

DUOS in AIR WIRELESS TRANSMITTER INSTALLATION GUIDE

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DUOS in AIR TRANSMITTER INSTALLATION GUIDE

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DUOS in AIR TRANSMITTER INSTALLATION GUIDE

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LEGEND:



Important information for the setup;

Take

Take note of the information;

Validation of a setting;

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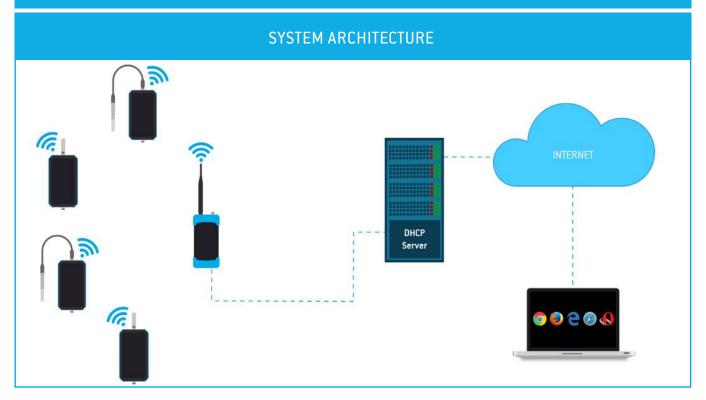


01 CONNECT AND CONFIGURE DUOS WIRELESS GATEWAY



NOTE:

If your device is a DUOS IoT GATEWAY, please consider the information on this page. If your device is a DUOS GATEWAY, please go to the next page to start the equipment setup.



MINIMUM REQUIREMENTS

The right application of DUOS IoT GATEWAY only occurs if all minimum requirements are met by the customer side. The architectural minimum requirements needed to successfully use this device are:

- Ethernet cable (included with your DUOS IoT GATEWAY);
- DHCP server;
- Web browser with the latest version;

You must have a DHCP server in your network. The main purpose of this kind of server is to automatically provide and assign IP addresses and other network parameters to connected devices.

To begin the configuration of DUOS IoT GATEWAY, the pin of button mode, must be in the *Config Mode* side.

After completing the setup procedures, go to step 5 to begin the connection to the platform.



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01 CONNECT AND CONFIGURE DUOS WIRELESS GATEWAY

TEKON CONFIGURATOR SOFTWARE is only compatible with the Microsoft Windows Operating System.

01	Connect the antenna to the <i>Gateway</i> .	
02	Connect the DUOS RS485-USB cable to the computer and then to the Gateway.	
	If the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red and blue LEDs are active, both the cable and <i>Gateway</i> and the red	 LED flashes slowly LED switched on and steady Red LED flashes every second whenever it sends beacons to new elements to join the network Green LED flashes as soon as the device receives data from other equipment.



step	
01	CONNECT AND CONFIGURE DUOS WIRELESS GATEWAY

05

Select the Serial Port of the DUOS Wireless Gateway

Click on the *Refresh Serial Ports* button.

rile Teele Uele		A.S
File Tools Help		
		-
Devices	Serial Port Configuration	
Transmitters A Head	Port Name COM4 -	
THU1102	Baudrate 19200 -	2
THP1217 THT1216	Parity None - Refresh Serial Ports	Not Connected
THP101 THT201	Gateway Repeater Transmitter	
THU301	Modbus Configuration	
THT202	Modbus Address	
DIN Rail TDU1218	Modbus Parity None •	Unknown Model
TDU1219	Wireless Network ID:	
 TDU301 Wireless 	Wireless Channel	
WGW1104 WGW410	Read Write	
DUOS		
PLUS	Click on connection button to start	

¹ Tekon Configurator software is free of charge and available at <u>www.tekonelectronics.com</u>



01 CONNECT AND CONFIGURE DUOS WIRELESS GATEWAY

TekOn Configurator		- 🗆 🗙
ile Tools Help		
Devices A Transmitters A Bead THU1102 THP1217 THP1217 THP1216 THP101	Serial Port Configuration Port Name COM3 Baudrate COM3 Parity COM1 COM1 COM1	Not Connected
THT201 THU301 THT202 THM501 THM501 DIN Rail TDU1218 TDU1219 TDU301 Wireless WGW1104 WGW1104	Gateway Reposers rensmitter Modbus Configuration Modbus Address 1 Modbus Baudrate 19200 Modbus Parity None Wireless Network ID:	Unknown Model
DUOS PLUS SFRIAI	Click on connection button to start	

07

Remove the *DUOS RS485-USB* cable from the *Gateway* side and reinsert it.



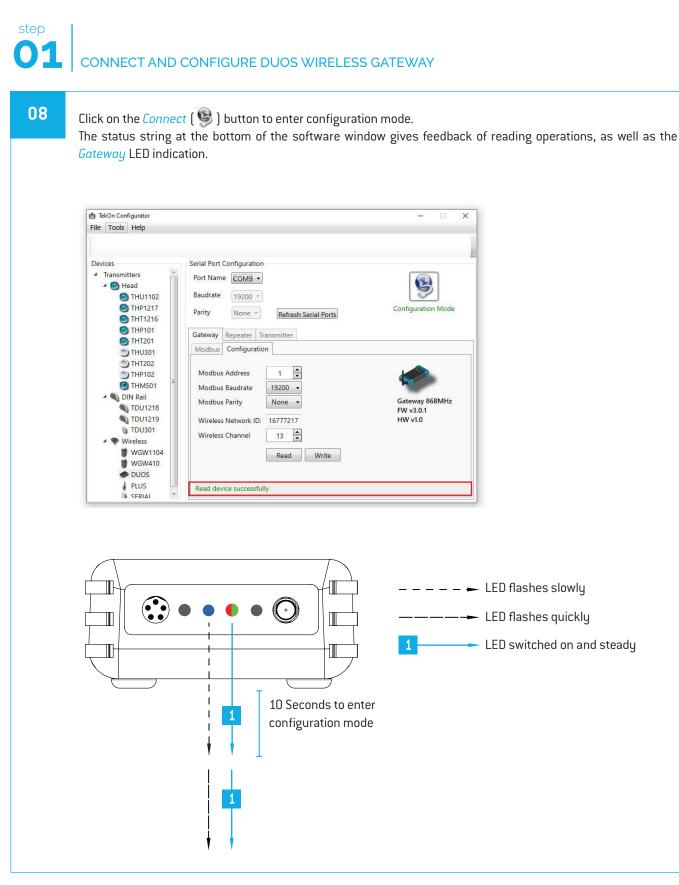
NOTE:

After reinserting the cable, you have 10 seconds to enter in configuration mode by clicking on the Connect () button, while the blue LED flashes slowly.

In this mode, you can manage the device parameters: *Modbus Address*, *Modbus baud rate*, *Modbus Parity*, *Wireless Network ID* and *Wireless Channel*.

² You can check the device port name in the Device Manager menu in the Windows operating system.







NOTE:

When 10 seconds have been exceeded, the blue LED is steady and it is no longer possible to enter configuration mode. In this case, the cable must be removed and reinserted - step 2.



01 CONNECT AND CONFIGURE DUOS WIRELESS GATEWAY

09

Take note of the device configuration data available, namely: *Modbus Address*, *Modbus Baudrate*, *Modbus Parity*, *Wireless Network ID* and *Wireless Channel*.

TekOn Configurator		
File Tools Help		
Devices	Serial Port Configuration	
Transmitters Mead	Port Name COM9 -	
THU1102	Baudrate 19200 -	Sector 1
THP1217 THT1216	Parity None * Refresh Serial Ports	Configuration Mode
THP101 THT201	Gateway Repeater Transmitter	
THU301	Modbus Configuration	
 THT202 THP102 THM501 	Modbus Address	
A DIN Rail		
TDU1218	Modbus Parity None 🔻	Gateway 868MHz FW v3.0.1
TDU1219	Wireless Network ID: 16777217	HW v1.0
TDU301		
Wireless	Wireless Channel 13	
WGW1104		
WGW410	Read Write	
DUOS		
I PLUS	Read device successfully	
SERIAL	Read device successiony	

10

NOTE:

The wireless network connection between devices is ensured by the *Wireless Network ID* and *Wireless Channel field parameters.*

Click on the *Disconnect* (🧐) button.

The Modbus interface and the wireless network are active if the blue LED is on and steady and the red LED is flashing once per second.

1 TekOn Configurator		
File Tools Help		
Devices	Serial Port Configuration	
Transmitters A Head	Port Name COM9 -	
C THU1102	Baudrate 19200 -	~
THP1217 THT1216	Parity None Refresh Serial Ports	Configuration Mode
THP101 THT201	Gateway Repeater Transmitter	
THU301	Modbus Configuration	
 THT202 THP102 THM501 DIN Rail TDU1218 TDU1219 TDU301 Wireless 	Modbus Address 1 Modbus Baudrate 19200 Modbus Parity None Wireless Network ID: 16777217 Wireless Channel 13	Gateway 868MHz FW v3.0.1 HW v1.0
Wireless WGW1104 WGW410 DUOS PLUS	Read device successfully	

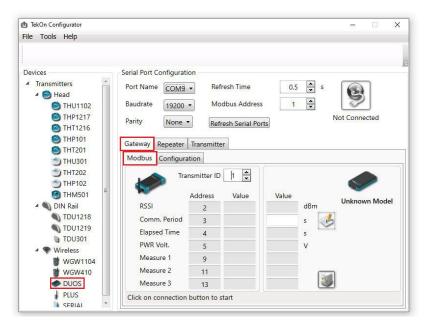


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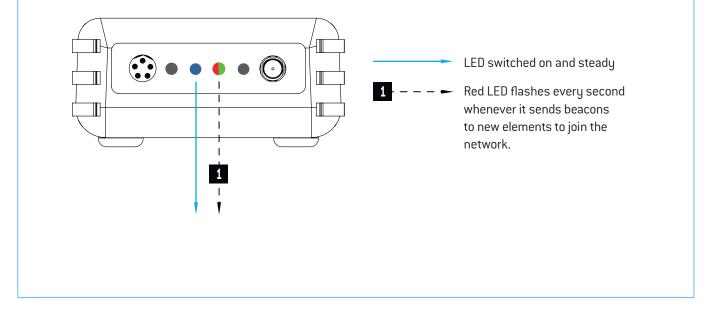
01 CONNECT AND CONFIGURE DUOS WIRELESS GATEWAY

Modbus Communication

Open the *Modbus* tab of the *Gateway* and set the previously saved configurations.



Ensure that the Port name, Baudrate, Parity and the Modbus Address fields are the same obtained in configuration mode.

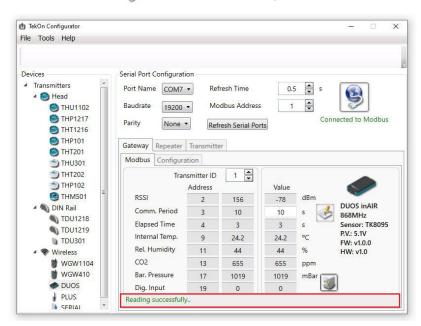




01 CONNECT AND CONFIGURE DUOS WIRELESS GATEWAY

12

Click on the *Connect* () button and check the operation status at the bottom of the window.



The messages *Connected to Modbus* and *Reading successfully* will appear if the *Serial Port* configuration parameters are correct and the Modbus connection established.

If the blue LED is on and steady and red LED flashes once per second, the *Gateway* is fully operational on the Modbus and wireless interfaces.



02 CONNECT AND CONFIGURE DUOS INAIR WIRELESS TRANSMITTER

01 Prepare the *DUOS inAIR Wireless Transmitter*. Unscrew the connector's rubber plug.



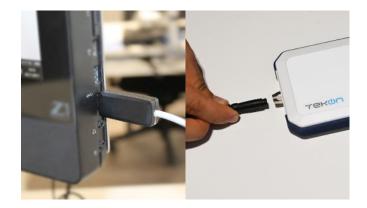
02

Open a new window of the *Tekon Configurator Software* and select the menu *DUOS* >> *Transmitter*.

the TekOn Configurator File Tools Help		
Devices	Serial Port Configuration	
Transmitters A Head	Port Name COM4 -	
THU1102	Baudrate 19200 +	I A A A A A A A A A A A A A A A A A A A
THP1217 THT1216	Parity None - Refresh Serial Ports	Not Connected
THP101 THT201	Gateway Repeater Transmitter 2	
THU301	Measure 1	
THT202	Measure 2	
THP102 THM501	Measure 3	
A DIN Rail	Battery Voltage V	Unknown Model
TDU1218	Comm. Period s	
TDU1219	Transmitter ID	
TDU301	Wireless Network ID:	
✓ ♥ Wireless WGW1104	Wireless Channel	
WGW410		
PLUS	Read Write	
SERIAL *	Click on connection button to start	

03 Connect the *DUOS TRANSMITTER SARC* cable to the computer and then to the transmitter.

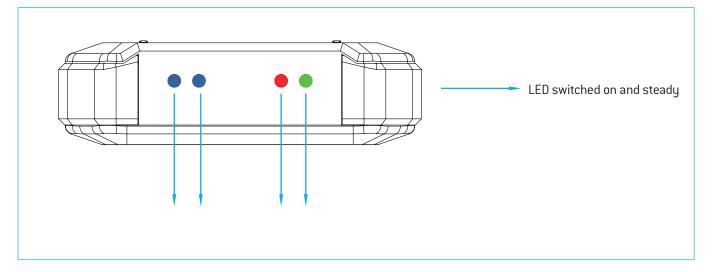
After cable connection, all LEDs stay active during 10 seconds.

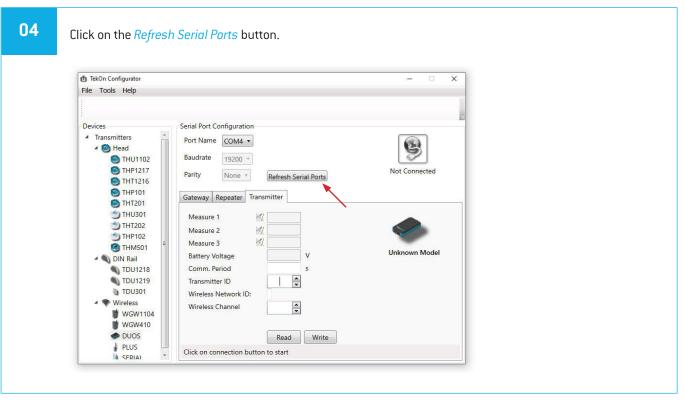






step connect and configure duos inale wireless transmitter







02 CONNECT AND CONFIGURE DUOS INAIR WIRELESS TRANSMITTER

TekOn Configurator File Tools Help		X
Devices	Serial Port Configuration	
 Head THU1102 THP1217 THT1216 THP101 THT201 	Baudrate COM12 • Baudrate COM3 COM3 COM7 COM1 Gateway Refresh Serial Ports	Not Connected
 THU301 THT202 THP102 THM501 	Measure 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	٠
Thinsoir Thinsoir Thinsoir TDIN Rail TDU1218 TDU1219 TDU301 Wireless WGW1104 WGW1104	Battery Voltage V Comm. Period s Transmitter ID V Wireless Network ID: Wireless Channel V	Unknown Model
DUOS PLUS SERIAI	Read Write Click on connection button to start	

06

Remove the cable from *DUOS inAIR Wireless Transmitter* side and reinsert it. This will access the device's configuration input window during 10 seconds.



³ You can check the device port name in the Device Manager menu in the Windows operating system.





02 CONNECT AND CONFIGURE DUOS INAIR WIRELESS TRANSMITTER

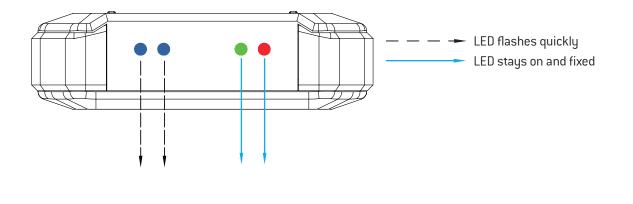
07

Click on *Connect* (9) button to enter configuration mode. These configurations are read automatically.

TekOn Configurator				- D
le Tools Help				
evices	Serial Port Configuration			
Transmitters	Port Name COM12 •			
C THU1 102	Baudrate 19200 +			2
THP1217	Parity None -	Refresh Seria	al Ports	Configuration Mode
THP101	Gateway Repeater Trans	smitter		
THU301	Internal Temp.	25.3	°C	
THT202	Relative Humidity	47	%	
5 THP102	CO2		ppm	and the second se
THP102	002	1277	P P P III	
THP102 THM501	Average CO2	1277	ppm	DUOS InAIR
🙆 THM501 👘	STATIS and and a second	12011	1	868MHz
THM501 THM501 DIN Rail TDU1218	Average CO2	1285	ppm	868MHz Sensor: TK8095
THM501 DIN Rail TDU1218 TDU1219	Average CO2 Barometric Pressure	1285 1016.5	ppm	868MHz
THM501 DIN Rail TDU1218 TDU1219 TDU301	Average CO2 Barometric Pressure Digital Input	1285 1016.5 Open	ppm mBar s	868MHz Sensor: TK8095 FW v1.0.0
THM501 THM501 DIN Rail TDU1218 TDU1219	Average CO2 Barometric Pressure Digital Input Comm. Period	1285 1016.5 Open 10	ppm mBar s	868MHz Sensor: TK8095 FW v1.0.0 HW v0.0
DIN Rail DIN Rail DIN Rail DIU 1218 TDU 1219 TDU 301	Average CO2 Barometric Pressure Digital Input Comm. Period Transmitter ID	1285 1016.5 Open 10 1	ppm mBar s	868MHz Sensor: TK8095 FW v1.0.0 HW v0.0

The status string at the bottom of the software window gives feedback on reading operations.

In configuration mode, *DUOS inAIR Wireless Transmitter* activates 4 LEDS: 2 blue LEDs flashes, red and green LEDs remains active and steady.





NOTE:

After reinserting the cable, you have 10 seconds to enter configuration mode by clicking on Connect () button, while blue LEDs flashes slowly.

When the 10 seconds window have been exceeded, blue LEDs are steady and it is no longer possible to enter configuration mode.

In that case, the cable must be removed from the transmitter and reinserted - step 3.



02 CONNECT AND CONFIGURE DUOS in AIR WIRELESS TRANSMITTER

08

Configure *Wireless Network ID* and *Wireless Channel* previously obtained from the *Gateway*. The wireless connection between both devices is ensured by *Wireless Network ID* and *Wireless Channel* parameters.

Ensure that *Transmitter ID* is unique in the network. Each device must have a different *Transmitter ID*. Change it (if necessary) and take note to view the data later.

Click on Write button to update settings to the Transmitter.

TekOn Configurator le Tools Help				- D
evices Transmitters * 😁 Head 😁 THU1102 😁 THP1217	Serial Port Configuration Port Name COM12 • Baudrate 19200 • Parity None •	Refresh Serie	al Posts	Configuration Mode
THT1216 THP101 THT201	Gateway Repeater Tran	nsmitter		
THU301	Internal Temp.	25.3	°C	
5 THT202	Relative Humidity	47	%	
5 THP102	CO2	1277	ppm	
THM501	Average CO2	1285	ppm	DUOS InAIR
🔺 🔦 DIN Rail	Barometric Pressure	1016.5	mBar	868MHz
TDU1218	Digital Input	Open	Ĩ	Sensor: TK8095
TDU1219	Comm. Period	10	5	FW v1.0.0 HW v0.0
Wireless	Transmitter ID	1	1	PWR Volt. 4.3V
WGW1104	Wireless Network ID:	16777217		
WGW410	Wireless Channel	13	1	
DUOS		Read	Write	
PLUS	Writing Success			



02 CONNECT AND CONFIGURE DUOS INAIR WIRELESS TRANSMITTER

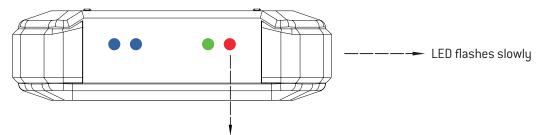
09

Click on the *Configuration Mode* () button to exit setup and start the equipment in normal operation mode.

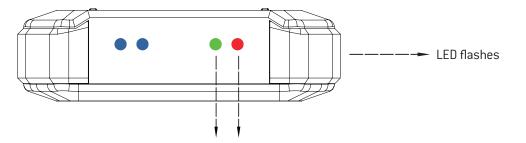
TekOn Configurator				- 0
le Tools Help				
evices Transmitters A B Head THU1102 THP1217 THP1217 THT1216	Serial Port Configuration Port Name COM12 = Baudrate 19200 = Parity None =	Refresh Seria	al Ports	Not Connected
THP101 THT201	Gateway Repeater Tran	smitter		
5 THU301	Internal Temp.	25.3	°C	-
THT202	Relative Humidity	47	96	
5 THP102	CO2	1277	ppm	
THM501 =	Average CO2	1285	ppm DUOS	DUOS inAIR
4 🌒 DIN Rail	Barometric Pressure	1016.5	mBar	868MHz
STDU1218	Digital Input	Open		Sensor: TK8095 FW v1.0.0
TDU1219 TDU301	Comm. Period	10	5	HW v0.0
A S Wireless	Transmitter ID	1	3	PWR Volt. 4.3V
WGW1104	Wireless Network ID:	16777217		
WGW410	Wireless Channel	13	3	
DUOS		Read	Write	
PLUS	Click on connection butto			

After this procedure:

• The *Transmitter* awaits connection to the *Gateway*, when only the red LED flashes;



• The *Transmitter* is connected via wireless and its data is available in the *Gateway*, when the red and green LEDs flash.





NOTE:

If the green LED does not flash, communication has not been established. Make sure that the devices are at a distance of at least 3 meters, or remove the antenna from the gateway (in case both devices are near each other). The *Transmitter LEDs* remain active during 1 minute. After this period, all LEDs shut down in order to optimise battery life.

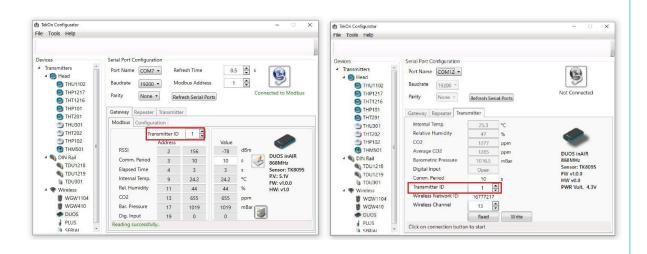
To reset the transmitter, the batteries should be removed, during - at least - 50 seconds (in sleep mode) or instead, as the transmitter has a magnetic switch, a magnet can be used to reset it by passing the magnet close to the transmitter's front side in the blue LED's area.



03 CHECK WIRELESS COMMUNICATION BETWEEN DUOS TRANSMITTER AND GATEWAY

01

Place the two windows of Tekon Configurator software devices side by side, in order to analyse communication between both devices.



02

Select the configured *Transmitter ID* in the *Gateway* window. After this, it is possible to access the address window of the *Transmitter* in analysis.

The communication between devices is successfull when the *Communication Period* field is in compliance with its duration cycle. Therefore, as soon as the cycle duration has finished, it will turn back to 0.

Communication does not occur if the *Elapsed Time* field presents a higher value than the *Communication Period* field.

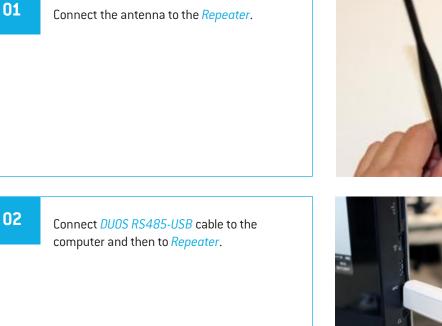
In the following example, it was established that the temperature monitoring cycle (or *Communication Period*) is 10 seconds. Therefore, the *Elapsed Time* field will turn back to 0 as soon as it reaches 10 seconds and the analysed parameters (in this case, the temperature) will be updated in accordance with ambient conditions.

You can define the communication period of the *Transmitter* in the write field by clicking on the *register* (J button.



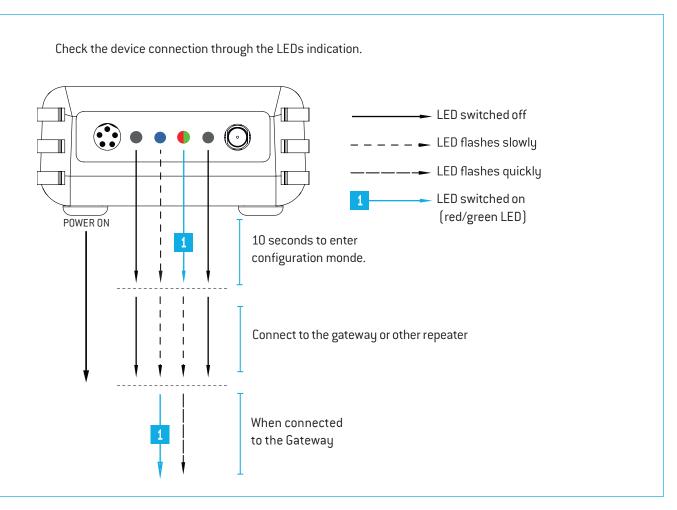


step 0 CONNECT AND CONFIGURE DUOS WIRELESS REPEATER Δ





02





step 04 CONNECT AND CONFIGURE DUOS WIRELESS REPEATER 03 Open Tekon Configurator Software and select the menu DUOS >> Repeater. **(b)** TekOn Configurator × File Tools Help Serial Port Configuration Devices 4 Transmitters Port Name COM1 -S 🔺 🙆 Head THU1102 Baudrate 19200 -THP1217 None * Not Connected Parity Refresh Serial Ports

Gateway Repeater Transmitter

Click on connection button to start

*

* *

Read Write

Un

n Mo

Repeater ID

Wireless Network ID:

Wireless Channel

04

Click on *Refresh Serial Ports* button.

+

THP101
 THT201

THU301

THT202

THP102
THM501

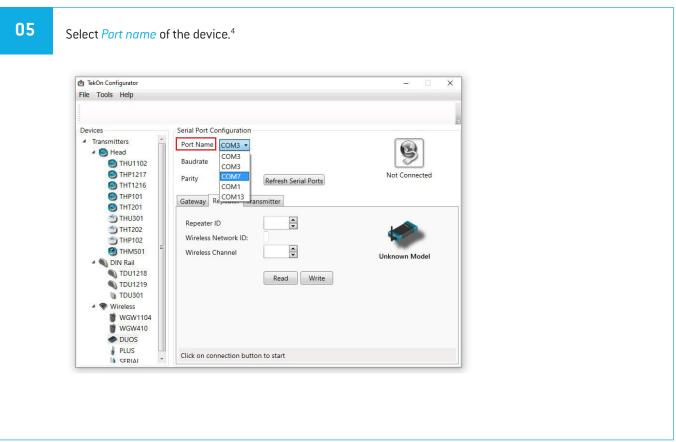
TDU1219 TDU301 Wireless WGW1104 WGW410 DUOS PLUS SERIAI

DIN Rail
 TDU1218

TekOn Configurator		— 🗆 ×
File Tools Help		
Devices	Serial Port Configuration	
Transmitters Mead	Port Name COM3 -	
THU1102	Baudrate 19200 +	9
THP1217 THT1216	Parity None - Refresh Serial Ports	Not Connected
THP101 THT201	Gateway Repeater Transmitter	`
5 THU301 THT202	Repeater ID	
THP102		
C THM501	Wireless Channel	Unknown Model
 DIN Rail 		
TDU1218	Read Write	
TDU1219		
TDU301		
 Wireless 		
WGW1104		
WGW410		
DUOS 🔷		
PLUS	Click on connection button to start	







06

Remove the cable from *Repeater* and reinsert it. After reinserting the cable you have 10 seconds to enter configuration mode by clicking on the *Connect* []] button, while the blue LED flashes slowly.



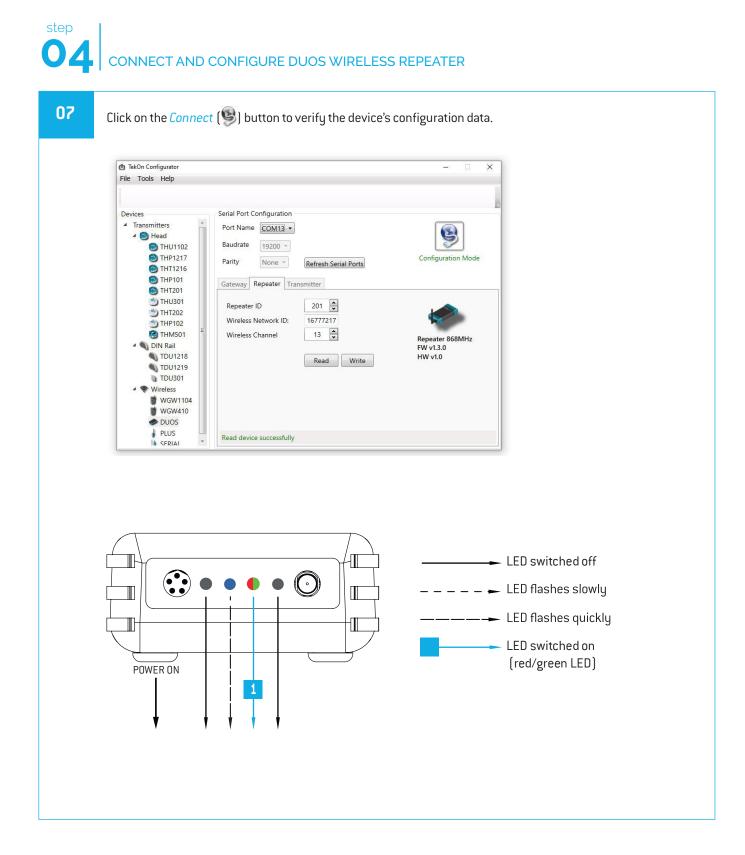


NOTE:

When the 10 seconds have been exceeded, the blue LED remains steady and it is no longer possible to enter *Configuration mode*. In that case, the cable must be removed from Repeater and reinserted.

⁴ You can check the device port name in the Device Manager menu in the Windows operating system.







CONNECT AND CONFIGURE DUOS WIRELESS REPEATER

08

Make sure that *Wireless Network ID* and *Wireless Channel* in the *Repeater* window have the same values as the ones that were obtained in the *Gateway* configuration window.

evices	Serial Port Configuration	
 THU1102 THP1217 THP101 THP101 THP101 TH201 TH1001 TH1001 TH1002 TH1002 TH1002 TH1002 TH1002 TH1001 TU1218 TDU1218 TDU1219 TDU1219 TDU1219 TDU1219 TDU1219 	Port Name COM13 • Baudrate 19200 • Parity None • Refresh Serial Ports Gateway Repeater Transmitter Repeater ID 201 • Wireless Network ID: 16777217 Wireless Channel 13 • Read Write	Configuration Mode Configuration Mode
WGW1104 WGW410 DUOS PLUS	Read device successfully	



NOTE:

If there is more than one *Repeater* in the network, make sure that the *Repeater ID* is unique in order to avoid network conflict.

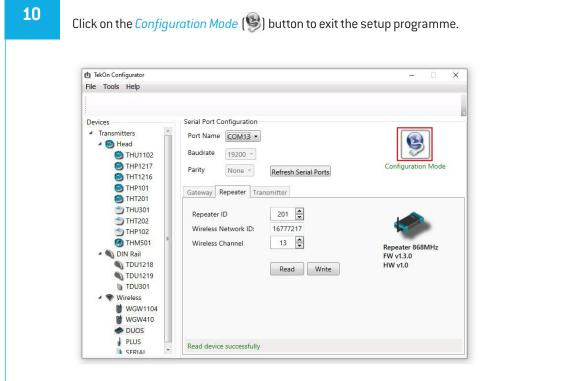
09

Change configuration fields (if necessary) and click on *Write* () button to update the *Repeater ID* parameter.

1 TekOn Configurator File Tools Help		- 🗆 🗙
Devices	Serial Port Configuration	
 Iransmitters Head THU1102 THP1217 THT1216 	Port Name COM13 • Baudrate 19200 • Parity None • Refresh Serial Ports	Configuration Mode
 THP101 TH1201 TH1201 TH1202 THP102 THM501 DIN Rail TDU1218 TDU1219 TDU301 Wireless WGW1104 WGW410 DUOS 	Gateway Repeater Transmitter Repeater ID 201 💌 Wireless Network ID: 16777217 Wireless Channel 13 💌 Read Write	Repeater 868MHz FW v1.3.0 HW v1.0
PLUS	Writing Success	



04 CONNECT AND CONFIGURE DUOS WIRELESS REPEATER



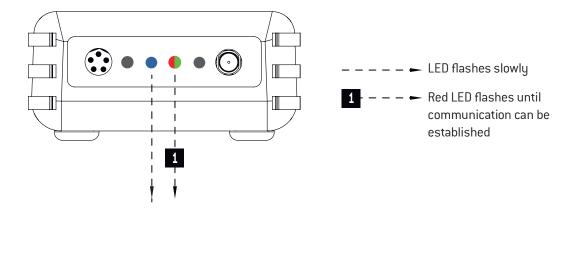


NOTE:

In order to establish communication between the Repeater and the Gateway, make sure that both devices are at a distance of at least 3 meters or remove the antenna from the repeater (in case both devices are near each other). These procedures will guarantee communication quality.

At this moment, it is possible to check if:

• The *Repeater* is trying to connect to the network when the red LED flashes every second.





04 CONNECT AND CONFIGURE DUOS WIRELESS REPEATER

• The *Repeater* is connected to the wireless network when red and green LEDs flash. -1 • LED switches on and remains steady Т – – – Red/green LED flashes as soon 1 as connection between the T devices has been established. I 1



Step 0.5 CONNECT DUOS WIRELESS IOT GATEWAY 01 Change the switch pin to Normal Mode. Plug the ethernet cable that follows with your gateway to the device's input and to your network. 02 Your DUOS IOT GATEWAY physical connection should look like this.



WIFI



The access through this interface only allows the configuration and consultation of DUOS IoT GATEWAY. Unable to send data to the cloud over this channel.

The DUOS IoT GATEWAY appear with an SSID with the following configuration *WGW4IoT-hostname*. By default, the devices follow with the SSID *WGW4IoT-<serialnumber>*

n	2
U	3

Connect to the wifi network that comes from your gateway.

Use the password *bresimar* to login.

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	Wi-Fi
Ativar ou desativar	
Wi-Fi	
WI-FI+ Experiència de Internet otimiza	ada Desativado 🗦
Redes disponiveis	
BRESIMAR	1
WGW4IoT-Tekon	(î,
OpenWrt	ିଲ
WGW4IoT-DUOS@TEKO	N 🦷
DOMBRESIMAR	<u>(</u>

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05 CONNECT DUOS WIRELESS IOT GATEWAY

DUOS IoT GATEWAY has a fixed IP address assigned to be accessed via mobile phone, tablet or pc (through Wi-Fi). The interface designed to interact with the device can be accessed through its fixed IP (192.168.128.1) or its SSID address (http://Tekon). The factory-defined and configurable access data are:

- Login: admin

- Password: admin



NOTE:

This password and username must be changed to improve the security level.



NOTE:

After a power-on cycle, the first access to the gateway may have a long time waiting time and should not be confused with a lack of response.



NOTE:

SSID address access is only possible until it is changed. After the change, you must access by the user-defined SSID.

04

Check your network credentials. Click on *Settings* >> *IP Network* tab.

By default, your gateway has a static ethernet IP address for the network (192.168.100.1). You can choose to keep this IP address or activate the DHCP feature to be assigned a dynamic IP address by the network.

Communication Module Users	Data Import/Export Network	Cloud Services	Monit System				
IP Network Table							
Show 10 + entries				Search			
Interface II DHCP			Gateway	MAC Address	11		
eth0 Disabled	192.168.100.1	255.255.255.0	192, 168, 0, 250	40.83.60.c2.1c:4c		🗷 Manage	
to Disabled	127.0.0.1	255.0.0.0		00:00:00:00:00:00			
ra0 Disabled	192.168.128.1	255.255.255.0		40 a3.6b c2 1c:4a			
Showing 1 to 3 of 3 entries					Previous	1 Next	
	pt.pool.ntp.org				Previous	1 Next	
NTP Peer	pt pool nip.org				Previous		
NTP	pt posi nip.org				Previous	1 Next	
NTP Peer OC Test	pt pool nip.org				Previous		
NTP Peer OC Test	pt pool nip.org				Previous		
NTP Peer @ Test Proxy Configuration					Previous		





05 CONNECT DUOS WIRELESS INT GATEWAY

05	To enable the option to get an dynamic IP address assigned by your network, click on <i>Manage</i> button.
	Communication Module Users Data ImportExport Network Cloud Services Mont System
	IP Network Table
	Show 10 + entries Search:
	Interface IL DHCP II IP Address II Netmask II Gateway II MAC Address II ellio Disabled 192.183.100.1 255.255.255.0 192.163.0.250 40.83.60.021.0:40
	Le manage
	ID Disabled 127.0.0.1 255.0.0.0 00000.00.00.00 CO Disabled 120.00.478.4 255.00.0 00000.00.00.00
	ra0 Disabled 192 168 128 1 205 235 235 0 40 a3 60 c.2 1c.4a Showing 1 to 3 or 3 entries Previous 1 Next
	NTP
	NTP Peer pt poot nip org
	o¢ Test
	Proxy Configuration



A pop-up window will show up. Click on the validation box, next to the *DHCP* label to enable the option and click on the *Update* button to save the changes. You will be redirected to the previous page.

	Interface	eth0		
Show to r entries	DHCP IP Address	192.168.100.1	Search [
Interface II DHCP	There are	192 165 100 1	***	
eth0 Enabled	Netmask	255 255 255 0	2.1C.4c	CE Manage
IO Disabled	Gateway	192.168.0.250	0.00.00	
780 Disabled	MAC Address	40 a3 6b c2.1c 4c	2.1c,4a	
Showing 1 to 3 of 3 entries				Previous 1
NTP		Close	5 Update	
NTP Peer	pl.pool.ntp.org			
Ø [#] Test				Update



Write down the IP address of your device's ethernet port. It will be needed later.





CONFIGURE A PROXY SERVER (OPTIONAL)

LIICK	on the <mark>Upda</mark>	ate butto	on to save	the change	es.			
	Interface []	DHCP	IP Address	11 Netmask	Gateway	MAC Address	11	
	eth0	Disabled	192.168.100.1	255.255.255.0	192.168.0.250	40 83:60 C2 1C:4C	G8 Manage	
	0	Disabled	127.0.0.1	255.0.0.0		00.00.00.00.00.00		
	rao	Disabled	192.168.128.1	255,255,255,0		40:a3.66:c2:1c:4a		
	Showing 1 to 3 of 3 en	tries					Previous 1 Next	
	NTP							
	NTP Peer		pt.pool.ntp.org					
	¢ \$ Test						E Update	
	Proxy Configuration	1]
	HTTP Proxy							
	HTTPS Proxy							



NOTE:

The proxy address must consider the full path configuration like in the example: 'http://my.proxy.com:9000' or 'https://my.secure.proxy.com:9000'





ACCESS TO DUOS GATEWAY IOT THROUGH ETHERNET

08			
	(B) Not some 102 168 100.1	So the st Category	
		(w) Tekon IoT Gateway	
	8	Sign in Usersare abuil Pasavord Excent by Reserver	



NOTE:

DUOS IoT GATEWAY access credentials displayed by default can be edited in *Settings* » *Users* menu.



09



TRANSMITTER ACTIVATION

At login, the graphical interface displays the transmitters that are connected to the network. The first presentation of the devices connected to the network is through a vertical listing (1). To get an overview of your system, at the bottom of the main page, you will find information about the activity and links established (2).

Most Recent Values		
Show to • entries	Bearch:	
Hub ID Name	Status	1
1 NA		
Showing 1 to 2 of 2 entries Status Overview	Previous	Next
Status Overview		Nert
Status Overview Network	Gateway	
Status Overview		Nert



The transmitters are listed in ascending numerical order. By default, the name appears with "N/A" until it is edited and reset. The *Hub ID* field match to the Transmitter ID field defined in Tekon Configurator over the transmitter configuration.

10

Click on the *Hub ID* field of the transmitter to activate. You will be redirected to the selected transmitter page, select the *Properties* tab [1], in the *Status* property, choose the *Active* state [2] and click on the *Update* button [3] to save the change.

Sensor Hub - 1 [1]		
	Modtus	
Properties		
Name		
System Id	1:0:0:0	
Network Id	1:0:0:1	
Firmware Version	3.0.0	
Refresh Time (seconds)	16	
Status	UNDEFINED	. (2)
Description	UNDEFINED AGTIVE INACTIVE	
Synchronize to Cloud	ÖF.	
		Chelde 🗄 Lipidate (3)



05 CONNECT DUOS WIRELESS IOT GATEWAY



The transmitter is activated. Transmitter information available for all the interfaces.



If you would like to send data from this transmitter to Tekon IoT Platform, set the *Synchronize to Cloud* field to *On* mode and save the changes. We will return to this subject shortly.

11

- In the "Properties" tab, fill in the fields:
- "Name" and "Description" according to your preference;
- "Refresh Time" according to the intended transmitter communication period;

Save the changes in the Update button.

ensor Hub - 1		
Measurements Properties Modbu	8	
Properties		
Name	DU0S InAirOutity	
System Id	1:0:0:8	
Network Id	1.0.0:1	
Firmware Version	10.0	
Communication Period (seconds)	10	
Status	ACTARE	~
Description		<u> </u>
Synchronize to Cloud	Off	
		Detete



The transmitter is configured.



CONNECT DUOS WIRELESS IOT GATEWAY

		CONNECTION	ТО ТЕКОМ ІОТ	PLATFORM	
12	In the DUOS loT GATEW	AY page, go to <i>Setting</i>	gs >> Cloud Servio	es.	
	(in) Telean LOT Gateway MORE ADDRAM A	ETWORK SCITINGS		1 ADMX-	
		part/Equar Network Claud Sendors Ma	nt Synkenv		
	Server USL Aft Key	http://wite.itekanelectionics.com/			
	Status ct; Test Cauteritato Tekon Cloud - Sensor hubs cont	an analysis		🗆 Martisete Graduostiate 📳 Update	
	Show 10 v entries Hub ID Nam	e	Status	Search	
	f g Showing 1 to 2 of 2 er	UOS InArrotantly mes	Cloud Synchronization Ciff	Previous 1 Next	

13

In a new browser page, access your Tekon IoT Platform and go to *Settings >> Administration*.

Instruction Instruction	DRIYS		Could not find any information for the following datasesticas	
	Humiliy 53.5% States and M	Lamparature	Conter – [UB] -310471 O MIRCOLD ALCOM	
			e nin-merana artimelli, ka	



step

05 CONNECT DUOS WIRELESS INT GATEWAY

	SETTINGS - O LOCOUT
/iew user	G LANDUAGE PERSONAL AREA
User details	ADMINISTRATION
2	
Name galenny	
Ukerkane	
gatavay	
Profile	
Enail	
No: date	
Culptices	
No data	
Company	
no data	
Communication details	
Açil bey	
Adultation Tale Adult of Collectual 2011	
	0

- C.	

In the DUOS IoT GATEWAY page, fill in the fields:

- "Server URL" with your Tekon IoT Platform address;
- "API Key" with the Api key previously copied;

Change the *Status* field value to *On*.

Settings				
Communication Module Users Data Imp	ort/Export Network Cloud Services	Montt System		
Tekon Cloud				
Server URL	http://sat/8.4okonekectronics.com/			
API Key	defailant film 42nd old?) 200706421202			
Status	<i>on</i>			
O ₆ ^a Test Credentials			🗋 Validate Crectentiais 🔄 Update	1
Tekon Cloud - Sensor hubs config	uration			_
Shaw ia v eatries			Search:	
Hub ID Name		Status		
f DU Showing 1 to 2 of 2 entr	OS inAirQuality	Cloud Synchronization Off	٠	
Second 1 is a second second			Previous 1 Next	



05 CONNECT DUOS WIRELESS INT GATEWAY

16

step

You can test the credentials declared. Click on *Test Credentials* button to test the credentials authenticity. If the credentials are authentic, a success message will show next to the button.

You can validate the credentials. This step will ensure data the credentials entered are authentic. Click on the *Validate Credentials* checkbox.

Click on *Update* button to save the changes. If *Validate Credentials* is checked, the configured data is stored only if valid. Pay attention to the received message.

munication Module - Usera - Data Import/2	goart Network Cloud Services Me	nil System	
iekon Claud			
Somer URL	http://sult@.tokonoloctronics.com/		
АРІ Кау	4/14/00/17/04-4241-0127-202306421292		
Status	Cin		
🕫 Test Crodentals 🖌 🖌 Authentication (IR		Welkdate Credenitials El Montenie
Tekon Cloud - Sensor hubs configura	lion		
Show 10 ~ entries			Search:
Hub ID Name		Status	
	AirGuaithy	Cloud Synchronization Off	*
			Previous 1 Next
f DUOS in Showing 1 to 2 of 2 entries			Fighter Hour



Your DUOS GATEWAY IoT is now connected to your Tekon IoT Platform instance.





CONNECT DUOS WIRELESS IOT GATEWAY

ATTACH TRANSMITTER DATA TO TEKON IOT PLATFORM

17 Access to your Tekon IoT Platform, click at the Datasources menu and the button (🔊) to edit the datasource where you want to send the transmitter data. 🔺 ALARMS - 🛢 DATA - 💠 SETTINOS eron 🙆 DAS-BOARD 🦾 DATASONICES Datasources **B** 6 © 2 00 00 00 Datasources list Dofasource * Date # Variable 4 11/18/2001 3:58:47 PM A BUILDIT & ADD A amount 11/18/2001 3 51112 PM × * > DUOS HYGROTEMP'S 11/18/2021 1111102 PM Am 3. 100 Data In An Quality Q 44 11/18/2021 3:51:12 PM O 100 • / s > HISTROTTHE ID1 - 12205 03/12/2028 1:33:38 PF 3. 11 0 ... TEP# III2 - 12206200006 12/12/2018 1-12-16 08 2.1 0 00 10 • Page 1 of 1

Copy the API key from the datasource and go back to your DUOS IoT GATEWAY page. On the page, select the transmitter you want to match, fill in the *API Key* field with the copied value.

You can test and validate the credentials, as explained in the step 16.

Click on Update button to save the changes.

Communication Modele Users Dat	la Import/Esport Network Cland Services Monit System	
Tekon Cloud		
Server URL	http://iot18.liskoneitschonics.com/	
API Kay	delabor Plan-day with 200064/202	
Status	Du .	
🕰 Test Gredentials 🖌 Authen	tication Ok	🗆 Validate Grestentialis 🖪 Apolante
Tekon Cloud - Sensor hubs o	onfiguration	🐱 Valdato Crodentials
Show to 🗸 entries		Search
Hub ID	Name	Status
1	000S inAirQuality	Cloud Synchronization On 🔹
API Key	14566045-711-4175-0052-140390-041-117	
		Validate Credentials

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CONNECT DUOS WIRELESS IOT GATEWAY



NOTE:

The message "Cloud Synchronization On" will only be visible if you have activated the option "Synchronize to Cloud" in the "TRANSMITTER ACTIVATION" step to activate your transmitter. If you did not perform the validation, the message "Cloud Synchronization Off" will be displayed in the "Status" field.



Your transmitter is now connected to your Tekon loT Platform.



NOTE:

Perform a reboot in the gateway. Remove the *DUOS RS485-USB* cable on the gateway port and reconnect it.

VERIFY COMMUNICATION WITH TEKON IOT PLATFORM

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To verify if the information acquired by the transmitter is effectively reaching your Tekon IoT Platform, click on the Datasources menu and check the date of the latest communication between the platform and the transmitter. This log will tell you if the communication process is on or not.

atasources list	00 0 0			a	5441			
batasoerce *		Date #	Communication #	Variable #	Actions			
DUOS HYGROTEMP 1		11/18/2001 11:58:47 PM	🗶 истисны жалы	💸 напозна какня	œ			¢
DUOS HYGROTEME 2		11/18/2001 3:53:12 PM	💐 urmour asam	X without knows		,		¢
> DUOS HYGROTENES		11/18/2021 311102 PM	🗶 нетоного мляни	🗶 sansar soos	ø	,		¢
Daca In An Quality		11/18/28/21 1/51:12 PM	O et	0		,		¢
Энтерстрик шт. тазаказаета		03/12/2020 1:33:30 PH	× minima warm	0	æ	,		¢
> TEMP III2 - 12206200006		03/13/2038 1:33:33 PM	× игоног млан	O ax				¢



05 CONNECT DUOS WIRELESS INT GATEWAY

		DATA C	омминіс	ATION O	/ER MOE	BUS TCP/	P
20							P communication. Is communications.
	C on the transn	nitter / hub	you want to		·	e Modbus Ho	lding Registers tab.
	Sensor Hub - Measurements Proporties Modbus holding registers	Meditus Holding registers					
	Register Variable	Actual Value	Register Address	Register Value	Register Type	Register Format	
	Transmitter Model	DUOS InAirQuality	63	0x000030	Holding Register	UNT16	
	Probe Sensor Model	TK8095	64	Dx00001C	Holding Register	UNT16	
	RSSI	-30(Bm	65	0x000090	Holding Register	UNT16	
	Communication Period	1Ds	66	0x000004	Holding Register	UNT16	
	Elapsed Time	4869s	67	0x001305	Holding Register	UNT16	
	Battery Voltage	3.94	68	0x000027	Holding Register	UNT16	
	FW Version Major I Minor	1.0	60	0x000100	Holding Register	UNT8_UNT8	
	PW Version Revision	0	70	0x000000	Holding Register	UNT16	
	HW Version Major 1 Minor	0.0	71	0x000000	Holding Register	UNTS_UNTS	
	Internal Temperature	27.13°C	72	0x41090000	Holding Register	FLOAT32	
	Relative Humidity	29.39%	74	Os41ECBE77	Holding Register	FL04T32	
	Carbon Dioxide	858ppm	76	0#44568000	Holding Register	FLOWT32	
	Mean Carbon Dioxide	962ppm	78	0x44708000	Holding Register	FLOAT32	
	Atmospheric Pressure	1019.5estor	50	0#447EE000	Holding Register	FLOAT32	
	Di Stale	0	82	0000008	Holding Register	FLOAT32	

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- In this page, you have the selected transmitter modbus scheme.
- (1): variable names;
- (2): current value recorded;
- (3): modbus address;
- (4): register value;
- (5): register type;
- (6): register data type; Sensor Hub - 40

Measuretnends Properties	Modbus Holding registers				
Modbus holding registers	(2)	(3)	(4)	(5)	(6)
Register Variable	Actual Value	Register Address	Register Value	Register Type	Register Format
Transmitter Model	DUOS InAirQuality	63	0x000030	Holding Register	UNT16
Probe Sensor Model	TK3095	64	0x00001C	Holding Register	UNTIG
RSSI	-30dfm	65	0x000030	Holding Register	UNT16
Communication Period	10s	66	0x00000A	Holding Register	UNT16
Elapsed Time	4369s	67	0x001305	Holding Register	UNT16
Battery Voltage	3.9V	68	0x000027	Holding Register	UNT16
FW Version Major I Minor	1.0	69	0x000100	Holding Register	UNTS_UNTS
FW Version Revision	:0::)	70	0x000000	Holding Register	UNT16
HW Version Major I Minor	0.0	71	0x000000	Holding Register	UINTS_UINTS
Internal Temperature	27.13°C	72	0x41D90000	Holding Register	FL0AT32
Relative Humidity	29.59%	74	0x41ECBE77	Holding Register	FLOAT32
Carbon Dioxide	858ppm	76	0x44568000	Holding Register	FLOAT32
Mean Carbon Dioxide	962ppm	78	0x44708000	Holding Register	FLOAT32
Atmospheric Pressure	1019 Sentar	80	0x4476E000	Holding Register	FLOAF32





CONNECT DUOS WIRELESS IOT GATEWAY



NOTE:

In this example we used the transmitter / hub 1. The first modbus address of its variables starts at 0. To find the modbus address calculation formula defined for DUOS IoT GATEWAY, please refer the datasheet on Tekon Electronics website.



To access to the records via Modbus TCP/IP in real time, you must use a program developed for this purpose, external to Tekon Electronics.



- DUOS IOT GATEWAY IP;
- Port: 1502;



REVISION HISTORY	
VERSION	
E01B	

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