

SenseHub™
THE NEW GENERATION
OF COW MONITORING



SenseHub is a sophisticated, modular cow monitoring solutions that leverages the deep expertise gained from the many Allflex Livestock Intelligence monitoring solutions monitor millions of animals worldwide. SenseHub collects and monitors critical data points for every individual animal, delivering timely reproduction, health and nutrition insights. Using SenseHub, producers can increase efficiency, improve livestock wellbeing, and drive prosperity for their farms and families.

#### **Reproduction Monitoring**

SenseHub reproduction monitoring applications eliminate the guesswork and inconsistency of evaluating the reproductive status of every individual heifer and cow. Our applications empower dairy farmers to optimize conception rates, while reducing skilled labor requirements and saving time.

Leveraging behavior monitoring based on activity, rumination, eating and other proprietary key cow behaviors, our reproduction monitoring applications provide unmatched heat detection accuracy, including detection of weak heat signs, while minimizing false positives. They deliver actionable insight in real time, with precise insemination timing guidance.

Using our applications, dairy farmers can reduce the calving interval, while reducing or eliminating dependency on reproductive hormones. With fewer days open, farmers can improve milk production as well as the genetic quality of their herd

Reproduction monitoring applications include Cows in Heat (estrus) Report, Cows with Irregular Heat Report, Suspected for Abortion Report, and Anestrous Cows Report.

#### **Health Monitoring**

SenseHub health monitoring applications empower dairy farmers to detect developing health issues in the transition period such as ketosis, DA, metritis and mastitis early on, before they show up in milk or as a serious metabolic problem. Often, they can be detected well before production drops or clinical signs appear. The applications also enable farmers to quickly evaluate response to veterinary treatments, for the best-possible recovery and treatment cost-effectiveness.

Using our applications, dairy farmers can make informed and timely decisions regarding intervention and treatment. This empowers them to take pre-emptive actions that help avoid deterioration, reduce treatment costs, reduce or prevent impact on milk production, and lower the mortality rate.

Real-time detection and alerts provide actionable insight into individual cows' health at high-risk times, including before, during and immediately after calving, enabling timely intervention that can save money and provide peace of mind. Our health monitoring applications also help farmers streamline their fresh cow protocol and minimize disruption to fresh cows' rest by enabling them to identify and care for those cows that need additional attention.

Health monitoring applications include Health Report, Fresh Cow Report, Animals to Inspect Report, Distress Report, and Distress Alerts.

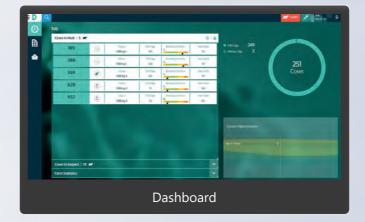
### **Group and Nutrition Monitoring**

SenseHub group monitoring applications provide dairy farmers with timely and actionable insight that enables optimized decision-making for herd-wide health, wellbeing and productivity. Varied reports that reveal trends within groups enable farmers to make timely decisions relating to wellbeing, nutrition, and heat abatement, and other farm management strategies.

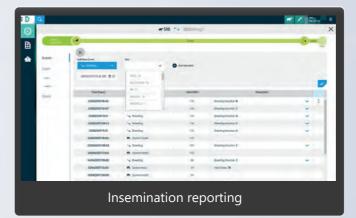
Farmers can improve their nutrition strategy by quickly understanding how their cows react to ration changes, including subtle adjustments such as new batches, new suppliers, toxin or feed issues, and ration modifications. The effects of ration adjustments can be detected in as little as a few hours, enabling informed nutrition decisions that optimize herd health, reproduction, and milk productivity. Visualization of long-term trends spanning several months provides nutritionists with an additional perspective for evaluating rations and changes.

Farmers can also understand the effects on their cows' wellbeing of environmental factors such as extremely hot weather, lack of water, wet bedding, over-population, wind, and dogs, and of changes to grouping, equipment and staffing. This enables informed decisions to address immediate issues, activate and fine-tune heat abatement strategies, and develop plans to prevent or minimize future problems.

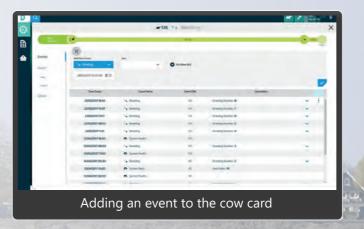
Group monitoring applications include Group Heat Stress Report, Group Consistency Report, and Group Routine Report.

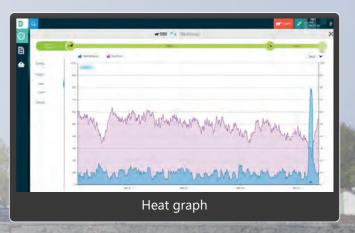














# FLEXIBLE, HIGH-PERFORMANCE COW MONITORING FOR ANY SIZE FARM

#### Gain actionable insight into every animal's status, in all populations, across the full animal lifecycle

Monitor all cattle on your dairy farm, from birth to culling, according to the specific needs of each population. With the ability to match tag type and application plan level to the various populations on your farm, you can gain actionable insights to optimize the productivity and wellbeing of all your livestock, for more sustainable and profitable operations.

- · Maximize conception rates, production and profitability, with advanced heat and health monitoring
- · Improve the conception rate of your heifer population using the Starter application plan, while using our broader application plans for the milking cows
- Maximize the potential value of young stock while reducing risks and costs, with dedicated health monitoring application for calves up to six months old

## Get an exceptionally flexible solution that meets your changing needs

Assemble your monitoring solution to best suit the different populations on your dairy farm, and your operational and business needs. Choose the tags, application levels, devices and farm payment method that suit you now, and make adjustments as individual animals transfer to different populations and as your needs change.

- Use the right tag at the right time Support for both eSense Flex ear tags and cSense Flex neck tags on the same farm
- · Use the right application for the right population Multiple application plans, and the flexibility to combine different application plans on the same farm
- Choose your preferred payment option Up or Go models for upfront or a monthly subscription
- Utilize your preferred user devices Desktop, laptop, tablet or any mobile device

## Manage your dairy farm livestock with maximum convenience

Utilize a variety of management solutions, tools, and options according to the size and infrastructure of your farm. With the modular SenseHub you can assemble your full monitoring and management solution according to your needs now and change or upgrade specific aspects as your needs evolve.

- Monitor large dairy herds of over 1,000 cows with the new SenseHub Server
- Easily and efficiently sort cows using a sorting gate connected to the system
- · Boost efficiency across your farm with integrated cow monitoring and herd management software
- Work with a modular, scalable solution that adjusts as your farm grows Upgrade application plans, add tags and upgrade software remotely

Mobile application

> Additional antennas

> > Tags

Web application



**Control Tower** service and support center

> Third-party herd management systems

Plug & play installation

SenseHub® Controller

# FLEXIBLE APPLICATION PLAN LEVELS



## Starter

- Heat Report
- Cows with Irregular Heat Report
- Suspected for Abortion Report
- Anestrous Cows Report



# Advanced

All Starter applications, plus:

- Health Report
- Fresh Cow Report
- Animals to Inspect Report
- Distress Report
- Distress Alerts



## Premium

All Starter and Advanced applications, plus:

- Group Heat Stress Report
- Group Consistency Report
- Group Routine Report



# Young Stock

Young Stock Health Report



# eSense Flex Tag



**Communication:** 2.4GHz - 802.15.4 Area coverage: 200 x 500 m (656 x 1,640 ft)

**Expected battery lifetime:** 3 years

**Size:** H x W x D: 68 x 38 x 15 mm (2.6 x 1.5 x 0.6 in)

**Weight:** 25 gr (0.88 oz)

Operating temperature: -30°C to 50°C (22°F to 122°F)

Housing: Waterproof (IP68) durability and unique plastic composition create a strong, airtight casing



# cSense Flex Tag

**Communication:** 2.4GHz - 802.15.4 Area coverage: 200 x 500 m (656 x 1,640 ft)

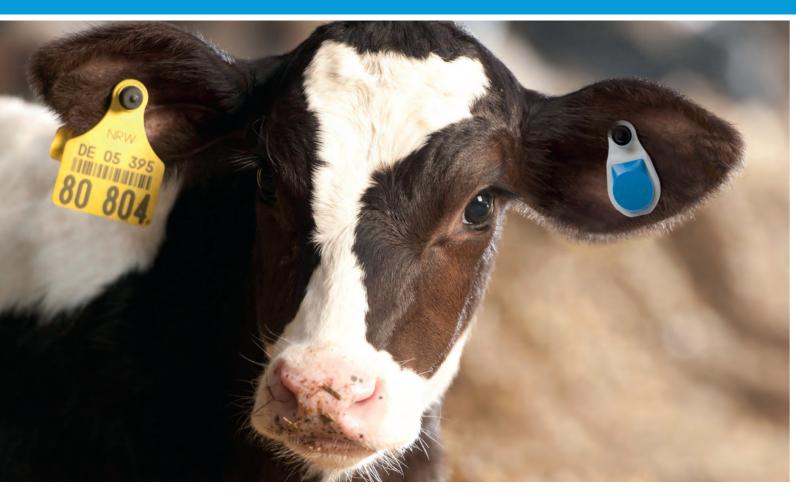
**Expected battery lifetime:** 7 years **Size:** H x W: 84 x 64 mm (3.3 x 2.5 in)

**Weight:** 98 gr (3.46 oz)

Operating temperature: -30°C to 50°C (22°F to 122°F)

Housing: Waterproof (IP68) durability and unique plastic composition create a strong, airtight casing

# USE THE RIGHT APPLICATION FOR THE RIGHT POPULATION



## Maximize the potential value of young stock, while reducing risks and costs

Allflex Young Stock Application provides advanced health monitoring of calves up to six months old, enabling you to detect the onset of health issues very early, sometimes even before clinical signs appear. With earlier detection, you can promptly begin treatment or otherwise intervene, reducing drug usage, preventing impact on each calf's growth curve or future performance, and ultimately reducing mortalities. Automated monitoring and detection saves time and effort and reduces dependence on skilled labor.



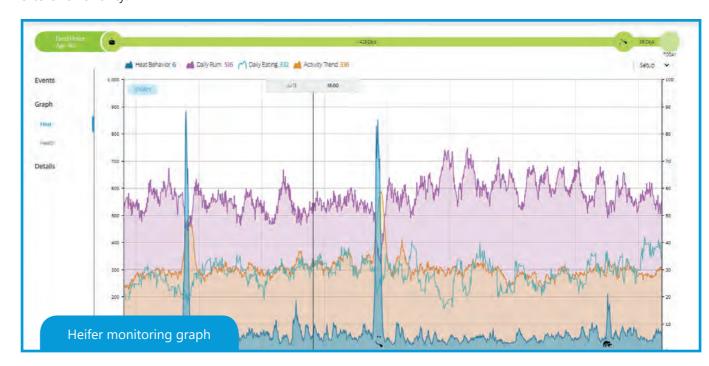


## Optimize heifer reproduction monitoring by using multiple application plans on your farm

The Starter application plan provides reproduction monitoring only and can be used alongside the Advanced or Premium plan on the same farm. This allows you to cost-effectively monitor heifers with the Starter application plan, to optimize conception rates, while using the Advanced or Premium plan for cows, which have more health, nutrition and wellbeing risks.

Since there is natural movement of animals between populations, tags can be kept on the same animal for its entire lifecycle.

The system automatically enables the application features for all tagged animals based on their population, allowing extensive flexibility.





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## About Allflex Livestock Intelligence

Allflex Livestock Intelligence, part of MSD Animal Health, is the world leader in the design, development, manufacturing and delivery of solutions for animal identification, monitoring and traceability. Our solutions empower farmers to act in a timely manner, to safeguard their animals' health, while achieving optimal production outcomes for a healthy food supply.

Through its commitment to the Science of Healthier Animals®, MSD Animal Health offers veterinarians, farmers, pet owners and governments one of the widest ranges of veterinary pharmaceuticals, vaccines and health management solutions and services. Merck Animal Health is dedicated to preserving and improving the health, well-being and performance of animals and the people who care for them.

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