

## Description

The device can be configured through any **CANopen** lift configuration tool using the corresponding EDS file: CAN\_IO\_TFT\_5.0.eds. You can download the file here:

<https://semitron.atlassian.net/wiki/spaces/PS/pages/1640398909/CAN+IO+TFT+5>

## Node-ID

The node-ID is an identifier that is unique to every CANopen device connected on the same bus. To change the node-ID, set the desired value on index 0x2000. To apply the change, click on store parameters on your preferred configuration tool and reset the node.

Recommended node-ID values for Car I/O panels are 16 to 20.

### General entries

Index	Name	Description
● 0x6001	● Lift number	● Specifies which lift (1-8) the device is assigned to (for multi-lift applications).
● 0x6002	● Floor number	● Floor number of the device. By default this parameter is set to 0 as a car/cabin device. (in case the device is used as a floor panel/LOP, this value should be 1-255)
● 0x6003	● Door number	● Specifies which door(s) the device is assigned to (for floors with multiple doors).



*These entries determine the overall behavior of the device. TFT and sound indications rely on the general entries to function correctly. Make sure these general entries are configured correctly if any of the functions below do not work as expected:*

- Display arrows
- Voice announcements
- Sound special indications
- Call acknowledgment tone

## Inputs

Index	Name	Description													
● 0x6100	● Virtual input	<ul style="list-style-type: none"> <li>8 inputs can be configured to support several input signals. These can be hall calls, car calls, etc.</li> </ul>													
● 0x6120	● Input State Parameters	<ul style="list-style-type: none"> <li>This configuration parameter can be used to enable or disable the corresponding input.</li> </ul> <p><b>Inputs enable status (default: ON)</b></p>													
● 0x6160	● Input Calibration Parameters	<ul style="list-style-type: none"> <li>This configuration parameter can be used in order to define the button debounce time and the polarity of the corresponding input.</li> </ul> <p><b>Button debounce time – default: 20ms</b> The debounce-time refers to the amount of time which is required to trigger an input to transmit the input signal</p> <p><b>Polarity (invert)</b></p> <table> <tr> <th>Polarity</th><th>Voltage</th><th>Input</th></tr> <tr> <td rowspan="2">0</td><td>+24V</td><td>Enable</td></tr> <tr> <td>0V</td><td>Disable</td></tr> <tr> <td rowspan="2">1</td><td>+24V</td><td>Disable</td></tr> <tr> <td>0V</td><td>Enable</td></tr> </table>	Polarity	Voltage	Input	0	+24V	Enable	0V	Disable	1	+24V	Disable	0V	Enable
Polarity	Voltage	Input													
0	+24V	Enable													
	0V	Disable													
1	+24V	Disable													
	0V	Enable													

## Outputs

Index	Name	Description													
● 0x6200	● Virtual Output	<ul style="list-style-type: none"> <li>8 outputs can be configured to support several output signals. These can be call acknowledgements, direction indications, arrival indications, etc.</li> </ul>													
● 0x6210	● Special Indication Output group	<ul style="list-style-type: none"> <li>16 special indications such as "Overload" and "Out of order", can be configured to display a custom message. The display message for each special indication, can be specified on index 0x62b1.</li> </ul>													
● 0x6220	● Output State Parameters	<ul style="list-style-type: none"> <li>This configuration parameter can be used to enable or disable the corresponding output.</li> </ul> <p><b>Outputs enable status (default: ON)</b></p>													
● 0x6260	● Output Calibration Parameters	<ul style="list-style-type: none"> <li>This configuration parameter can be used in order to define the polarity of the corresponding output.</li> </ul> <p><b>Polarity (invert)</b></p> <table> <tr> <th>Polarity</th><th>Voltage</th><th>Output</th></tr> <tr> <td rowspan="2">0</td><td>+24V</td><td>Enable</td></tr> <tr> <td>0V</td><td>Disable</td></tr> <tr> <td rowspan="2">1</td><td>+24V</td><td>Disable</td></tr> <tr> <td>0V</td><td>Enable</td></tr> </table>	Polarity	Voltage	Output	0	+24V	Enable	0V	Disable	1	+24V	Disable	0V	Enable
Polarity	Voltage	Output													
0	+24V	Enable													
	0V	Disable													
1	+24V	Disable													
	0V	Enable													

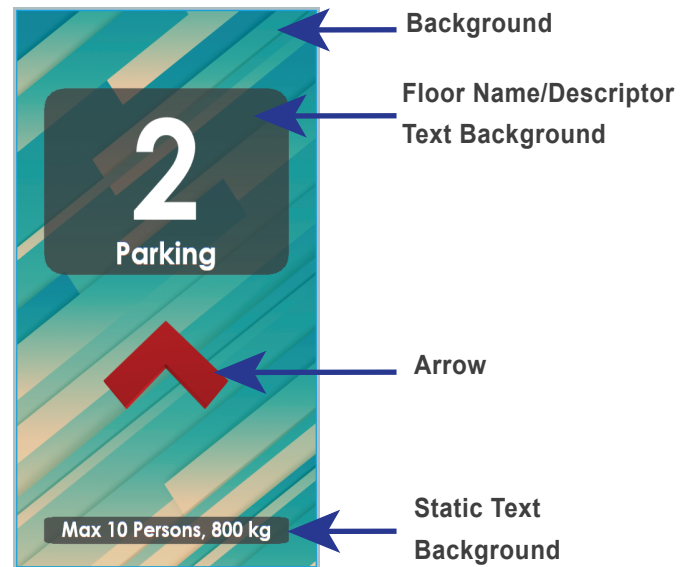
# Display Configuration

The device supports 2 separate UIs, which can be selected to fit your specific need. In the default UI, all the elements of the screen are preconfigured and laid out in a specific way to allow for a quick and easy setup of the device. In the customizable UI, more configuration options are available for the user to fully customize the layout of the screen. The configuration options described below, will be marked (cus.) when they are exclusively available in the customizable UI.

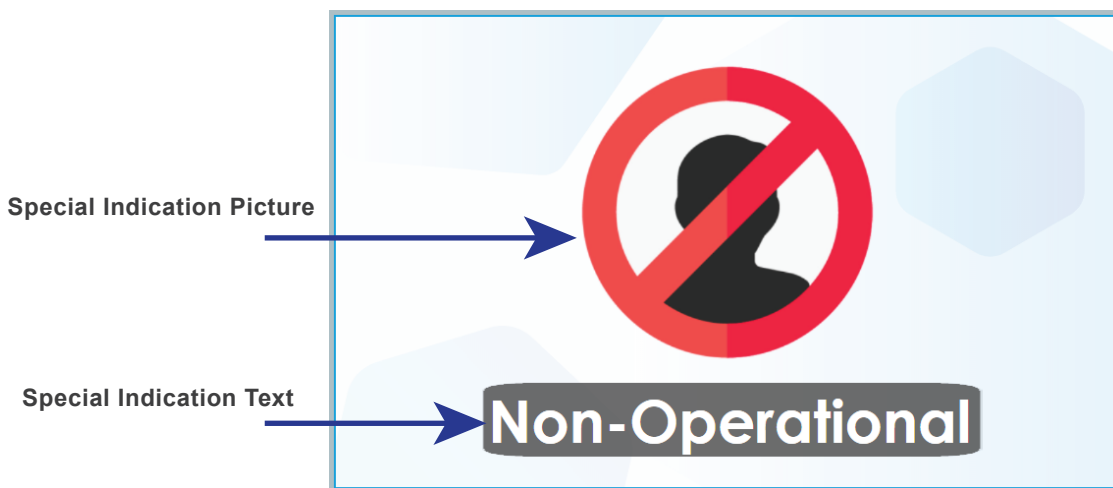
The elements that make up the UI of the device can be seen in the pictures below.



1. Landscape mode



2. Portrait mode



3. Special Indication Screen

In the next tables you can find in detail the configuration parameters for each display element.



## Texts Definition

Index	Name	Description
● 0x62B0	● Floor name	● Floors display names (up to 32 floors)
● 0x62B1	● Special indications text	● Special indication display messages
● 0x2011	● Floor Descriptor text	● Floor descriptor messages



## 0x2005 Display Options

Sub - Index	Name	Description
1	Display Brightness	TFT Display Brightness (1-5)
2	Display Orientation	<ul style="list-style-type: none"> <li>● Portrait mode</li> <li>● Landscape mode</li> </ul>
3	Background Image	<ul style="list-style-type: none"> <li>● 1 Vivid turquoise {default}</li> <li>● 2 Vivid purple</li> <li>● 3 Black folded</li> <li>● 4 White tiles</li> <li>● 5 Black tiles</li> </ul>
4	User Interface (UI)	<ul style="list-style-type: none"> <li>● 1 Default</li> <li>● 2 Customisable</li> </ul>



## Background Images

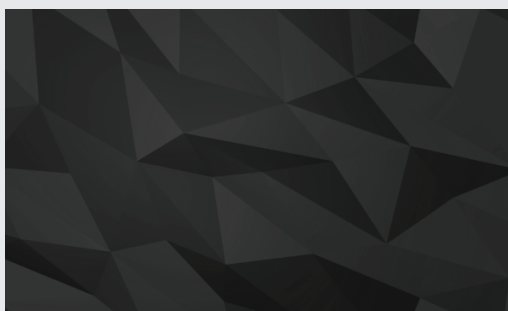
1



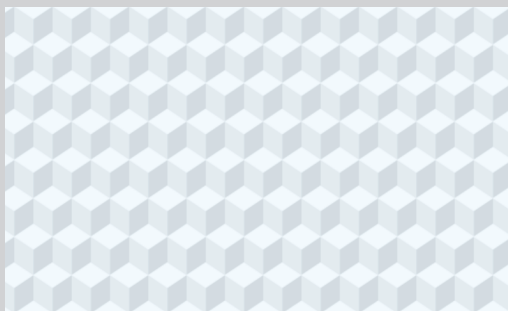
2



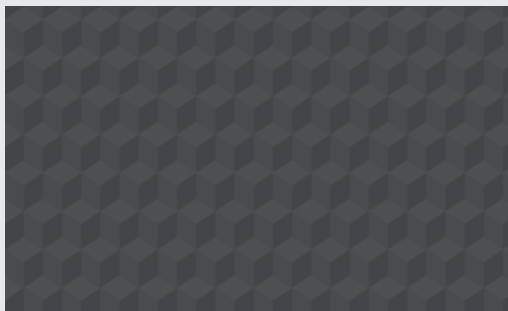
3



4



5



## △ ▽ 0x2006 Arrows

Sub - Index	Name	Description
1	● Arrow Up Graphic	● Up Arrow Graphic selection (1-8 see table below)
2	● Arrow Down Graphic	● Down Arrow Graphic selection (1-8 see table below)
3	● Moving Arrows	● ON: Moving arrow ● OFF: Static arrow
4	● Moving Speed	● Moving Arrow speed (1: slowest - 5: fastest)
5	● Horizontal Position (cus. UI)	● Horizontal position of the arrow (0: leftmost - 10: rightmost)
6	● Vertical Position (cus. UI)	● Vertical position of the arrow (0: topmost - 10: bottommost). Applies only on static arrows.

## △ ▽ Arrow Graphic selections

1		
2		
3		
4		
5		
6		
7		
8		



## Text Fields

### 0x2007 Static Text

Sub - Index	Name	Description
1	● Static Text	● Static Display message
2	● Text Color	<ul style="list-style-type: none"> <li>● Text RGB color value (24bit)</li> <li>● Default: 0xFFFFFFFF (white)</li> </ul>
3	● Text Background Opacity	● Static text background opacity definition (0-10)
4	● Font (cus. UI)	● Static text font (1: Century Gothic, 2: Arial)
5	● Font Size (cus. UI)	● Static text font size (1-6)
6	● Horizontal Position (cus. UI)	● Static text horizontal position (0: leftmost - 10: rightmost)
7	● Vertical Position (cus. UI)	● Static text vertical position (0: topmost - 10: bottommost)

### 0x2008 Floor Name 0x2009 Floor Descriptor 0x2010 Special Indication

Sub - Index	Name	Description
1	● Text Color	<ul style="list-style-type: none"> <li>● Text RGB color value (24bit)</li> <li>● Default: 0xFFFFFFFF (white)</li> </ul>
2	● Text Background Opacity	● Text background opacity definition (0-10)
3	● Font (cus. UI)	● Element font (1: Century Gothic, 2: Arial)
4	● Font Size (cus. UI)	● Element font size (1-6)
5	● Horizontal Position (cus. UI)	● Horizontal position of the element (0: leftmost - 10: rightmost)
6	● Vertical Position (cus. UI)	● Vertical position of the element (0: topmost - 10: bottommost)

## Pictures

### 0x2012 Floor (1-32) 0x2013 Special Indication (1-16)

Name	Description
● Picture	● File name of the image for each floor/special indication. The file name definition must include the file extension as well e.g. file_name.bmp
● Horizontal Position	● Horizontal position of the image (0: leftmost - 10: rightmost)
● Vertical Position	● Vertical position of the image (0: topmost - 10: bottommost)



## Text Fields

### 0x2007 Static Text

Sub - Index	Name	Description
1	● Static Text	● Static Display message
2	● Text Color	<ul style="list-style-type: none"> <li>● Text RGB color value (24bit)</li> <li>● Default: 0xFFFFFFFF (white)</li> </ul>
3	● Text Background Opacity	● Static text background opacity definition (0-10)
4	● Font (cus. UI)	● Static text font (1: Century Gothic, 2: Arial)
5	● Font Size (cus. UI)	● Static text font size (1-6)
6	● Horizontal Position (cus. UI)	● Static text horizontal position (0: leftmost - 10: rightmost)
7	● Vertical Position (cus. UI)	● Static text vertical position (0: topmost - 10: bottommost)

### 0x2008 Floor Name 0x2009 Floor Descriptor 0x2010 Special Indication

Sub - Index	Name	Description
1	● Text Color	<ul style="list-style-type: none"> <li>● Text RGB color value (24bit)</li> <li>● Default: 0xFFFFFFFF (white)</li> </ul>
2	● Text Background Opacity	● Text background opacity definition (0-10)
3	● Font (cus. UI)	● Element font (1: Century Gothic, 2: Arial)
4	● Font Size (cus. UI)	● Element font size (1-6)
5	● Horizontal Position (cus. UI)	● Horizontal position of the element (0: leftmost - 10: rightmost)
6	● Vertical Position (cus. UI)	● Vertical position of the element (0: topmost - 10: bottommost)

## Pictures

### 0x2012 Floor (1-32) 0x2013 Special Indication (1-16)

Name	Description
● Picture	● File name of the image for each floor/special indication. The file name definition must include the file extension as well e.g. file_name.bmp
● Horizontal Position	● Horizontal position of the image (0: leftmost - 10: rightmost)
● Vertical Position	● Vertical position of the image (0: topmost - 10: bottommost)



# Sound configuration

The CAN\_IO\_TFT\_5 devices feature audio support through an externally connected speaker which can be used for the following functions:

- Sound special indication like the arrival gong, overload warning, etc.
- Voice floor announcements
- Call acknowledgment tone
- Music playback

## Sound special indications

Index	Name	Description
<ul style="list-style-type: none"><li>• 0x621B</li></ul>	<ul style="list-style-type: none"><li>• Speech special indication output group</li></ul>	<ul style="list-style-type: none"><li>• Configure up to 16 signals which will trigger playback of the audio files defined on object 0x62B3.</li></ul>
<ul style="list-style-type: none"><li>• 0x62B3</li></ul>	<ul style="list-style-type: none"><li>• Speech special indication file names</li></ul>	<ul style="list-style-type: none"><li>• Configure the audio file names for each corresponding signal defined on object 0x621B</li></ul>

## Floor announcements

Index	Name	Description
<ul style="list-style-type: none"><li>• 0x62B2</li></ul>	<ul style="list-style-type: none"><li>• Speech position indication file names</li></ul>	<ul style="list-style-type: none"><li>• Configure the file names for announcements for up to 32 floors</li></ul>

## 0x2030 Sound options

Sub - Index	Name	Description
1	<ul style="list-style-type: none"> <li>Acknowledge tone file name</li> </ul>	<ul style="list-style-type: none"> <li>The audio file name which will be played when a call has been acknowledged.</li> </ul>
2	<ul style="list-style-type: none"> <li>Acknowledge tone enabled</li> </ul>	<ul style="list-style-type: none"> <li>Enable / Disable the acknowledge tone.</li> </ul>
3	<ul style="list-style-type: none"> <li>Music enabled</li> </ul>	<ul style="list-style-type: none"> <li>Enable / Disable the background music when no other sound is active. The music files will be selected automatically from inside the music folder.</li> </ul>
4	<ul style="list-style-type: none"> <li>Acknowledge tone volume</li> </ul>	<ul style="list-style-type: none"> <li>The volume of the acknowledge tone (0%-100%)</li> </ul>
5	<ul style="list-style-type: none"> <li>Music volume</li> </ul>	<ul style="list-style-type: none"> <li>The volume of the background music (0%-100%)</li> </ul>
6	<ul style="list-style-type: none"> <li>Floor announcements volume</li> </ul>	<ul style="list-style-type: none"> <li>The volume of the floor announcements (0%-100%)</li> </ul>
7	<ul style="list-style-type: none"> <li>Speech special indications volume</li> </ul>	<ul style="list-style-type: none"> <li>The default volume of all speech special indications (0% - 100%). The volume can also be configured for each signal individually on object 0x621B via the volume output option.</li> </ul>

# MicroSD card

## Folder structure

A microSD card slot is available on the device and provides more configuration options through custom pictures and sound files which can be loaded from an external microSD card. These files need to be saved in the correct directories inside the SD card to be recognized by the device. All pictures should be saved in a folder named “images” inside the root directory. Similarly, all sound files should be saved in a folder named “audio”, apart from music files which are saved in the sub-directory “audio/music”. Powering up the device while having a microSD card inserted, will generate those directories automatically if they do not already exist.

## Image file compatibility

The following criteria must apply for the image files to be supported:

- BMP file format
- Image resolution smaller or equal to 800x480
- Color depth of 24Bit

Setting the menu switch to the ON position will display a list of all available image files. A green checkmark to the right of the file name will indicate that the image is compatible, while a red exclamation mark symbol means that the image is unsupported.

The diagram illustrates the 'SD card files' interface. It features a table with three columns of file names. To the right of each file name is a small circular icon: a green checkmark for supported files and a red exclamation mark for unsupported files. A blue arrow labeled 'Unsupported file symbol' points to the red exclamation mark next to 'UNSUPP\_IMAGE.JPG'. Another blue arrow labeled 'Supported file symbol' points to the green checkmark next to 'FIRE\_ALARM.BMP'. A third blue arrow labeled 'Firmware version of the device' points to the text 'version: 1.00' in the top right corner of the interface. The title 'SD card files' is in the top left, and '4. SD Card Files' is at the bottom center.

SD card files			version: 1.00
RECEPTION.BMP	RESTAURANT.BMP	PARKING.BMP	
ROOF_TERRACE.BMP	VIP_TRANSPORT.BMP	FIRE_ALARM.BMP	
UNSUPP_IMAGE.JPG			

4. SD Card Files

## Sound file compatibility

MP3 and WAV format sound file are supported with a bitrate of up to 128Kbits/sec

# Firmware Updates

Firmware updates are supported to provide the latest features and bug fixes for the device. A firmware update can be performed through an SD-card or USB stick.

To perform a firmware update, the device must first enter bootloader mode by any of the two methods described below.

- The first method is to power-on the device while holding down Button-1 for 5 seconds.
- The second method is to press and hold Button-1 for 5 seconds while the device is already powered on, and the menu switch is set to ON.

Once in bootloader mode, the green and red LEDs will start blinking in an alternating fashion, indicating that the device is ready. In case you wish to exit this mode, you may press and hold Button-1 for 5 seconds and return to regular operation. The update procedure will start automatically if either an SD card or USB stick is plugged-in, containing a valid firmware file in their root directory. Flashing the new firmware will take approximately 4 minutes. During this time, the green LED will start flashing rapidly, indicating that the firmware is being updated. Once done, the device will boot up into regular operation, or show a red led in case of failure. If the update failed, the procedure can be restarted by pressing Button-1.failed, the procedure can be restarted by pressing Button-1.failed, the procedure can be restarted by pressing Button-1.failed, the procedure can be restarted by pressing Button-1.failed, the procedure can be restarted by pressing Button-1.



*To apply any changes done to the parameters, click on store parameters on your preferred configuration tool.*



CANopen device profile for Lift



Conforms with quality management systems standards

