



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

Parameter	Description
Power supply voltage	9-28 V DC
Current consumption	50 mA (stand-by)
	Up to 150 mA (transmitting)
Compatible equipment	Trikdis radio transmitter 716 ; 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



Wi-Fi module W485

Parameter	Description
Security mode	WPA, WPA2, WPA mixed
Network configuration type	DHCP or manual network configuration (using phone or laptop)
Operating environment	Temperature from –10 °C to +50 °C, relative air humidity – up to 80 % at +20 °C
Dimensions	88 x 62 x 26 mm
Weight	80 g

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

Terminal	Description
+DC	Power supply terminal (9-28 V DC positive terminal)
-DC	Power supply terminal (9-28 V DC negative terminal)
A RS485	Terminal A of <i>RS485</i> bus
B RS485	Terminal B of <i>RS485</i> bus

1.4 LED indication of operation

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



Indicator Light status		Description
	3 blinks	Not connected via at least one of the channels

If none of the LED indicators are active, check the power supply and connections.

2 Schematics for connecting the Wi-Fi module W485



Wi-Fi module W485

Wi-Fi module W485 connection scheme with T16



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**.

← W485_007				
Signal strength	Excellent			
Encryption type	WPA2 PSK			
12345678	۲			
Show advanced options				
CANCEL	CONNECT			

 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.

① 192.168.12.1		1	:				
Please enter password:							
1							
LOGIN							



 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**.

③ 192.168.12.1				1	:			
Network settings								
Main	General	Network	Wifi conr	nection				
Reporting Access								
Use DH	ICP:	2						
Static I	P:							
Net ma	isk:							
Gatewa	ay:							
Save parameters: Save								

- 3. Choose a Wi-Fi network in the **WIFI settings** window.
- 4. Enter the Wi-Fi network password.
- 6.Click the **Join** button.

192.168.12.1		1	:			
WIFI settings						
Main General Netwo	ork Wifi conr	nection				
Reporting Access						
Status: disabled						
Wireless SSID settingsAvailable networks and signal strenghtsTrikdis2,100%Password for SSID:57dSd96Use custom SSID:						
Join to selected netwo	rk: Join					
Access point settings						
Access point name:	!W!485					
Password:	12345678					
Security:	WPA2_PSK	•				
Save parameters:	Save					



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.

③ 192.168.12.1		1			
WIFI settings					
Main General Netwo	ork Wifi conn	ection			
Reporting Access					
Status: disabled					
Wireless SSID setting Available networks an signal strenghts	s id		T	2	
Password for SSID: 57dSd96					
Use custom SSID:	Trikdis	s2		_	
Join to selected netwo	rk: Join	-			
Access point settings					
Access point name:	!W!485				
Password:	12345678				
Security:	WPA2_PSK V				
Save parameters: Save					

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	
mod	ule will be as	sign	ed a	n IP address				

3 192.168.12.1	1	:
Wifi connecting		
Connecting to: Trikdis2 Back to main: Back 7		
-		

③ 192.168.12.1			1	:		
W485 communicator configuration page						
Main General Network Wifi connection						
Reporting Access						
Device information	n					
Device name:	W4	85				
Firmware version: 2.00						
Bootloader version: 1.00						
Device MAC:	80 7	D3A2008	37 D			
Serial No:	000	007				
Internal IP: 192.168.1.44						
Wifi status						
Connected to: Trikdis2						
Signal strength: 86%						
Restore defaults:	estore					



"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**.

③ 192.168.12.1				1	:		
General settings							
Main Ger	neral	Network V	Vifi con	nectic	on		
Reporting	Acces	S					
Account ID	:		0001				
Account ID	from	master:					
Test period:			2	h	ours		
Time sync.:			Prima	Primary •			
Transparent:							
Internal Events							
Enable E/R			CID	Are	a Zone		
Power low		Event •	302	99	0		
Power restore		Restore •	302	99	0		
Periodical test		Event •	602	99	0		
Save paran	neters	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.

A 192.168.12	1:	
Reporting		
Main General	Network	Wifi connection
Reporting Acces	s	
General settings	:	
Backup reporting	g after	3 attempts
Return to primar	y after	600 sec.
Primary channe	ĩ	
Mode:	TCI	PV
Host:	195	5.14.186.120
Port:	444	40
Encryption key:	123	3456
Ping interval:	30	
Backup channel		
Mode:	TC	P v
Host:	195	5.14.157.140
Port:	444	148
Encryption key:	123	3456
Ping interval:	30	
Protegus		
Enable Protegus:		
Save parameters	S	ave

① 192.168.12.1			1	:
Access settings				
Main General	Network	Wifi conr	nection	
Reporting Acces	ss			
Login pass:	12	3456		
Save parameters: 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: <u>www.protegus.eu/login</u>





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.

Add new system	
Unique ID *	Enter the MAC address. You can find it here: - on the package; - on the back of the controller housing.
	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.**



Protegus Intelligent security & control	T16+W485 online	~		Q Peter	Ë	<u>نې</u>	\bigcirc	
C Areas								
ج۞ Settings			Area 1 number			Save		
Events			Area 2 number					
6			-					