

# TGP driver

## TGP-4A-0X-IQ & TGP-7A-01-IQ proگرامing & CyBro communication driver

### VisualTFT quick guide

SW & examples download:

|                              |                                 |
|------------------------------|---------------------------------|
| TGP development SW           | <a href="#">VisualTFT</a>       |
| TP-4A-0X-IQ example project  | <a href="#">Example project</a> |
| TGP-7A-01-IQ example project |                                 |

### Starting new TP project

- Start VisualTFT
- menu: File → New Project



- in “New Project” dialog set:
  - Project name and Path
  - Select Device Type according following table

| Robotina code | VisualTFT Device Type |              |               |
|---------------|-----------------------|--------------|---------------|
|               | Series                | Type         | Resolution    |
| TP-4A-0X-IQ   | M Serial              | DC48480M040  | 480 × 480 px  |
| TGP-7A-01-IQ  | IOT                   | DC10600PW070 | 1024 × 600 px |

### TP Project Settings



### Connecting TP



### 1st time connection



After successful connection TP should beep.

## Connection after TP is configured

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## Uploading project to TP

### Compile and verify project

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### Load to panel

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Load dialog is not translated to English 

## Configuring TP panel

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## TP screens examples

### Screen ID: 00



| ID | type   | description     |
|----|--------|-----------------|
| 1  | button | previous screen |

| ID | type    | description              |
|----|---------|--------------------------|
| 2  | button  | home screen              |
| 3  | button  | next screen              |
| 10 | button  | toggle controlled device |
| 11 | icon    | controlled device icon   |
| 12 | message | controlled device name   |

## Screen ID: 01



| ID | type    | description            |
|----|---------|------------------------|
| 1  | button  | previous screen        |
| 2  | button  | home screen            |
| 3  | button  | next screen            |
| 10 | button  | up controlled device   |
| 11 | button  | down controlled device |
| 12 | message | controlled device name |
| 13 | icon    | controlled device icon |

## Screen ID: 02



| ID | type    | description                |
|----|---------|----------------------------|
| 1  | button  | previous screen            |
| 2  | button  | home screen                |
| 3  | button  | next screen                |
| 11 | button  | toggle controlled device 1 |
| 13 | icon    | controlled device 1 icon   |
| 15 | message | controlled device 1 name   |
| 21 | button  | toggle controlled device 2 |
| 23 | icon    | controlled device 2 icon   |

| ID | type    | description                |
|----|---------|----------------------------|
| 25 | message | controlled device 2 name   |
| 31 | button  | toggle controlled device 3 |
| 33 | icon    | controlled device 3 icon   |
| 35 | message | controlled device 3 name   |
| 41 | button  | toggle controlled device 4 |
| 43 | icon    | controlled device 4 icon   |
| 45 | message | controlled device 4 name   |

### Screen ID: 03



| ID | type    | description              |
|----|---------|--------------------------|
| 1  | button  | previous screen          |
| 2  | button  | home screen              |
| 3  | button  | next screen              |
| 11 | button  | up controlled device 1   |
| 12 | button  | down controlled device 1 |
| 13 | icon    | controlled device 1 icon |
| 15 | message | controlled device 1 name |
| 21 | button  | up controlled device 2   |
| 22 | button  | down controlled device 2 |
| 23 | icon    | controlled device 2 icon |
| 25 | message | controlled device 2 name |

| <b>ID</b> | <b>type</b> | <b>description</b>       |
|-----------|-------------|--------------------------|
| <b>31</b> | button      | up controlled device 3   |
| <b>32</b> | button      | down controlled device 3 |
| <b>33</b> | icon        | controlled device 3 icon |
| <b>35</b> | message     | controlled device 3 name |
| <b>41</b> | button      | up controlled device 4   |
| <b>42</b> | button      | down controlled device 4 |
| <b>43</b> | icon        | controlled device 4 icon |
| <b>45</b> | message     | controlled device 4 name |

## Screen ID: 04



| <b>ID</b> | <b>type</b> | <b>description</b>         |
|-----------|-------------|----------------------------|
| <b>1</b>  | button      | previous screen            |
| <b>2</b>  | button      | home screen                |
| <b>3</b>  | button      | next screen                |
| <b>11</b> | button      | toggle controlled device 1 |
| <b>13</b> | icon        | controlled device 1 icon   |
| <b>15</b> | message     | controlled device 1 name   |
| <b>21</b> | button      | toggle controlled device 2 |
| <b>23</b> | icon        | controlled device 2 icon   |
| <b>25</b> | message     | controlled device 2 name   |
| <b>31</b> | button      | toggle controlled device 3 |

| ID | type    | description                |
|----|---------|----------------------------|
| 33 | icon    | controlled device 3 icon   |
| 35 | message | controlled device 3 name   |
| 41 | button  | toggle controlled device 4 |
| 43 | icon    | controlled device 4 icon   |
| 45 | message | controlled device 4 name   |
| 51 | button  | toggle controlled device 5 |
| 53 | icon    | controlled device 5 icon   |
| 55 | message | controlled device 5 name   |
| 61 | button  | toggle controlled device 6 |
| 63 | icon    | controlled device 6 icon   |
| 65 | message | controlled device 6 name   |

## Screen ID: 05



| ID | type    | description              |
|----|---------|--------------------------|
| 1  | button  | previous screen          |
| 2  | button  | home screen              |
| 3  | button  | next screen              |
| 11 | button  | up controlled device 1   |
| 12 | button  | down controlled device 1 |
| 13 | icon    | controlled device 1 icon |
| 15 | message | controlled device 1 name |

| <b>ID</b> | <b>type</b> | <b>description</b>             |
|-----------|-------------|--------------------------------|
| <b>21</b> | button      | up<br>controlled<br>device 2   |
| <b>22</b> | button      | down<br>controlled<br>device 2 |
| <b>23</b> | icon        | controlled<br>device 2<br>icon |
| <b>25</b> | message     | controlled<br>device 2<br>name |
| <b>31</b> | button      | up<br>controlled<br>device 3   |
| <b>32</b> | button      | down<br>controlled<br>device 3 |
| <b>33</b> | icon        | controlled<br>device 3<br>icon |
| <b>35</b> | message     | controlled<br>device 3<br>name |
| <b>41</b> | button      | up<br>controlled<br>device 4   |
| <b>42</b> | button      | down<br>controlled<br>device 4 |
| <b>43</b> | icon        | controlled<br>device 4<br>icon |
| <b>45</b> | message     | controlled<br>device 4<br>name |
| <b>51</b> | button      | up<br>controlled<br>device 5   |
| <b>52</b> | button      | down<br>controlled<br>device 5 |
| <b>53</b> | icon        | controlled<br>device 5<br>icon |
| <b>55</b> | message     | controlled<br>device 5<br>name |
| <b>61</b> | button      | up<br>controlled<br>device 6   |
| <b>62</b> | button      | down<br>controlled<br>device 6 |
| <b>63</b> | icon        | controlled<br>device 6<br>icon |

| ID | type    | description              |
|----|---------|--------------------------|
| 65 | message | controlled device 6 name |

### Screen ID: 06



| ID | type    | description                      |
|----|---------|----------------------------------|
| 1  | button  | previous screen                  |
| 2  | button  | home screen                      |
| 3  | button  | next screen                      |
| 10 | picture | HVAC settings frame              |
| 11 | icon    | HVAC fan limits                  |
| 12 | message | HVAC setpoint degrees            |
| 13 | message | HVAC setpoint decimals and units |
| 21 | button  | HVAC fan limit increment         |
| 22 | button  | HVAC fan limit decrement         |
| 23 | picture | HVAC fan icon                    |
| 31 | button  | HVAC setpoint increment          |
| 32 | button  | HVAC setpoint decrement          |
| 33 | icon    | HVAC mode (heating/cooling)      |

### Screen ID: 07



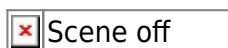
| ID | type    | description                               |
|----|---------|---|
| 1  | picture | Room number frame                         |
| 2  | icon    | Room state icon (idle/DND/MUR)            |
| 3  | icon    | Door-bell icon (disabled/enabled/ringing) |
| 4  | picture | Code keypad                               |
| 5  | QCode   | Room QR code                              |
| 10 | message | Room number                               |
| 10 | button  | toggle controlled device                  |
| 11 | icon    | controlled device icon                    |
| 12 | message | controlled device name                    |
| 20 | picture | Room state frame                          |
| 21 | button  | Door-bell button                          |
| 22 | button  | Code keypad button                        |

### Screen ID: 08



| ID    | type    | description   |
|-------|---------|---------------|
| 4     | button  | Cancel button |
| 5     | button  | OK button     |
| 10-19 | button  | 0-9 button    |
| 20-29 | message | 0-9 text      |
| 30    | message | Code          |
| 60    | picture | Code frame    |

### Controlled devices icons



|                          |               |
|--------------------------|---------------|
| <input type="checkbox"/> | Scene on      |
| <input type="checkbox"/> | Light off     |
| <input type="checkbox"/> | Light off     |
| <input type="checkbox"/> | Blinds idle   |
| <input type="checkbox"/> | Blinds up     |
| <input type="checkbox"/> | Blinds down   |
| <input type="checkbox"/> | Fan off       |
| <input type="checkbox"/> | Fan 1         |
| <input type="checkbox"/> | Fan 2         |
| <input type="checkbox"/> | Fan 3         |
| <input type="checkbox"/> | DND idle      |
| <input type="checkbox"/> | DND active    |
| <input type="checkbox"/> | MUR idle      |
| <input type="checkbox"/> | MUR active    |
| <input type="checkbox"/> | Backlight off |
| <input type="checkbox"/> | Backlight On  |
| <input type="checkbox"/> | Alarm off     |
| <input type="checkbox"/> | Alarm on      |
| <input type="checkbox"/> | Alarm ringing |

## HVAC fan limits icons

|                          |             |
|--------------------------|-------------|
| <input type="checkbox"/> | Fan off     |
| <input type="checkbox"/> | Fan limit 1 |
| <input type="checkbox"/> | Fan limit 2 |
| <input type="checkbox"/> | Fan limit 3 |

## HVAC fan icon

|                          |            |
|--------------------------|------------|
| <input type="checkbox"/> | Fan button |
|--------------------------|------------|

## HVAC mode icons

|                          |         |
|--------------------------|---------|
| <input type="checkbox"/> | Cooling |
| <input type="checkbox"/> | Heating |

## Room mode icon

|                          |            |
|--------------------------|------------|
| <input type="checkbox"/> | Idle       |
| <input type="checkbox"/> | DND active |
| <input type="checkbox"/> | MUR active |

## Door-bell icons

|                          |                   |
|--------------------------|-------------------|
| <input type="checkbox"/> | Doorbell disabled |
| <input type="checkbox"/> | Doorbell idle     |
| <input type="checkbox"/> | Doorbell ringing  |

## Code keypad icons

- Code keypad off
- Code keypad on

## CyPro TP driver

PLC project example

### TP driver variables

| direction | var                  | description  | value    |
|-----------|----------------------|--|----------|
| TP → PLC  | tpanel_event         | TP events (button press, button release, screen change, ...) | ppssooee |
| PLC → TP  | tpanel_beep_req      | TP beep request  | pptttt   |
|           | tpanel_screen_req    | TP screen request  | ppss     |
|           | tpanel_backlight_req | TP backlight request   | ppbbb    |
|           | tpanel_icon_req      | set TP icon request  | ppssooii |
|           | tpanel_txt[0..19]    | TP text  | char     |
|           | tpanel_txt_req       | set TP text request  | ppssoo   |

### Value legend:

|     |           |                             |
|-----|-----------|-----------------------------|
| pp  | panel     | TP RS485 address            |
| ss  | screen    | TP Screen ID                |
| oo  | object    | TP object (button, icon) ID |
| ee  | event     | TP object event:            |
|     |           | - 01: pressed (fp)          |
|     |           | - 00: released (fn)         |
|     |           | - 09: screen change         |
| ttt | time      | Beep time in 10*ms (1-255)  |
| ii  | icon      | TP Icon index               |
| bbb | backlight | Backlight 0-255 (0=max)     |

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