

# Safeguarding Food Production and Boosting Food Defense with Video Surveillance

White Paper by



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Featuring the Evolution  
Stainless Steel Camera





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# Safeguarding Food Production and Boosting Food Defence with Video Surveillance

The food we eat is integral to our health and well being, but it goes much deeper than that, as our cultures and values are often centered around the food we eat. The iconic image of a family sitting down to dinner around a table conjures feelings of belonging, community and a special bond between people.

When we contemplate where and how our food is made, cleanliness and hygiene are typically at the top of the list of necessities. And when it comes to production facilities, strict regulations and sanitation requirements are in place to ensure that the highest levels of food safety are met.

Shifting demographics, and evolving cooking techniques lead to differing tastes and ingredients and today, there is an ever-increasing demand for higher quality “premium” foods such as organic produce and specialty food items. But the food industry’s sole focus isn’t simply on delivering the best product to the consumers. Stringent safety measures must be followed to ensure proper production. Consider the risks associated with providing unsafe food to a restaurant. We’ve seen restaurant chains suffer multimillion-dollar quarterly losses following high-profile contamination issues. Many other restaurant chains and food brands have also fallen into the same trap: complacency with the production process.

Compliance and regulations drive the food safety process but one of the

main challenges for the industry is how to efficiently meet these requirements without compromising quality. The question then becomes, how can the process be secured to maintain production schedules, and deliver high-quality items to the consumer?

## 2. FOOD SAFETY BY NUMBERS

According to the World Health Organization (WHO)<sup>1</sup>, there are more than 200 diseases that are spread through food and:

- One in 10 people fall ill every year from eating contaminated food and 420,000 people die as a result.
- Children under the age of five are at a particularly high risk, with some 125,000 young children dying from foodborne illnesses every year.
- Foodborne diseases affect vulnerable people worse than other groups, such as people with poor or fragile health status, including infants, pregnant women, the sick and the elderly.

<sup>1</sup>World Health Organization. *10 Facts on Food Safety*. Published October 2016. [www.who.int](http://www.who.int)





#### AWARD-WINNING TECHNOLOGY

Oncam's award-winning 360-degree technology and cameras are the cornerstone of any modern and intelligent security solution where the customer requires Total Situational Awareness. Oncam provides a unique way of experiencing the power of surveillance cameras, via 3D dewarping software. This unique user experience is also available through a free mobile app for remote access.

A differentiating strength of the Evolution Camera Range is its innovative modular design, capable of being mounted on a range of available housings to allow for indoor, outdoor, surface mount and concealed applications. This is a new approach for 360-degree surveillance products and will greatly enhance the ease and speed of installation.

Oncam provides the very best dewarping experience in the surveillance industry today, as proven by the ever increasing number of NVR/VMS partners who have integrated our SDK. Oncam's technology enables Live and Retrospective analysis of an entire scene that will enable you to identify and track threats.

The WHO also reports that there are a number of ways foods can become contaminated, since the food supply chain is very complex and "involves a range of different stages, including on-farm production, slaughtering or harvesting; processing; storage; transport; and distribution before the food reaches consumers."

### 3. FOOD SAFETY & FOOD DEFENSE

While education and training in safe food handling is the cornerstone of illness prevention, challenges still exist for food manufacturers and producers:

- Globalization and trade make the food chain longer and bring new challenges to disease outbreak investigations and recalls.
- The process involves multiple stakeholders who collaborate to streamline safe food practices (i.e. too many cooks in the kitchen.)
- Unregulated systems for proper training on food handling.
- Large employee populations with high turnover rates and cultural differences in how food is prepared.
- Constant changes to production practices.
- Managing the supply chain from production to storage to delivery.

In addition to these challenges, food production facilities must also cooperate with governmental authorities (such as the U.S. Food and Drug Administration) to investigate foodborne illness outbreaks and determine how the outbreak occurred. Food production facilities face the complex process of providing information to these authoritative bodies to aid these investigations.

With these challenges, comes the need to build stronger internal processes and diversify technology systems. Video surveillance is a powerful tool to augment facility security efforts but these devices can also be leveraged for uses far beyond forensic purposes. From processes on the farm to practices in the kitchen, food processors and manufacturers are at a point in which video capture technologies, such as IP video surveillance cameras, and deep learning (think video analytics) can play an important role in monitoring manufacturing and production.

### 4. APPLICATIONS FOR USE

Video surveillance offers food production and manufacturing facilities a number of uses, including:

- Monitoring production line staff and day-to-day operations.
- Utilizing video to pinpoint cross-contamination issues or potential hazards.
- Identifying instances of breaches in compliance in slaughtering or harvesting.
- Investigating accidents on the job or incidents of theft or tampering.
- Training new employees on correct procedures.

### 5. PROTECTIVE TECHNOLOGY FOR HARSH CONDITIONS

Oncam is an independent, specialized IP video and technology company whose sole focus is on 360-degree and wide-angle smart IP video, working with partners to deliver high-value business solutions for customers that leverage Oncam's award-winning technology.



*Fish-eye 360° view from an Oncam Evolution Camera*





### 360° VIDEO TECHNOLOGY

By enabling high-resolution recording of the entire fisheye view, images from Oncam cameras can be processed during playback as if they were live, independent of what an operator was doing at the time of the recording. During playback, images can be dewarped and virtual cameras can be generated enabling the viewer to pan, tilt and zoom around the entire scene.

### DEWARPING TECHNOLOGY

Stepping away from standard pixel density calculators and get full representation of the capabilities of our solution, Oncam has created an [online tool](#) to allow customers to not only see a representation of the image quality they can expect with the camera mounted at different heights, but also see how our dewarping functionality can benefit the solution. Use the [online tool](#) to generate views from both our Evolution 05 and 12 cameras, at different heights and with different object distances, and dewarp the image directly in your browser.

As a leader in the video surveillance market, Oncam is dedicated to helping ensure the safety of food by providing a solution aimed directly at the food processing and manufacturing market: the Evolution 05 and Evolution 12 Stainless Steel Cameras.

Both versions have been specifically designed to meet the needs of customers operating in environments where resilience is paramount, such as pharmaceuticals, food processing, industrial and chemical plants, ports and marine applications.

Optimized to meet the specific needs of the food industry, the new Stainless Steel form factor enables the camera to withstand harsh elements, delivering built-in protection against weather, water and dust. Made of materials that are resistant to corrosion and can stand up to high-pressure jets and washdowns, the camera demonstrates the ideal combination of practicality, innovation and style.

## 6. A GUIDE TO STAINLESS STEEL CERTIFICATION

The Oncam Stainless Steel Camera housing is manufactured in electropolished marine-grade 316 stainless steel, which offers superior resistance to corrosion and rusting, and maximizes product lifecycle. These features have led the Stainless Steel Camera to achieve advanced certifications and ratings, including:

### *NSF Certification*

The Stainless Steel Camera is certified by NSF International to NSF/ANSI Standard 169 - Special Purpose Food Equipment and Devices. NSF International standards serve as the benchmarks by which all commercial foodservice equipment products are measured. Certification

signifies to customers, specifiers and health departments that these products have been reviewed by an independent third-party organization and meet all applicable North American sanitation requirements. The Stainless Steel Camera design and construction have been reviewed for cleanability to make sure they comply with all the required standards and can be used in a commercial kitchen/food service establishment.

### *HACCP Compliance Verification (EU)*

The HACCP Compliance Verification - Europe (HCV EU) Program by NSF verifies the hygienic quality of commercial food equipment, which demonstrates commitment to food safety and compliance with relevant European guidelines and legislation. The Stainless Steel Cameras have been approved for use in HACCP-controlled environments.

### *IP69K*

The ingress protection (IP) rating system is an internationally recognized scale that demonstrates proven protection against environmental factors such as liquids and solids. IP69K is the highest IP protection rating available against water and dust ingress and is widely used to test products that need to withstand sanitary washdowns.

During the test, the camera enclosure is first subjected to pressurized dust and afterward exposed to high-pressure water jets. The test is passed only if no dust or water are observed inside the camera.

### *IK10*

The impact protection (IK) rating portrays the degrees of protection provided by the enclosure against external mechanical impacts. In other words, this rating determines the camera's level of vandalism protection.





## EVOLUTION STAINLESS STEEL

The [Evolution Stainless Steel](#) by Oncam are unique in the 360° video surveillance market: both the 5MP and 12MP versions have been specifically designed to meet the needs of customers operating in environments where resilience is paramount.

The casing is fashioned out of electropolished marine grade 316 Stainless Steel, for maximum resistance to corrosion. The IP69K / IK10 ratings make the enclosure resistant to high pressure water jets, dust, and vandalism, while the NSF / HACCP certifications make it compliant with standards for commercial food equipment. All these features come in a stylish design, showing that functionality doesn't have to compromise on innovative and quality design.

Find out more about the [Evolution Stainless Steel](#), watch test and installation videos and download the data sheet on [our website](#).

Together, the NSF and HACCP certifications, IP69K rating and IK10 rating of the Stainless Steel Camera along with its innovative design enable total situational awareness in unprecedented applications. As with all Oncam 360-degree cameras, both the Evolution 05 and Evolution 12 feature Oncam's industry-leading dewarping software, available on the free mobile app and all major recording systems.

## 7. THE FUTURE OF FOOD SAFETY

Food safety is of the utmost importance and being able to monitor and audit the process is paramount to an institution's success. But there are requirements that must be met when implementing such tactics for food protection. At its core, implementing a video surveillance solution can allow these facilities to achieve new levels of situational awareness with cameras that are in place to help address incidents, track processes and streamline operations.

Production facilities are faced with growing regulations and higher consumer demand, making it more critical than ever that these entities monitor the production process accordingly. Technologies, such as video surveillance and artificial intelligence and analytics, elevate the options available on the market today, thus taking the act of surveillance from simply an investigative process to a more risk mitigation-focused strategy.

## ABOUT ONCAM

Oncam is an independent, specialised IP video and technology company with a reputation for being one of the most innovative firms in today's market. Oncam's sole focus is on 360-degree smart IP video - working with partners to deliver high-value business solutions for customers that leverage Oncam's award-winning technology. Find out more about our company and products by [visiting our website](#).

## ABOUT ONCAM

We hope that you found this white paper about food safety & certification informative and instructive. If you would like to discuss it further, as well as find out more information, please get in touch with the Oncam team and we would be happy to assist you. Feel free to drop us [an email](#) or call directly on the number below.

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*Evolution Stainless Steel by Oncam  
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