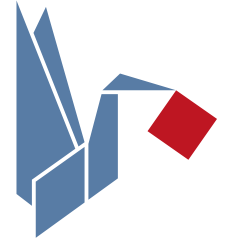
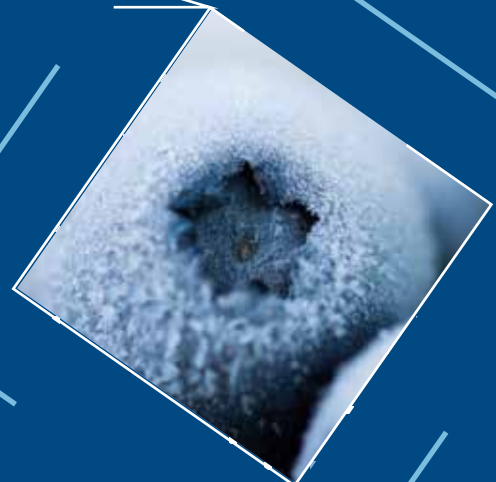


**tecnosoft**  
WE DELIVER DATA



# TEMPERATURE & HUMIDITY



MONITORING SOLUTIONS  
FOR THE COLD CHAIN





# We deliver data

Tecnosoft was founded in 1989 as a research and development company for data acquisition systems for third party companies: the specifications of the new system were drawn up from initial customer requests; the systems are usually made up by an electronic part with firmware and a management software.

Customers were from different fields and activities, from geotechnic to knitting, from medical to industrial. In all these years Tecnosoft has developed important skills in understanding the customer's requirements and transfer them into the project's specifics and the development of the system, keeping itself up to date on new available technologies providing always advanced solutions.

Since 2002 a new TECNOSOFT branded line of monitoring devices has been created: it is

a series of monitoring solutions of different parameters such as temperature, humidity, pressure etc. There are multiple fields of application from pharmaceutical to food & beverages, from energetic to laboratories, from environment to medical.

TECNOSOFT does not only develop the device but provides a whole complete solution that includes software dedicated to specific applications and to the different fields, that will answer to all different requirements of the regulations and of the users for an easy and user friendly system.

Thanks to its flexibility and its continuous updating Tecnosoft manages to grasp quickly user needs and turn them into new systems or updates for existing solutions, as well as being able to customize them according to different needs.

ISO 9001:2015



CERTIFIED QUALITY  
MANAGEMENT SYSTEM

Since 2002 TECNOSOFT has adopted a quality system certified first ISO 9001: 2000 and now 9001: 2015, passing through 9001: 2008.

Quality system procedures ensure that the software development follows accurate standards and steps so that it can always be kept under control and continuously improve, also thanks to the advice and suggestions of numerous users.



## Process monitoring

Monitoring of temperature and humidity sensitive products is an essential process for a high quality standards and a guarantee for both the manufacturer and for the end user. TECNOSOFT cold chain solutions allow you to monitor the temperature during your manufacturing processes.

**Sectors of interest:** Pharmaceutical / Medical Industry, R&D, Laboratories and Hospitals, Food Industry.



## Warehouses and transportation monitoring

To be able to certify to the end user that the goods delivered has been stored and transported following all reference regulations it is an indispensable plus for companies active in a highly competitive sector such as that of logistics.

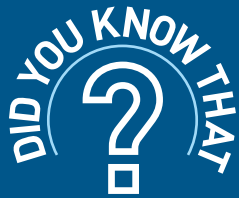
**Sectors of interest:** Logistics, Transport, Food Industry, Pharmaceutical Industry.



## Preservation of goods and sensitive items

In order to protect sensitive and valuable items such as artworks of art in museums or archives, the temperature and humidity must also be constantly monitored.

TECNOSOFT solutions allow a reception of accurate and precise data with the use of non-invasive methods



## The fridge of the desert

Food storage is one of the fundamental processes of agri-food transformation and its primary purpose is the preservation over time of the edibility and nutritional value of an agri-food product, preventing accidental alterations.

Since the dawn of humanity the improvement of conservation technologies coincided with a development either demographic and social.

One of the less known methods of conservation is the system called in arabic Zeer or refrigerator of the desert.

The device uses a raw clay pot, which is porous, unglazed and filled with moist sand. It contains in the center another smaller internal vase (which can be glazed to prevent liquid penetration) in which it is placed the food.

The evaporation of water which moistens the sand contained in the cavity between the two vessels produces cooling, bringing the internal heat of the pot outside.

After putting the food that needs to cool down inside the internal vase, this vase is covered with a wet towel, while the

sand is maintained wet by pouring water twice a day.

The actual evaporative cooling depends on temperature, humidity and the air speed (ventilation).

Maintaining a constant flow of fresh air, the temperature of the inner vessel can reach up to 4.4°C, temperature at which, the harmful mesophilic bacteria, slow down their growth.

There are traces showing the usage of this technique in Ancient Egypt around 2500 BC. Despite this technique has been used since ancient times technology seems to have been forgotten with the advent of electric refrigerators.

In the 1990s, in rural areas of northern Nigeria, Mohamed Bah Abba (1964-2010), professor of business studies at the Jigawa State Polytechnic in Dutse, took up this technology and started to produce it in a serial manner.

This system has been successfully adopted in many countries in sub-Saharan Africa and it helped to reduce diseases related to bad food preservation and it has guaranteed several economic benefits to those who use it.







# Contactless temperature Data Loggers for Shipping and Cold Chain

TempNFC is a contactless data logger for temperature monitoring with NFC technology that is managed via ANDROID app.

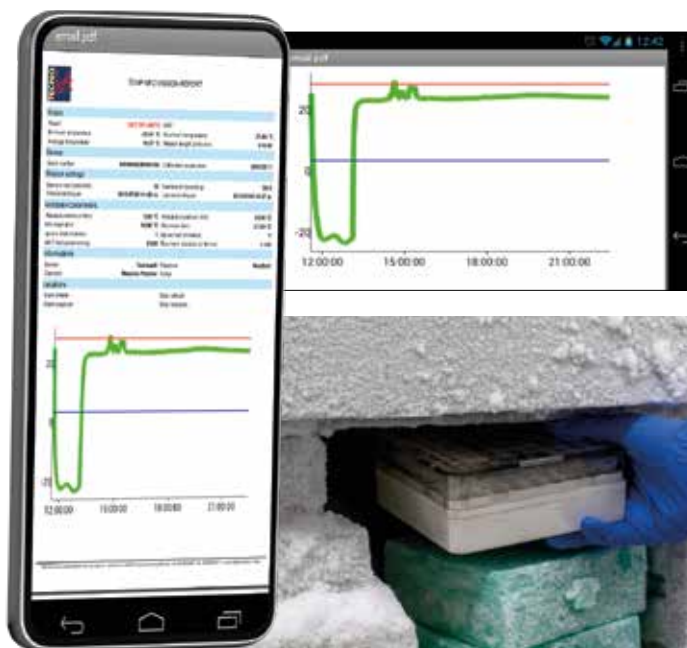
Developed specifically for transport finds application also for monitoring environments, refrigerators and cold rooms.

TempNFC is available in different versions:

TempNFC	TempNFC RC	TempNFC RCE	TempNFC RCA
			
Single use	Rigid Case	With external probe	With anti-temper
Range: $-30^{\circ}\text{C} \div +50^{\circ}\text{C}$ / Accuracy: $\pm 0.5^{\circ}\text{C}$ without certificate / $\pm 0.2^{\circ}\text{C}$ with certificate / Resolution: $0.01^{\circ}\text{C}$ / Memory: 3.928 / Battery: up to 10 years or 3 million acquisitions		Probe Range: $-40^{\circ}\text{C} \div +70^{\circ}\text{C}$ / Probe dimensions: cable 700 L X 2 Ø (mm) - Probe 20 L X 3 Ø (mm)	

## Software features

- OS: Android 5 or later
- Data in Graph, with Zoom, and Table
- Customizable parameters: minimum and maximum limits and maximums, activation energy for the MKT calculation, mission maximum duration, notes (sender, operator, recipient), e-mail address for the automatic sending of the PDF report, manual start (with button)
- Calculated parameters: MKT, minimum, maximum
- Scan barcode and QR code for the packages transported
- Geolocation of the start and end points
- Synchronization with TECNOcloud: download data on the Cloud, make it available to those who want to manage the data anywhere, export them to Excel, create PDF reports, email them in automatic



## Bluetooth Data Logger of temperature for Shipping and Cold Chain



BlueLOG is a temperature data logger which is managed via the Android app,

### **NOD - Nebula Of Data Cloud**

Your data follow you everywhere thanks to Tecnosoft's new Cloud, the Nebula Of Data (NOD). You'll be able to see in real time the readings from BlueLOG, during transport, if

available in many versions with different options.

associated with a telephone connected to the internet, or upon arrival at their destination. Reports, sending via email, exporting to excel. Free your time, we'll take care of the data.



Data Logger range:  $-30^{\circ}\text{C} \div +60^{\circ}\text{C}$  / Maximum sensor range [external]:  $-80^{\circ}\text{C} \div +200^{\circ}\text{C}$  / Maximum accuracy:  $\pm 0.1^{\circ}\text{C} / \pm 3\%$  / Batteries (replaceable): 2X1.5V, up to 2 years with transmission every 15 minutes / Immediate reading and stop alarm button

### **App and Cloud Features**

- OS: Android, iOS
- Bluetooth 4.0 or higher
- Real-time monitoring or downloading at destination
- Alarms in real time on the App
- Geolocation of delivery locations and visualization on the Cloud map
- Data in Graph and Table
- Send immediate reading with relative marker on graph
- Generation of reports in PDF, Excel, CSV
- Acquisition rate: from 1 minute upwards


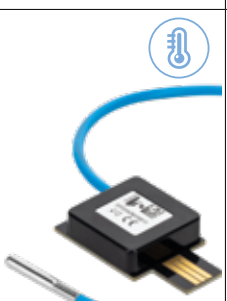



### **Options available**

- Internal temperature, external temperature, humidity, Smart Sensor
- Tilt and shock / drop sensor
- Buzzer for acoustic alarm
- Anti-tamper function
- Extended memory
- BlueLOG will recognize the customer via GPS from the delivery list

# Miniaturized temperature Data Logger

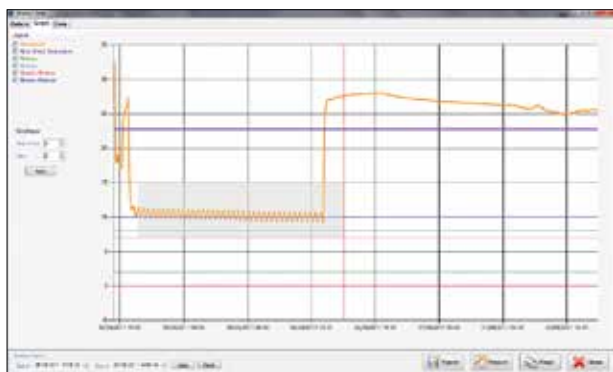
TempStick and Humistick temperature data loggers are miniaturized recorders with a wide range of monitoring applications: from temperature controlled transports of food and chemical reagents and pharmaceuticals to continuous monitoring in fridges and

fridge cells according to ISO 9001 and 12830 standards, HACCP, FDA, BRC ecc. certification. Its reduced size and no need of external power supply make the TempStick system extremely versatile. The data logger can be supplied with different probes and cables.

TempStick	TempStick Probe	TempStick Probe -80	TempStick Probe 200	HumiStick
With internal sensor	With external probe and cable	For temperatures down to -80 °C	For high temperatures up to 200 °C	
				
Range: -30 °C ÷ +60 °C	Probe Range: -40 °C ÷ +80 °C	Probe Range: -80 °C ÷ +20 °C	Probe Range: 0 °C ÷ +200 °C	Range: -30 °C ÷ +60 °C
Dimensions: 50 X 24 X 10 (mm) / Accuracy: ± 1 °C without certification / ± 0.25 °C without certification / Resolution: 0.03 °C / Memory: 2.730 / Battery: up to 10 years or 3 million acquisitions				

## Software features

- Graph with zoom and selection of the curves to be displayed
- 4 temperature and 2 humidity thresholds displayed on the graph
- Calculation of the heat index and the dew point (only with HumiStick), MKT calculation
- Data exportable to Excel and printed reports with graph and data



# What TECNOSOFT offers

Calibration and ISO-certificates



Maintenance and battery change in our laboratories



Technical assistance



Rental services with certified loggers



Personalization and extra calibration points



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