

The Balancing Act in Food Preparation:

PC Use and Adherence to Safety Regulations



Introduction

Not all industries are subject to such heavy regulation as the food industry, and with good reason. The consequences for consumers, and for businesses, of a disregard for food safety regulations can be hefty. For individuals, the consequences can be deadly. For businesses, the resultant penalties imposed for breach of the code, and the damage to a brand can be almost as disastrous.

Since it is common in all industries for computers to play a vital role, the food processing industry is no different in the desire to maximise the efficiency and tracking benefits of computerisation. However, peculiar to the food processing industry is the difficulty of balancing safety regulations with a hostile environment for standard PCs, where washing and extremes of temperature will be encountered.

Finding a way to ensure the benefits of smooth computerised operation in a food processing environment, and in such a way as to ensure the viability of the machine itself while scrupulously adhering to the food safety regulations can be a balancing act requiring careful consideration.



Standard PCs aren't up to standards

One of the great difficulties facing computer use in the food preparation industry is that a standard PC will be inadequate.¹ Temperatures in food preparation areas will not be well-suited to standard PCs, as these entail extremes of temperature, exposure to water, soiling and corrosion.

Regulations for food preparation and handling are, of necessity, exceptionally stringent in order to safeguard the health and well-being of the population who consumes these products. For instance, food is required to be prepared in corrosion-resistant cooking apparatus, and the requirement for corrosion-resistance is extended to all equipment, including computers, that might be used in the vicinity.² A standard PC will not be compliant with these requirements.

Choose the special

It can make real sense, therefore, for specialised computing equipment to be used in food preparation. Having immediate, on-location access to a reliable computer can improve the productivity of an individual operator by streamlining the process of data access and input and improving product traceability.³

Similarly, having computerised management of production can improve accuracy and efficiency in product assembly and distribution. Computer-Aided Design (CAD), Computer-Aided Manufacturing (CAM), Manufacturing Resource Planning (MRP II) and Computer-Integrated Manufacturing (CIM) are used across the industry to regulate planning, reduce human error and wastage, as well as to provide a cohesive understanding of all elements of an operation from budgets to process controls, group technology systems, design and manufacturing.⁴

Aside from the cost benefits that come from having a faster and more efficient work process in place, costs can be lowered further by having fewer items of equipment to replace⁵ as specialised equipment can last longer in rigorous environments than standard PCs can.

Perhaps most significantly of all considerations, specialised PC equipment can prevent the contamination of food. Aside from the health concerns for those individuals who might become ill from consuming contaminated food, the reputational, financial and legal considerations for the company who provided the food are considerable. Having a brand associated in popular memory with 'food poisoning' will damage sales for some time, and will require extensive marketing strategies to ameliorate. There are also fines enforced by each Australian State⁶ that can be incurred by a company found guilty of negligence regarding food safety, and the legal costs that can accrue from individuals seeking restitution for damages through the legal system.



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Customised and up to code

Fortunately, it can be very straightforward to source reliable PCs designed to be used in food technology environments and applications. Interworld Electronics offers a variety of purpose-built industrial PCs that meet the regulatory requirements, so that the benefits of integrating computer use in food production can be realised without the concerns of breaching Australian Food Standards.

While they offer the ability to customise a PC for an end-user's specific requirements, their range of industrial PCs is broad and covers an array of features in different models. These include PCs with IP65 / IP69K protection, monitors, all-in-one panel PCs, HMIs and keyboards manufactured from type 304 or 316L stainless steel which can be hosed down and is water and temperature-resistant.

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Furthermore, their PCs have fanless operation, and have a wide temperature range within which they remain operational so as to suit a host of different manufacturing environments.

It can be reassuring to know that the real benefits to the food preparation industry of increased efficiency, communication and monitoring across all aspects of an operation can still be utilised without having to compromise ease of access, or to breach the standards existing for the protection of consumers and manufacturers alike.

REFERENCES

- ¹ 'Computerized Systems in Food Processing Industry', US Department of Health & Human Services, US Food and Drug Administration, <http://www.fda.gov/ICECI/Inspections/InspectionGuides/ucm074871.htm>
- ² Australia New Zealand Food Standards Code - Standard 3.2.2 - Food Safety Practices and General Requirements (Australia Only), Oct 2014, <http://www.comlaw.gov.au/Details/F2014C01204>
- ³ Moe, T. 'Perspectives on Traceability in Food Manufacture', Trends in Food Science and Technology, Volume 9, Issue 5, May 1998, Pages 211–214
- ⁴ Computers In Design and Manufacturing, Institute of Food Technologists, <http://www.ift.org/knowledge-center/learn-about-food-science/become-a-food-scientist/introduction-to-the-food-industry/lesson-4/computers-in-design-and-manufacturing.aspx>
- ⁵ Martin, C. and Peck, H. Marketing Logistics (2nd Ed), Butterworth Heineman, Oxford & Burlington, 2003.
- ⁶ <http://www.foodauthority.nsw.gov.au/news/offences#.VLCwFHu37K8>

SEE ALSO

See also: <http://www.health.vic.gov.au/foodsafety/bus/enforce.htm>

See also: http://www.healthywa.wa.gov.au/Healthy-WA/Articles/N_R/Publication-of-names-of-offenders

See also: <http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/about+us/legislation/food+legislation/food+prosecution+register>

See also: <http://www.health.qld.gov.au/foodsafety/>

