



# Automating Food Safety Assurance with Zebra Touch Screen Computers and Tablets

REAL-TIME WIRELESS FOOD SAFETY TECHNOLOGY

Enhanced food safety protocols lead to more productive employees, more delighted passengers and more profitable, sustainable businesses

THE CHALLENGE:

## Assure food safety with real-time measurement and troubleshooting

Fundamental to successful food and beverage operations is the ability to ensure food safety. Improper food handling puts both passengers and crew at risk of potentially serious foodborne illness and disease. Poor food handling protocols can also increase liability and undermine the bottom line. Over the years – and in many cases still today – the norm for executing food safety procedures has been built on a process of using paper logs. In an industry where safety is both paramount and could be easily compromised, these delays can lead to significant problems, potentially including outbreaks of serious illnesses such as salmonella and E-coli.

THE SOLUTION:

## Automate food safety procedures with Disney CHEFS®...

### POWERED BY ICERTAINTY AND ZEBRA RUGGEDIZED HANDHELD MOBILE COMPUTERS

As a part of its corporate citizenship focus, Walt Disney Parks and Resorts will increase availability of Disney-licensed technology and expertise on safety and accessibility for third-party use. Disney CHEFS is an example of such technology. Invented by Disney and co-developed with software development firm iCertainty, Disney CHEFS is a mobile application that automates the know-how gained through years of operating the largest theme parks in the world.

In the cruise industry, what's needed are real-time food safety solutions that allow managers to recognize issues before they become a problem and at the same time, have the ability to simultaneously improve operational efficiency. To accomplish this, progressive food service and hospitality operators up and down the supply chain are using technology such as the Disney CHEFS solution coupled with powerful Zebra touch screen computers and tablets.

Providing highly advanced wireless technology, including Bluetooth, Zebra devices are used around the globe to automate and improve food safety procedures. A growing number of cruise lines are relying on the TC51, TC70 and ET50 to collect and record measurements ranging from cooking and storage temperatures to crew sanitation procedures such as hand and ware washing.



### DISNEY CHEFS TC51, TC70 and ET50 BENEFITS

- Automate measurements at crucial food safety control points
- Recognize and rectify food safety issues in real time
- Prompt and document employee safety protocols such as hand washing
- Reduce or eliminate opportunity for foodborne illnesses
- Create easily accessible databases for accountability and traceability
- Deliver on your brand promise and ensure passenger satisfaction

# Zebra Enterprise Touch Screen Computers and Tablets Ensure HACCP Compliance

HACCP (Hazards Analysis at Critical Control Points) is a globally accepted process for assuring food safety. By following HACCP procedures, cruise lines are able to control critical temperatures, measurements and other factors that make food safe for passengers and crew alike.

## NON-COMPLIANCE ISSUES

Paper-based systems can compromise HACCP compliance. Logs are filled in and checked manually at the end of the day or the next morning. When safety-related errors—such as imprecise refrigeration and cooking temperatures, incorrect holding temperatures at various stations in a food service line, and lack of compliance with sanitary procedures—are discovered, corrective action can be taken, but usually not until the next day at the earliest. These delays can be both dangerous and costly.

## BOTTOM LINE IMPACT

Non-compliance with health department regulations affects more than food safety alone; it also negatively impacts the bottom line. Industry statistics show that annual food losses from errors in temperature control and other food

safety protocols are staggering. Training costs are also adversely affected. Enterprises spend thousands of hours training employees in proper procedures. This is especially significant when employee turnover is exceptionally high and training must be continually repeated to account for staff changes. Automated systems are proven to help reduce food losses and training costs significantly.

## MOBILITY AND AUTOMATION

A growing number of food service and hospitality organizations are finding the antidote to the inefficiencies of paper-based systems in the use of TC51 and TC70 mobile computers and the ET50 tablet with integrated food safety software. Disney CHEFS revolutionizes the way we look at food safety. Through the use of technology, Disney CHEFS streamlines the auditing and technical skills required to drive the

**“The combination of Disney CHEFS and Zebra’s mobile computers has given Food Service Operators a ‘safe made certain’ solution for iCertainty to deliver a reliable platform to our customers.”**

- Ted Woodings,  
Chief Executive Officer,  
iCertainty



SOURCE: <http://fortune.com/food-contamination/>



right behavior, at the right time and place to the right person. The Disney CHEFS software uses powerful Zebra mobile computers to collect and record measurements ranging from cooking and storage temperatures to employee sanitation procedures such as hand and ware washing.

### **RUGGEDIZED PERFORMANCE**

Zebra enterprise touch screen computers and tablets are durable handheld computers designed for food and beverage environments. Ruggedized to MIL-STD 810G, IP65 and IP67 and able to withstand the fast pace of food service operations and exposure to issues such as drips, spills and splashes, temperature extremes and drops, the TC51 and TC70 boast a 1.8 GHz hexa-core 64-bit processor and the ET50 has a powerful 1.59 GHz Intel quad core. The TC51 supports up to 32 GB flash memory and the TC70 is available with up to 16 GB flash memory. The ET50 has 64 GB eMMC flash memory. They also feature Bluetooth technology and touch screen displays for exceptional ease of use.

### **TEMPERATURE CONTROL**

Maintaining strict temperature control is vital to ensuring food safety and complying with health department regulations. Areas of particular concern include: refrigeration levels in storage areas and kitchens, cooking temperatures during food preparation and holding temperatures in hot and cold food stations. Zebra handheld computers and tablets make it easier to accurately collect, analyze and act on this

important data, not at the end of the day or the next morning, but in real time.

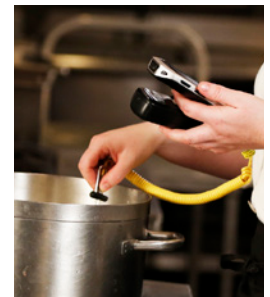
### **REMOTE TEMPERATURE PROBES**

Zebra handheld computers and tablets work with sanitized digital or Bluetooth thermometers that are inserted into food as it is being prepared or when it is holding in a food line. These remote probes work almost instantly to verify temperatures when cooking and in line spot checks, showing green when the temperatures are correct and red when they are not. The devices have corrective actions built in, showing employees exactly what procedures to follow if temperatures are not correct. They also alert users when scheduled tasks have not been initiated or completed. Real-time reports can be pulled immediately from the system, so action can be taken as quickly as possible, ensuring that passenger safety is never compromised.

### **ACCESSIBLE DATA REPOSITORY**

Zebra touch screen mobile computers and tablets also address another major issue with paper-based food safety processes: accurate, accessible record keeping. It's not unusual for paper records to fill up fifty or more large binders with manually recorded data. Not only are these records susceptible to human error, but they are anything but quickly and easily accessible.

With the Disney CHEFS system using Zebra handheld mobile computers, all food safety data is automatically recorded on the device, and then sent to a data repository that makes accurate



#### **Remote Temperature Probes**

- Work with sanitized digital or Bluetooth thermometers
- Verify temperatures throughout cooking and food lines
- Alert users for scheduled tasks

## APPLICATION BRIEF

AUTOMATING FOOD SAFETY ASSURANCE  
CRUISE LINES

information immediately accessible. Transferring data to the database is easy and immediate. Users simply press a button to document and save the data to the food safety data repository. Enterprise-grade mobile computers make complete records easily available for regulatory and traceability purposes, and the historical records make it easier to recognize and implement potential new efficiencies.

## EMPLOYEE PRODUCTIVITY

Electronic data capture and automated functionalities are important factors in enhancing employee productivity. The TC51 and TC70 mobile computers and the ET50 tablet all prompt and document employee conformance with health department sanitation guidelines, such as consistent hand washing procedures and equipment washing. By combining real-time data and behavioral observation and documentation, the devices also provide opportunities for employee training and coaching, offering the ability to correct problem areas on the spot, while helping to reinforce positive behaviors.

## BUILDING A FOOD SAFETY CULTURE

Disney CHEFS and Zebra touch screen mobile computers are transformative technology that helps food service ensure food safety, sanitation, product quality and service excellence from the moment the food is received at the loading dock to just before passengers savor their first bites. They are fundamental components for creating a true food safety culture, helping organizations continually build the knowledge of their staff and increase their ability to work at their highest levels of productivity. Employees are continually reminded of the importance of food safety and are provided with the technology and processes to maximize food safety in every aspect of food transport, storage, preparation and service.

## PROTECTING YOUR PASSENGERS AND YOUR BRAND

In the food and beverage business, the key to sustainable success is creating a brand promise based on providing consistent, enjoyable, delicious passenger experiences. Ensuring food safety by scrupulous attention to detail in the monitoring and management of critical control points is fundamental to your ongoing success. Zebra mobile computers powered by Disney CHEFS are crucial technology tools for helping you assure food safety and deliver on your brand promise... for every passenger every time.

For more information on how the TC51, TC70 and ET50 handheld mobile computers can help you ensure food safety, reduce liability and deliver on your brand promise, visit [zebra.com/hospitality](http://zebra.com/hospitality).



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