



Allflex Livestock Intelligence

SenseHub™

The new generation of cow monitoring



Livestock Intelligence™

Merck Animal Health Intelligence

SenseHub™ is a sophisticated, modular cow monitoring solution that delivers timely, actionable information on the reproductive, health, nutritional and wellbeing status of individual cows and groups. It collects and analyzes critical data points for every individual animal. Using SenseHub, dairy farmers with any size operation can increase efficiency, improve their animals' wellbeing, and drive prosperity for their farms and families.

SenseHub is integrated with Allflex Livestock Intelligence monitoring applications.

Reproduction Monitoring

Allflex Livestock Intelligence reproduction monitoring applications eliminate the guesswork and inconsistency of evaluating the reproductive status of every individual heifer and cow. The 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 decreasing or eliminating dependency on reproductive hormones. With fewer days open, farmers can optimize milk production as well as the genetic quality of their herd.

Our reproduction monitoring applications include Cows in Heat (estrus) Report, Cows with Irregular Heat Report, Suspected for Abortion Report, Anestrous Cows Report and Pregnancy Probability Report.

Health Monitoring

Allflex Livestock Intelligence health monitoring applications empower dairy farmers to detect developing health issues in the transition period such as ketosis, DA, metritis and mastitis, before they show up in milk or as a serious metabolic problem, and often well before production drops or clinical signs appear. They 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, enabling 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' peace by enabling them to identify and care for those cows that need additional attention.

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

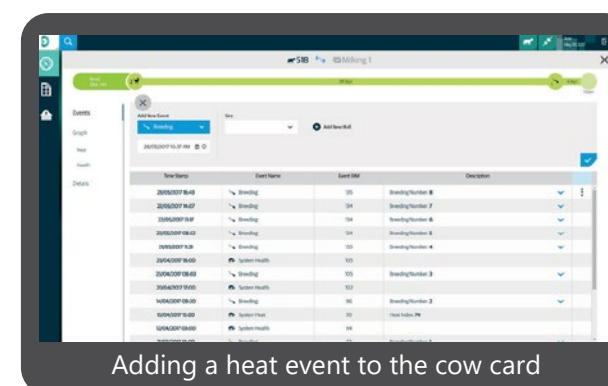
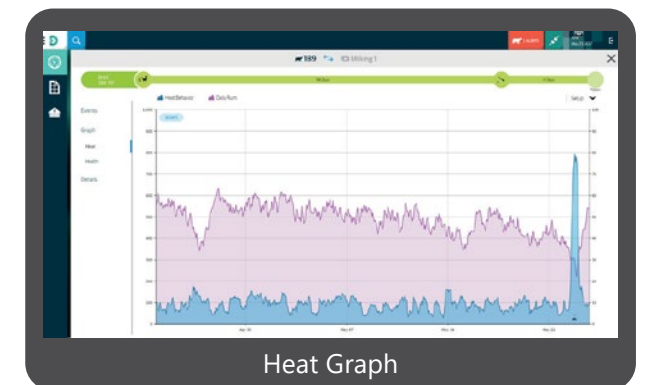
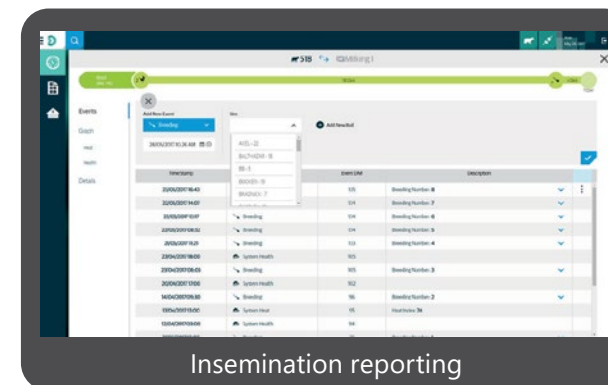
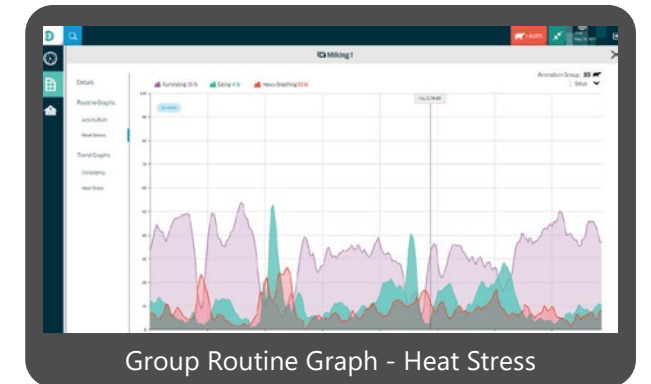
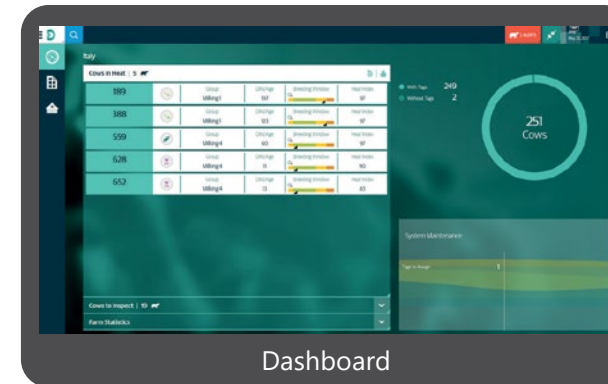
Group and Nutrition Monitoring

Allflex Livestock Intelligence group monitoring applications provide dairy farmers with fast and actionable insights that enable 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 the cows' health, comfort, nutrition, and heat abatement, 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, a toxin or feed issue, and ratio 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 of environmental factors such as extremely hot weather, lack of water, wet bedding, over-population, wind, and dogs, on their cows' wellbeing, as well as 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.

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



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, 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, health, group and nutrition monitoring
- Improve the conception rate of your heifer population using the Starter application plan, while using our more comprehensive application plans for your milking cows

Get an exceptionally flexible solution that meets your changing needs

Assemble your monitoring solution to best suit your operational and business needs, along with different populations. Choose the tags, application levels, devices and your 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 model for up-front payment or Go for 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 Allflex Livestock Intelligence's modular approach, 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 1000 cows with the new SenseHub Server
- Easily and efficiently sort cows using a connected sorting gate 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



Single-Box Connectivity



eSense™ Ear Tag

- Communication:** 2.4GHz - 802.15.4
- Area coverage:** 200 m x 500 m / 656 ft x 1640 ft
- Expected battery lifetime:** Electrical (battery): 3 years
- Dimensions:** H x W x D: 68 mm x 38 mm x 15 mm / 2.7 in x 1.5 in 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



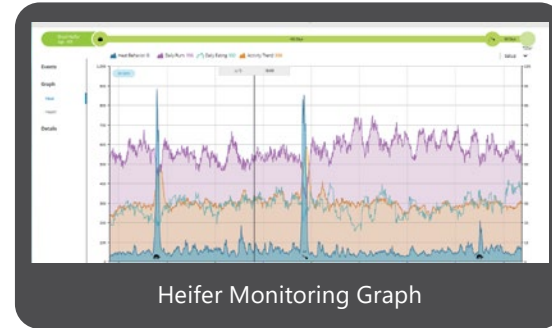
cSense™ Neck Tag

- Communication:** 2.4GHz - 802.15.4
- Area coverage:** 200 m x 500 m / 656 ft x 1640 ft
- Expected battery lifetime:** Electrical (battery): 7 years
- Dimensions:** H x W: 84 mm x 64 mm / 3.3 in 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

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

You can now cost-effectively monitor heifers with the Starter application plan, to optimize conception rates, using it alongside the Advanced or Premium plans for cows, which have more health, nutrition and wellbeing risks. Using the Starter application plan on heifers provides reproduction monitoring only. Each tag can be kept on the animal for its entire lifecycle. As the animal naturally moves between populations, the system automatically enables the application features relevant to the population, permitting extensive flexibility.

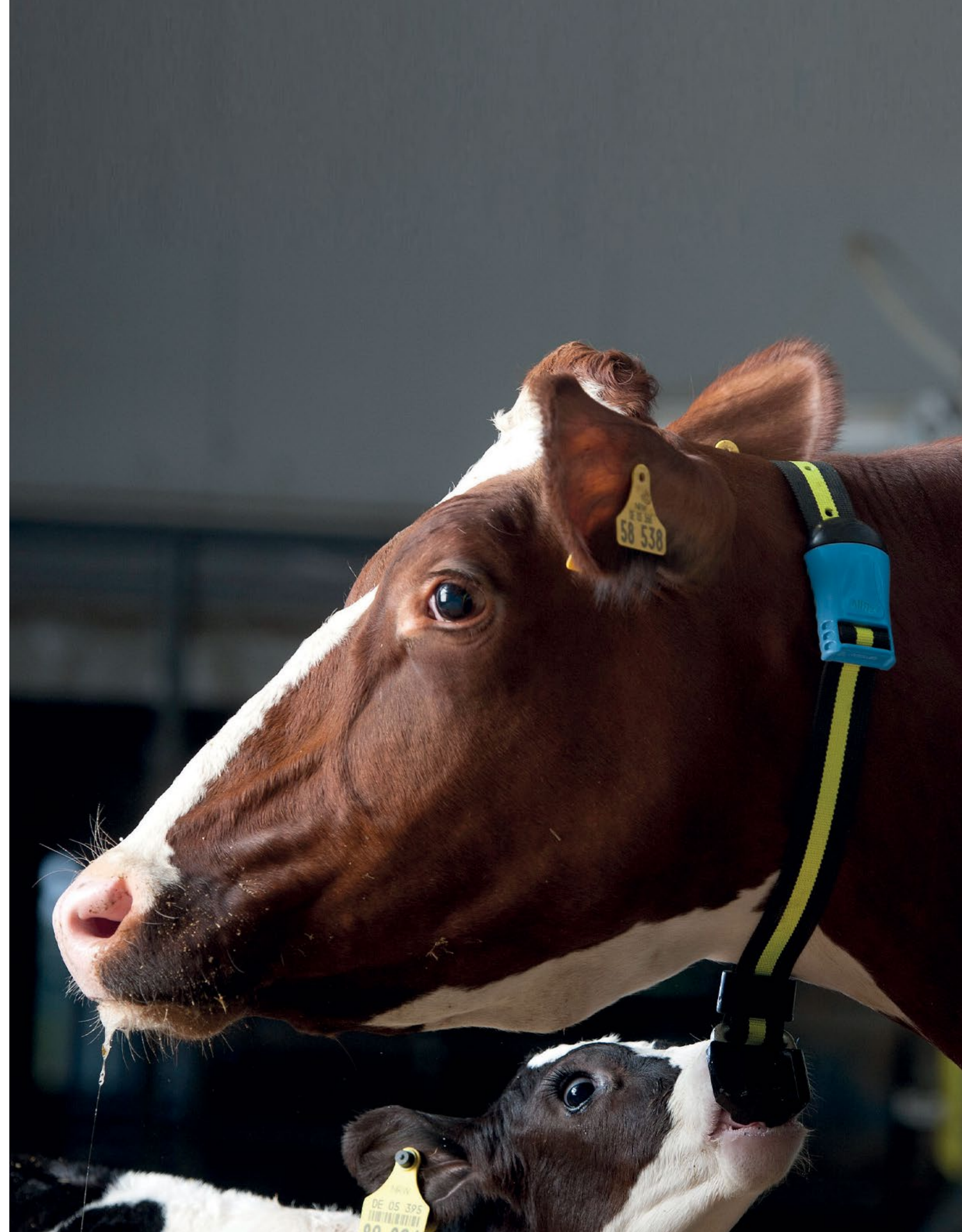


FLEXIBLE APPLICATION PLAN LEVELS	Starter	Advanced	Premium
Heat Report	✓	✓	✓
Cows with Irregular Heat Report	✓	✓	✓
Suspected for Abortion Report	✓	✓	✓
Anestrous Cows Report	✓	✓	✓
Pregnancy Probability Report	✓	✓	✓
Expected Dry-Off and Calving Report/Graph	✓	✓	✓
Fertility Summary Report	✓	✓	✓
Health Report		✓	✓
Fresh Cow Report		✓	✓
Animals to Inspect Report		✓	✓
Distress Report		✓	✓
Distress Alerts		✓	✓
Group Heat Stress Report			✓
Group Consistency Graph			✓
Group Routine Graph			✓



Livestock Intelligence™

MSD Animal Health Intelligence





About Allflex Livestock Intelligence

Allflex Livestock Intelligence is the world leader in the design, development, manufacturing and delivery of solutions for animal identification, monitoring and traceability. Our data-driven solutions are used by farmers, companies and countries to manage hundreds of millions of animals worldwide. By putting intelligent, actionable management information into farmers' hands, our solutions empower them to act in a timely manner to safeguard their animals health and wellbeing, while achieving optimal production outcomes for a healthy food supply. Allflex Livestock Intelligence is a livestock portfolio of digital products within Merck Animal Health.

Through its commitment to the Science of Healthier Animals®, Merck Animal Health offers veterinarians, farmers, pet owners and governments one of the widest ranges of veterinary pharmaceuticals, vaccines and health management solutions and services as well as an extensive suite of digitally connected identification, traceability and monitoring products. Merck Animal Health is dedicated to preserving and improving the health, wellbeing and performance of animals and the people who care for them.

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