Wi-Fi module W485
Installation manual with T16 transmitter and SP231 security control panel
May, 2019
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Safety precautions

The Wi-Fi module should be installed and maintained only by qualified personnel.
Please read this manual carefully prior to installation in order to avoid mistakes that can lead to malfunction or even damage to the equipment.
Always disconnect the power supply before making any electrical connections.
Any modifications, modernization or repairs not authorized by the manufacturer shall render the warranty void.

Please adhere to your local waste sorting regulations and do not dispose of this equipment or its components with household waste.
1 Description

This installation manual describes how to connect and configure the W485 to operate with the T16 transmitter and SP231 security control panel.

The Wi-Fi module W485 is compatible with the Trikdis radio transmitter T16 and control panel SP231. The W485 sends messages wirelessly via Wi-Fi internet router to the CMS (central monitoring station). It is not possible to control the T16 transmitter or SP231 control panel using the W485.

The W485 Wi-Fi module can also be connected along with G16 and G16T communicators. Configuration is described in the G16 and G16T communicators’ manuals.

It is recommended to change the W485’s Access point and Login passwords.

Features

Connection
- Connection type: Wi-Fi.

Settings and installation
- Quick and easy installation.
- Remote configuration using an internet browser.

Communication
- One primary connection channel and one secondary connection channel.
- Alternative sending of event logs to Protegus app, which allows the user to monitor the security system remotely.
- The Wi-Fi module W485 uses Contact ID codes to transmit event messages via Wi-Fi.

1.1 Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply voltage</td>
<td>9-28 V DC</td>
</tr>
</tbody>
</table>
| Current consumption     | 50 mA (stand-by)  
<p>|                         | Up to 150 mA (transmitting) |
| Compatible equipment    | Trikdis radio transmitter T16; Trikdis control panel SP231; cellular communicator G16 and G16T (firmware 1.32); cellular gate controller GV17 (firmware 1.06) |
| Connection to CMS       | TCP/IP or UDP/IP via Wi-Fi |
| Event transmission protocol | TRK_TCP or TRK_UDP |
| Event sending           | In Contact ID codes |
| Encryption key          | 6 symbol encryption key |
| Wi-Fi frequency         | 2.4 GHz |
| Wi-Fi protocol          | 802.11 b/g/n |</p>
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security mode</td>
<td>WPA, WPA2, WPA mixed</td>
</tr>
<tr>
<td>Network configuration type</td>
<td>DHCP or manual network configuration (using phone or laptop)</td>
</tr>
<tr>
<td>Operating environment</td>
<td>Temperature from −10 °C to +50 °C, relative air humidity – up to 80 % at +20 °C</td>
</tr>
<tr>
<td>Dimensions</td>
<td>88 x 62 x 26 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>80 g</td>
</tr>
</tbody>
</table>

### 1.2 Wi-Fi module W485 elements

1. Indicator lights.
2. Frontal case opening slot.
3. Terminal for external connections.

### 1.3 Purpose of terminals

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+DC</td>
<td>Power supply terminal (9-28 V DC positive terminal)</td>
</tr>
<tr>
<td>-DC</td>
<td>Power supply terminal (9-28 V DC negative terminal)</td>
</tr>
<tr>
<td>A RS485</td>
<td>Terminal A of RS485 bus</td>
</tr>
<tr>
<td>B RS485</td>
<td>Terminal B of RS485 bus</td>
</tr>
</tbody>
</table>

### 1.4 LED indication of operation

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Light status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NETWORK</td>
<td>Green solid</td>
<td>Connected to Wi-Fi network</td>
</tr>
<tr>
<td></td>
<td>Yellow blinking</td>
<td>Shows signal strength from 0 to 10</td>
</tr>
<tr>
<td>DATA</td>
<td>Green solid</td>
<td>Message is being sent</td>
</tr>
<tr>
<td></td>
<td>Yellow solid</td>
<td>Unable to send message</td>
</tr>
<tr>
<td>STATUS</td>
<td>Green solid</td>
<td>No operational problems</td>
</tr>
<tr>
<td></td>
<td>1 blink</td>
<td>Unable to connect to Wi-Fi network</td>
</tr>
<tr>
<td></td>
<td>2 blinks</td>
<td>Poor Wi-Fi signal strength</td>
</tr>
</tbody>
</table>

www.trikdis.com
2 Schematics for connecting the Wi-Fi module W485

3 Setting parameters

Connect the **W485** module to a Wi-Fi network. To do this, use a phone or a laptop. Open the Wi-Fi access to the internet window. Choose the network **W485_xxx**. In order to connect to the **W485_xxx** network, you need to enter the password (default password - 12345678) and click **CONNECT**.

1. Open a browser and enter the IP address 192.168.12.1. In the window that opens, enter the password (default password – 123456). Click **LOGIN**.

---

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Light status</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 blinks</td>
<td>Not connected via at least one of the channels</td>
<td></td>
</tr>
</tbody>
</table>
2. If the box Use DHCP is ticked in the Network settings window, the Wi-Fi module will automatically read the network parameters (Gateway, Net mask, Static IP) and the module will be assigned an IP address.
Set the necessary settings and click Save.

3. Choose a Wi-Fi network in the WIFI settings window.

4. Enter the Wi-Fi network password.

6. Click the Join button.
If the network is not on the **Available network and signal strengths** list or if it is hidden, you must:

4. Enter the Wi-Fi network password.
5. Enter the network name in the **Use custom SSID** field and tick the box.
6. Click the **Join** button.

7. A window will open. You must wait for the module to connect and then click **Back**.

The connection will be configured and the Wi-Fi module will be assigned an IP address.
“General settings” window

Account ID – enter device number.

Account ID from master – if the box is ticked, messages will be sent with the number of the main device (the one that the Wi-Fi module is connected to).

Test period – period for sending TEST connectivity check messages.

Time sync. – choose which server (receiver’s or Protegus) to use for time synchronization.

Transparent - remove the check box to make the module W485 work with T16 and SP231.

Internal events – settings for sending internal events.

Set the necessary settings and click Save.
“Reporting” window

General settings:

Backup reporting after – specify the number of unsuccessful attempts to send a message using the primary channel before switching to the backup channel.

Return to primary after – specify the time period after which the device will attempt to regain connection via the primary channel.

Primary channel:

Mode – specify the protocol (TCP or UDP) for sending messages.

Host – enter the receiver’s IP address.

Port – enter the receiver’s network port number.

Encryption key – enter the encryption key.

Ping interval – enter the time period in between PING signals.

Backup channel:

Set the parameters for the backup channel. This will ensure that if connectivity via the primary channel is lost, events will be sent via the backup channel. Configure the backup channel using the setting field descriptions above.

Protegus:

Enable Protegus: - enable Protegus service the, W485 will send notifications to Protegus app.

Set the necessary settings and click Save.

“Access settings” window

Login pass – set the password for connecting with the Wi-Fi module.

Set the necessary settings and click Save.

4 Adding the Wi-Fi module W485 to Protegus app

Adding the Wi-Fi module W485, which is connected to the radio transmitter T16, to Protegus. With Protegus the user will see the status of the system and receive event notifications.

1. Download and launch the Protegus application or use the browser version: www.protegus.eu/login
2. Log in with your user name and password or register and create new account.

**Important:** When adding the W485 to Protegus check if:
1. *Protegus cloud* is enabled;
2. Power supply is connected ("POWER" LED illuminates green);
3. Registered to the Wi-Fi network ("NETWORK" LED illuminates green and blinks yellow).

3. Click **Add new system** and enter the W485’s “MAC” address. This address can be found on the device and the packaging sticker. Click **Next**.

4. In the new window, click **Areas** in the side menu. In the next window, specify how many alarm system areas.

5. In the new window, identify what is the number for each of the specified areas in the security system and press **Save**.