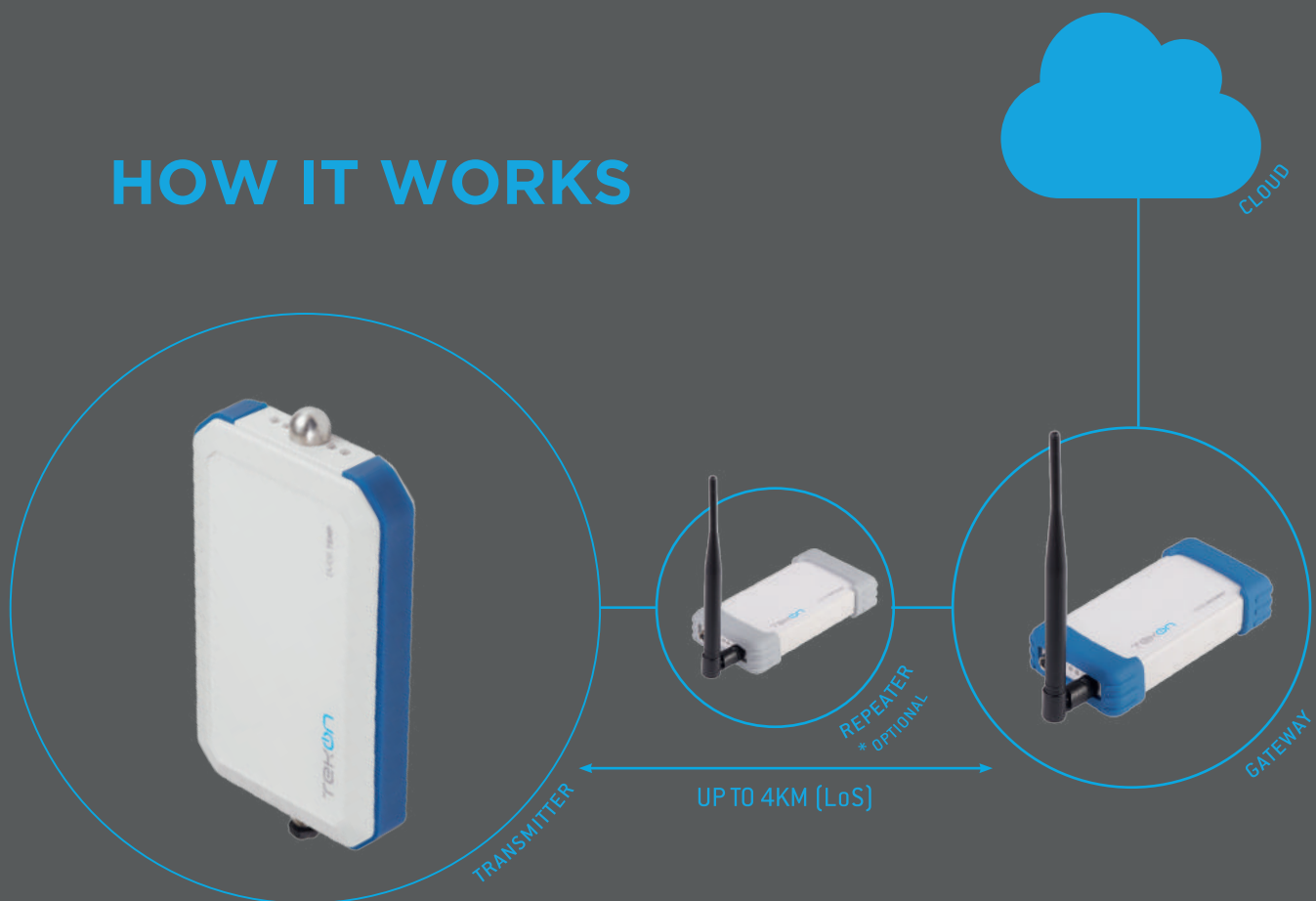# SYSTEM **DUOS**

WIRELESS SMART SENSORS

TEMPERATURE / HUMIDITY / CO2 / DIGITAL INPUT

LONG RANGE COMMUNICATION

WIDE OPERATING TEMPERATURE RANGE

MODBUS RTU COMMUNICATION

SCALABLE SOLUTION

REST API INTEGRATION

HIGH PROTECTION INDEX

An accurate wireless measuring system for monitoring applications, automation and centralization of temperature, humidity, or CO2 measurements.

HOW IT WORKS

CLOUD

TRANSMITTER

REPEATER
* OPTIONAL

GATEWAY

UP TO 4KM (LoS)

DUOS WIRELESS **TRANSMITTER**

- Up to 4Km communication distance (LoS) with 128-bit AES encryption
- Multi-hop mesh network with self-forming, self-healing and self-optimizing features
- Battery voltage and wireless link quality (RSSI) monitoring
- Low power and long battery life
- Extreme operating temperature range -40ºC to 80ºC and IP67 protection
- Simple and intuitive USB configuration via Tekon Configurator (free software)

MODELS

	EXTERNAL TEMPERATURE	INTERNAL TEMPERATURE	DIGITAL INPUT	CO$_2$	HUMIDITY
DUOS **TEMP**	●	●			
DUOS **HYGROTEMP**	●	●			●
DUOS **DI+TEMP**	●	●	●		
DUOS **CO$_2$**		●		●	

DUOS WIRELESS **GATEWAY**

The main endpoint of DUOS wireless network is tasked to manage the communications between all the devices of DUOS wireless network.

- Scalable network up to 55 DUOS transmitters
- Up to 13 repeaters in series
- Modbus RTU communication via RS485 interface
- Power Supply 12V DC ± 5%
- Protection Index IP40

DUOS WIRELESS **GATEWAY** IOT

The main endpoint of DUOS wireless network is tasked to manage the communications between all the devices of DUOS wireless network.

- Scalable network up to 55 DUOS transmitters
- Up to 13 repeaters in series
- Modbus RTU communication via RS485 interface
- Power Supply 12V DC ± 5%
- Protection Index IP40

DUOS WIRELESS **REPEATER**

Increase the range of your DUOS wireless network. With the DUOS Wireless Repeater, the wireless data communication is more secure and reliable.

- Up to 4Km communication distance (LoS)
- Up to 13 repeaters in series
- Power Supply 12V DC ± 5%
- Protection Index IP40

EXTERNAL TEMPERATURE **PROBES**

MODELS	OPERATING TEMPERATURE	ACURACY	RESOLUTION	CABLE LENGTH	CONNECTOR
DUOS DIGITAL PROBE	-40 to 80ºC	± 0,25ºC	0,1ºC	N/A	Industrial M8
DUOS DIGITAL PROBE WITH CABLE	-40 to 80ºC	± 0,25ºC	0,1ºC	2 or 5 mts	Industrial M8
DUOS DIGITAL HIGH TEMPERATURE PROBE WITH CABLE	-40 to 125ºC	± 0,25ºC	0,1ºC	2 or 5 mts	Industrial M8

APPLICATIONS

AGRO-INDUSTRY

DATA CENTER

RENEWABLE INDUSTRY

PROCESS INDUSTRY

FOOD INDUSTRY

COLD CHAIN

PHARMACEUTICAL INDUSTRY

BUILDING AUTOMATION

HVAC

RETAIL

USE CASES

BLOOD BANK
TEMPERATURE, HUMIDITY AND DI

DUOS wireless sensors were integrated in a blood bank, to monitor temperature, humidity and digital input state to ensure the security of blood and derivatives assets. All data was available in the local automation and stored in a cloud service.

MUSEUMS
TEMPERATURE AND HUMIDITY

Our temperature and humidity monitoring solutions are helping to preserve our history. Tekon Electronics implemented wireless solutions in museum's exhibition and storage rooms, in order to minimize the interference of these variables in the preservation process. The solution was backed with our Tekon IoT Platform to establish a real-time monitoring system to ensure a timely intervention in the temperature control of this spaces.

OFFICES
TEMPERATURE, HUMIDITY AND CO2

DUOS wireless solutions are integrated into a office indoor air quality monitoring proccess. Air quality in closed spaces has a direct influence on the productivity and comfort of the people who work there. Through a real-time monitoring of the variables like temperature, humidity and CO2, it is possible to know when there is a need to activate the air renewal mechanisms in closed spaces.

FOOD RETAIL
TEMPERATURE

Wireless smart sensors to monitor the temperature of cooling and freezing rooms to store food with different safety ranges. The solution was backed with our Tekon IoT Platform to establish a real-time monitoring system to ensure food safety.

TEKON ELECTRONICS

Avenida Europa, 460
Quinta do Simão - Esgueira
3800-230 Aveiro
PORTUGAL

P.:+351 234 303 320
M.: +351 939 992 222
E.: sales@tekonelectronics.com

TEKONELECTRONICS.COM

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