

But to improve or maintain the proper levels of care for K9 units or pets and zoo animals, you have to know what's happening with critical elements of that care. Internet of Things (IoT) technologies in the form of sensors collecting and delivering data and software offering that data, at times instantly, can keep you in the know regarding your K9's well-being.

Sensors can send you an instant alert via text, email, or call when there's a potential problem like high in-vehicle temperature. Read how Monnit® can help you remotely monitor K9 facilities and kennels 24/7.

Spoiler alert: The ROI is significant by avoiding dangerous temperatures and high humidity in vehicles and facilities, plus water leak damage and malfunctioning HVAC systems. It's all easily managed using an online dashboard on a smartphone or computer. Plus, alerts via email, text, or call from a wide variety of fast-install sensors and meters.

### Challenges

A law enforcement agency in the Southern United States had an incident with a patrol vehicle's air conditioning unit failing while the officer was responding to a call. Due to the sweltering weather, it didn't take long for the K9 left in the vehicle to suffer from the heat.

The officer had no idea that the air conditioning had failed and that his K9 partner was in trouble. K9s work hard and are regarded as part of the law enforcement family. It's devastating to the entire department when a situation like this happens.

The agency's K9 trainer contacted Monnit to consult about a solution for monitoring their environments and climates for temperature and humidity around their dogs when they're on and off duty.



### Solution

The K9 training and handling team opted for a Monnit IoT solution, consisting of ALTA® by Monnit Wireless Temperature and Humidity, Open-Closed, Water Detection, and heating, ventilation, and air conditioning (HVAC) Sensors with ALTA Gateways to monitor K9 facilities and kennels remotely.

Using various ALTA Temperature Sensors deployed in the patrol vehicle and facility kennels and attached to their K9s' collars, officers and staff have an efficient and cost-effective means of remotely monitoring temperatures around their K9 units.

Additionally, officers self-installed:

- Wireless Humidity Sensors inside vehicles and facilities to measure relative humidity (RH)
- Wireless Water Detection Sensors—Water Rope and Water Detection Puck—to monitor the department's K9 facilities for leaks and pooling
- Differential Air Pressure Sensors, Vibration Meters, and AC Current Meters on HVAC air circulation fans, pumps, motors, and ducts
- Open-Closed Sensors on doors and windows of vehicles and kennel facilities
- The iMonnit Sensor Management and Remote Monitoring Software on K9 officer smartphones, tablets, and computers
- Gateways in facilities and patrol vehicles to protect and communicate data sent from every Monnit Sensor and Meter

Sensor data is checked against conditions configured in the software, and alerts are sent to officer mobile devices via email, text, or call if conditions, especially temperatures, are too high or low. Using a secure login, officers and staff can access and view the history of conditions, and alerts are tracked through the system.

#### Results

Monnit makes it easy to realize an immediate return on investment. However, to determine the ROI for this application, you would have to:

- Put a price on the health and well-being of law enforcement K9s
- Factor in K9 team training cost and time
- The emotional connection of the team

Partnering with Monnit allows trainers to send a K9 monitoring system with every dog that leaves their care. Since initiating the Monnit solution, several instances of unsafe conditions have been detected, allowing officers or staff to respond quickly, ensuring the safety of their dogs.

Using Monnit's comprehensive monitoring solution, K9 officers can:

- Provide a reliable and straightforward monitoring system with each trained K9 to ensure its safety in buildings and the field
- Monitor the temperatures around their dogs at all times with integrated sensors on K9 collars.
- Track temperatures throughout facilities and within patrol vehicle kennels.

**ROI:** After only a couple of weeks using Monnit Solutions, the law enforcement agency optimized its facility and vehicle monitoring with preventive measures in place to care for its K9s properly.

## Monnit Remote Monitoring Helps You Keep Animals Comfortable, Safe, and Healthy





# Temperature Sensors

Chart your kennel and HVAC systems' fluctuating environmental conditions.
The ALTA Temperature Sensor can be customized and attached to or embedded in a collar. It can also measure various HVAC system components and ducts with a waterproof lead up to 100 feet.



### Humidity Sensors

The scientific-grade ALTA Humidity Sensor remotely monitors relative humidity (RH) with a +/- 3% accuracy (between 10-90% RH), temperature, and dew point in facilities. Available in Wireless and PoE options to instantly alert you via text, email, or call.



### Water Detection Sensors

An ALTA Wireless
Water Detection Puck
Sensor is ideal close to
kennels and around
toilets, sinks, boilers,
and water heaters. An
ALTA Wireless Water
Rope Sensor along
walkways, walls, and
pipes can detect
water and help
prevent damage
from leaks.



### AC Current Meters

Analyze HVAC system power consumption and predict problems before they occur with our ALTA AC Current Meters. Knowing current use by root mean square (RMS) average and amp-hours helps you manage performance. Monitor a/c compressors and fan motors too.



### Open - Closed Sensors

Maintain security across your facilities and vehicles by monitoring the status of doors and windows.

ALTA Wireless
Open-Closed Sensors use a switch and trigger magnet to detect status.
Be alerted right away when the status changes from your preset parameters in iMonnit.

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