameters are set but the region has no effect on the system.



12.2 mappAlarmX

The error Messages are configured inside the mapp configuration. To add or remove alarms simply do this in the configuration. The mappAlarm function blocks are executed in the AlarmX Action.

Following alarms are monitored:

- All section faults with the StSection function blocks
- System faults with the StControl function block
- SDC Axis alarms

13 Read temperatures

To read the temperatures of the SuperTrak, the SuperTrakServChanRead() function is used.

1570: Hardware Sensor Values

Returns values from hardware sensors. Temperatures are in units of 0.01°C.
Voltages are in units of 0.01V.

Index	Description
0 - 4	Left motor temperature, thermistors 1 - 5
5	Left coil driver electronics temperature
6	Left coil driver motor voltage
7	(reserved)
8 - 12	Right motor temperature, thermistors 1 - 5
13	Right coil driver electronics temperature
14	Right coil driver motor voltage
15	(reserved)

```
SuperTrakServChanRead(SectionID, TemperatureID, StartIndex, SIZEOF(Temperatures.Section[Sec-
tionID].Value)/SIZEOF(Temperatures.Section[SectionID].Value[0]), ADR(Temperatures.Section[Sec-
tionID]),SIZEOF(Temperatures.Section[SectionID]));
```

Every cycle the SectionID must be changed to get all values. To get the temperature, the values must be divided by 100.

13.1 Hardware Status in Trakmaster

Starting with version 3.0.30.0, the simulation uses a thermal model powered by machine learning technology to estimate operating temperatures. To obtain temperature estimates in simulation, ensure that the conveyor thermal model service is installed. If the thermal model service is not present, then the simulation displays "placeholder" temperature values that are not meaningful.

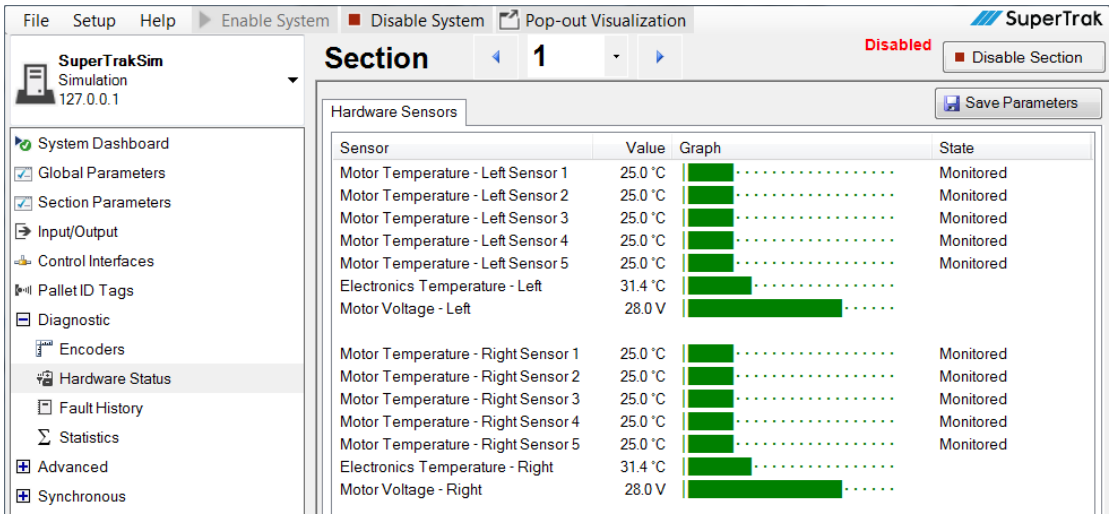
The model was trained under the following conditions:

- Guard doors closed
- Ambient temperature of 25°C within the machine enclosure
- Conveyor electronics enclosures closed
- No active cooling
- No additional heat sources
- No obstructions to airflow (convection)
- Temperatures measured after 6 hours of continuous steady-state operation

Applications may experience differences in thermal behavior due to factors such as:

- Ambient temperature
- Active cooling
- Processes that produce heat
- Structures or mechanisms that impede airflow, such as shrouding the conveyor
- Interruptions or irregularities in machine operation

To obtain meaningful temperature estimates from the simulation, ensure that it has been running in steady state for two to three minutes. If an estimated temperature value is near its limit, then it is worthwhile to test a representative subset of the process on real conveyor hardware.



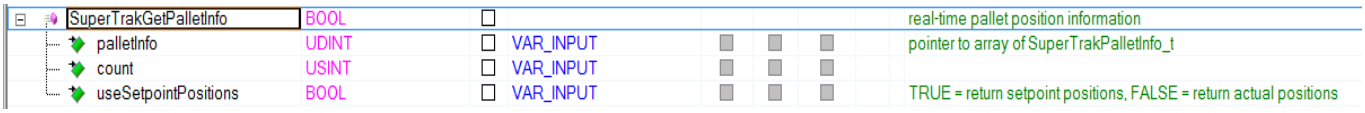
Important!

This tool can be used to get a rough overview of the expected temperature which the system will gain. It should not be used as a sizing tool due to the quite enlarged error!

14 Get shuttle position

With the SuperTrakGetPalletInfo() function the position of each shuttle can be read.
The sequence of how the information is stored inside the array depends on the internal shuttle ID of the SuperTrak. This means that the shuttle with ID = 5 can be stored in array index #1 due to the internal ID.

Get the actual position: SuperTrakGetPalletInfo(ADR(Data), NrOfShuttles, FALSE);
Get the set position: SuperTrakGetPalletInfo(ADR(Data), NrOfShuttles, TRUE);



This function provides information every cycle.

15 Release notes

15.1 Distribution Package

Version 5.7 (2024 Feb 1)

- Updated to SuperTrak Controller Version 3.0.48.0

Version 5.06.3 (2023 Jan 12)

- Maintenance release of SuperTrak library

Version 5.06.2 (2022 Aug 31)

- Update on StCom library due to a bugfix of communication issues.

Version 5.06.1 (2022 July 29)

- Due to issues with SuperTrak functions in combination with mappServices 5.17 the sample project was updated to mapp versions 5.18.

Version 5.06 (2022 July 8)

- Updated to SuperTrak Controller Version 3.0.36.0
- Update to mappMotion
- Changed error handling of function blocks

Version 5.05 (2021 May 3)

- Updated to SuperTrak Controller Version 3.0.26.2

Version 5.04 (2020 Sept 1)

- Updated to SuperTrak Controller Version 3.0.22.4
- Extended diagnosis possibilities

15.2 TrakMaster

Please find the actual revision history of Trakmaster inside Trakmaster help in chapter Release Notes / Configuration Tool.

15.3 SuperTrak library

Please find the actual revision history of the SuperTrak library inside Trakmaster help in chapter Release Notes / Controller Software.

15.3.1 SuperTrak maintenance release versions

Version 3.0.36.1 (2022 Nov 28)

- Fixed an issue with merging for sync zones with multiple master periods per pallet. This issue only occurs if the first sync zone segment does not start at a master value of 0.
- Resolved an issue that could cause the configuration software to report an error during connection, if the configured shelf length is large (e.g. 500 mm).
- Updated Gateway FPGA firmware to version 3.0.100.0. This resolves an issue with I2T fault clearing, which caused following error faults due to loss of coil current drive.
- Implemented a workaround to avoid most cases of incorrect "collision deadlock" warnings.

15.4 StCom library

Version 5.7 (2024 Feb 1)

- Rework of ErrorReset commands with new approach via ServiceChannel, which adds a more stable way of reseting all kind of errors.

Version 5.06.2 (2023 Jan 12)

- Resolved issue which was causing communication issues if cycle time was configured slower than 800µs, especially on bigger layouts
- Documentation updates on StTargetExt and StPallet function blocks
- Resolved issue with format of help pages

Version 5.06.1 (2022 Aug 31)

- Bugfix on communication channel due to timeout issues

Version 5.06.0 (2022 Jul 8)

- Added additional error reaction for parameters out of range
- Adjusted limits for parameters

Version 5.05.0 (2021 May 3)

- Bugfix on Hover functionality
- Added manual on how to configure digital IO’s

Version 5.04.0 (2020 Jul 18)

- Fixed issue that StWritePnu was not saving all parameters.
- Fixed timing issue on StReadPnu which was leading to out of the date data.

- Added list of parameters inside the StCom help. This list is representing all parameters which can be read and write from/to the SuperTrak controller.

- Improvements on diagnostic information. Added additional information for the user.
- Updated descriptions of StReadPnu and StWritePnu function blocks.
- Getting started extended with more detailed information for the user.
- Updated help file with actual content out of Trakmaster.
- Adjustment of ServiceChannel data to increase performance of bigger systems.

Version 5.03.0 (2018 Jul 18)

- Fixed timing issue within StTargetExt and StPallet when multiple requests were made simultaneously
- Fixed issue that causes StWritePnu not to write parameters

Version 2.20.2 (2018 Mar 7)

- Bugfix for errorhandling inside StControl and StSection. ErrorBits will be written to the FUB that called the request.

Version 2.20.1 (2018 Mar 6)

- Changed the errorhandling inside StControl. The faults inside StControl will not be written cyclically to logger.

- **Version is only compatible with SuperTrak library 0.04.0 or higher.**

Version 2.20.0 (2018 Feb 23)

- Errorhandling changed for StSection and StControl. More than one error can now be read from the Info structure.
- Resolved an issue that caused, that function block can’t be used, because if an error occurred inside the ArLog, the ArLog FUB was not disabled, to reset the error in this instance.
- StTargetExt and StPallet CommandDone output is resetted immideatelly after the input command is reset.

- **Version is only compatible with SuperTrak library 0.04.0 or higher.**

Version 2.12.3 (2018 Feb 1)

- Changed factor for Moving filter in StTargetExt and StPallet

15.5 HMISupport library

Version 5.07.0 (2024 Feb 1)

- Aligned with StCom Version

Version 5.06.0 (2022 Jul 8)

- Aligned with StCom Version

Version 5.05.0 (2021 Feb 22)

- Aligned with StCom Version

Version 5.04.0 (2020 Jul 7)

- Aligned with StCom Version

Version 1.0.0 (2018 Jun 8)

- Implemented HMIControl, HMIWriteParID and HMIReadParID
- Simple interface to read and write ParIDs from HMI.
- Simple save system parameters input

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