A LOGISTICAL CHALLENGE

HOW TO TRANSPORT A **VACCINE** THAT NEEDS TEMPERATURES OF UP TO **-80ºC / -112ºF**?

The lower the temperature, the higher the challenges to keep the cold chain intact on the distribution and transportation process. The distribution of a vaccine in sparsely populated, rural areas with poor communications is penalizing all the inhabitants to access their vaccine.

- **The WHO points out that more than half of the vaccines are wasted globally due to problems derived from temperature control and shipments.**
- **Some vaccines' sensitivity results in extreme transport conditions that make it difficult to distribute them safely and efficiently.**
- **The European Union member states are lacking in terms of their cold chain infrastructures that do not guarantee some vaccines' correct supply.**
- **As a result of some distribution requests, there may be access problems to the vaccines for around two-thirds of the world's population.**

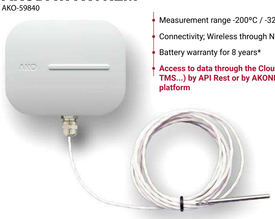
AKODATA

AKO-59810

- Measurement range:
  - Internal probe temperature -40ºC / -40ºF to 50ºC / 122ºF
  - External probe temperature -50ºC / -58ºF to 50ºC / 122ºF
  - Humidity 0 to 100 %
- Connectivity; Wireless through NBIoT
- Battery warranty for 8 years*
- **Access to data through the Cloud: (ERP, TMS...) by API Rest or by AKONET.Cloud platform**

AKODATA XTREM

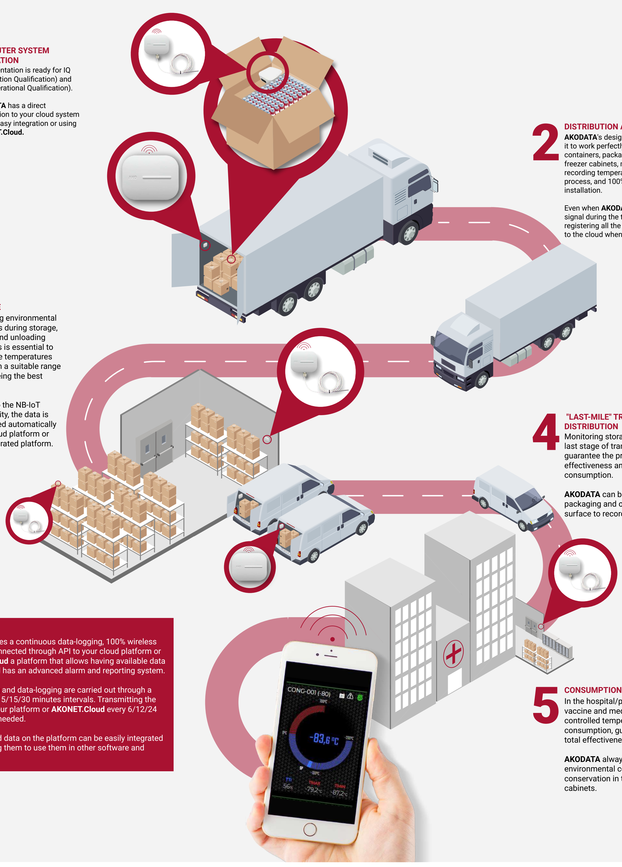
AKO-59840



- Measurement range -200ºC / -328ºF to 100ºC / 212ºF
- Connectivity; Wireless through NBIoT
- Battery warranty for 8 years*
- **Access to data through the Cloud: (ERP, TMS...) by API Rest or by AKONET.Cloud platform**

THE KEY TO ENSURE A SAFE DISTRIBUTION AND TRANSPORT PROCESS:

TRACEABILITY OF THE ENTIRE COLD CHAIN PROCESS



1 COMPUTER SYSTEM VALIDATION

Documentation is ready for IQ (Installation Qualification) and OQ (Operational Qualification).

AKODATA has a direct connection to your cloud system by **API** easy integration or using **AKONET.Cloud.**

2 DISTRIBUTION AND TRANSPORTATION

AKODATA's design and functionality allow it to work perfectly in transport containers, packaging, cold rooms or freezer cabinets, monitoring and recording temperature at any time of the process, and 100% wireless and easy installation.

Even when **AKODATA** doesn't have a signal during the transport, it continues registering all the data and is send it back to the cloud when it regains the signal.

3 STORAGE

Monitoring environmental conditions during storage, loading, and unloading processes is essential to ensure the temperatures are kept in a suitable range guaranteeing the best quality.

Thanks to the NB-IoT connectivity, the data is transmitted automatically to the cloud platform or your integrated platform.

4 "LAST-MILE" TRANSPORT & DISTRIBUTION

Monitoring storage conditions in the last stage of transport are critical to guarantee the product's full effectiveness and safety before its consumption.

AKODATA can be fixed both in the packaging and on the transport surface to record the data.

DATA LOGGER

AKODATA makes a continuous data-logging, 100% wireless and directly connected through API to your cloud platform or to **AKONET.Cloud** a platform that allows having available data all the time and has an advanced alarm and reporting system.

The monitoring and data-logging are carried out through a configurable at 5/15/30 minutes intervals. Transmitting the data back to your platform or **AKONET.Cloud** every 6/12/24 hours, or as is needed.

All the recorded data on the platform can be easily integrated by API, allowing them to use them in other software and systems.

5 CONSUMPTION

In the hospital/pharmacy, the vaccine and medicine are kept at a controlled temperature until their consumption, guaranteeing their total effectiveness.

AKODATA always record all the environmental conditions of conservation in the cold rooms and cabinets.

BENEFITS

AKODATA & AKODATA XTREM

- **AKODATA:** Humidity and temperature data logger up to -40ºC / -40ºF
- **AKODATA XTREM:** Recording of temperature up to -200ºC / -328ºF.
- Alarms in real-time by email. 24/7 Alarm System in case of exceeding the pre-established limits.
- Daily, weekly and monthly reports to both internal audits and quality certifications.
- Indicators, reports and graphics oriented towards maintenance and quality, with impact on the business.
- Specific indicatos (average kinetic temperature).
- Access to data through the Cloud: (ERP, TMS...) by API Rest or by AKONET.Cloud platform.
- The most efficient solution in temperature and humidity monitoring for assets distributed in several locations.
- Easy to install & set up with dropdown menus. Without wiring.
- Scalable a multiple devices.
- Unified and reliable access to the key information to integrate on its operations.
- Reports on demand and recorded incidents.

TECHNICAL FEATURES

AKODATA & AKODATA XTREM

AKODATA

Power supply.....Battery LiSOCl2,3.6 Vdc,6.5 Ah
Estimated life of the battery.....up to 8 years*
Bands.....NBIoT (Narrow band) LTE Cat NB1 | B2,B3,B4,B8,B12,B13,B20

Measuring range
Internal temperature probe.....-40 to 50ºC
External temperature probe.....-50 to 50ºC
Moisture.....0 to 100%

Resolution
Temperature.....0.1ºC
Moisture.....0.1% RH

Precision
Internal temperature probe -40 to 0 ºC: ±1ºC
External temperature probe 0 to 50 ºC: ±0.5ºC
Moisture 20 a 80%: ±3%
Rest: ±10%

Working ambient temperature.....-40 to 50ºC
Storage ambient temperature.....-40 a 60ºC
Recomended +30 ºC
Range of moisture permitted.....0 - 100 % RH (without condensation)
Protection degree
AKO-59810x / 59820x (without antenna).....IP68
AKO-59811x / 59821x (with antenna).....IP65

AKODATA XTREM

Power supply.....Battery LiSOCl2,3.6 Vdc,6.5 Ah
Estimated life of the battery.....up to 8 years*
Bands.....NBIoT (Narrow band) LTE Cat NB1 | B2,B3,B4,B8,B12,B13,B20

Measuring range.....-200 to 100ºC

Resolution.....0.1ºC

Precision
Internal temperature probe -40 to 40ºC: ±0.5ºC
Rest: ±1ºC

Antenna.....Internal AKO-59840x
.....External AKO-59841x
Working ambient temperature.....-40 to 50ºC
Storage ambient temperature.....-40 to 60ºC
Recomended +30ºC
Range of moisture permitted.....0 - 100% RH (without condensation)
Protection degree
AKO-59840x.....IP67
AKO-59841x.....IP65

Dimensions.....107 mm (W) x 85 mm (H) x 39 mm (D)

Probe lenght.....3 m

* Battery life may vary depending on the ambient temperature, the level of coverage and the configuration of the device.