

LSG Sky Chefs: The world's largest airline caterer
relies on durable Panel PCs from Beckhoff

Reliable control and visualization of production processes



© Photographer: Jens Görlich

An LSG Sky Chefs ramp agent pushes the chilled trolleys laden with meals, snacks and duty-free items on board the Airbus A340 and parks it in place in the galley.

LSG Sky Chefs, whose head office is in Neu-Isenburg near Frankfurt/Main, Germany, is the catering subsidiary of Deutsche Lufthansa AG. The company employs approximately 28,000 people at around 200 sites in 51 countries. In 2009 LSG Sky Chefs produced around 405 million meals for more than 300 airlines. Around 450 flights are readied for departure every day at Frankfurt Airport alone. In order to ensure a well-fed well-being for the aircraft passengers, LSG Sky Chefs maintains two state of the art production plants at Frankfurt airport. Robust Panel PCs from Beckhoff's CP72xx series ensure that LSG Sky Chefs personnel are always in control of the processes.

The Beckhoff CP72xx series Panel PC is designed for mounting arm installation. The high-performance Panel PC with ultra-compact slimline housing is suitable both for modern machine controllers and for industrial IT applications. The waterproof and dustproof IPC with its resilient aluminum housing has a Beckhoff motherboard, with a housing depth of just 98 mm (3.9 in). The integrated PC is equipped with a modern Intel® Core™ Duo processor as standard or with the optional Core™2 Duo.

The larger of the two plants is situated in the new city district of Gateway Gardens, close to the Frankfurter Kreuz motorway intersection. LSG Sky Chefs produces exclusively for its customer Lufthansa here. International airlines such as Air China, United Airlines and Japan Airlines are supplied with their meals from the second plant, which is located directly on the airport grounds. Around 3,500 employees produce approximately 93,000 meals daily at these two plants.

A whole series of work steps and logistic masterstrokes are necessary before everything is in place in the aircraft and passengers can enjoy their menus, arranged and ready to eat on the tray. Cakes and rolls are baked, just-delivered fruit and vegetables are processed in the cold kitchen into starters and salads. The ingredients for the main courses on the onboard menus for first class passengers are prepared in the so-called 'warm kitchen.' In accordance with stringent regulations, the cooling chain must be maintained for all foodstuffs; this means that freshly cooked dishes must be cooled immediately and must then wait in cold-storage depots for their eventual transport to the aircraft. That is important in order to ensure that the meals subsequently reach the passenger in a hygienically perfect condition.

"In the case of long-haul flights we are informed of the final number of passengers 24 hours before takeoff; in the case of domestic and short-haul flights only four hours before. Only then do we know for sure how many meals are required per flight," says Peter Salbreiter, Group Leader of works, IT and IT processes at the Frankfurt site.

The respective airline's detailed specifications regarding arrangement and weight must be maintained meticulously throughout the entire production process. Uniform menus are created from starters, deserts, rolls, chocolate boxes, napkins, jam, cutlery, as well as salt and pepper at the modern workstations. The filled trays are stowed professionally in trolleys and made available on the supply ramp together with the complete flight load. The deep-frozen main courses for the business and economy class sections are stowed in oven inserts here. Magazines, equipment, meals and beverages converge on the ramp and are sorted into one of the ramp boxes for each flight and each aircraft kitchen. Once the loaded articles and meals are complete, they are stowed in the elevating platform truck and driven to the aircraft they are intended to serve.



Beckhoff Panel PC in industrial IT use

The plant in Gateway Gardens was officially opened on 19th June 2008. The production floor area covers 19,000 square meters (204,000 + square ft). Of the 40 total Beckhoff Panel PCs in use at the Frankfurt site, 35 are also installed there. "We mainly use the Beckhoff Panel PCs to visualize and control our processes," explains Salbreiter. This way, 10 stations on the suspended electric conveyor are each equipped with a Panel PC. As the backbone of the flow of material, the conveyor interconnects the entire production including the cold-storage depot. "The trolleys are transported by this system – regardless of whether they contain the returned trolleys from the aircraft or are standing ready, cleaned and filled, for the next flight," explains the IT specialist. Seven PCs are installed in the automatic warehouse for small parts, which contains more than 65 different items of tableware, from plates and cups to cutlery. A further four Panel PCs are used for the facility management. Eight devices serve the fleet management of the plant's total of 105 elevating platform vehicles. The remaining six are located in different places in the production and are used exclusively for the visualization of the processes that take place there.

Panel PCs from a different manufacturer were used before the relocation to the new production facility in Gateway Gardens. "But only with moderate success," Salbreiter remembers, because the environmental conditions sometimes place special demands on the devices. The durable Beckhoff Panel PCs, which have a high-quality aluminum housing, capably fulfill the requirements of protection class IP 65.

LSG Sky Chefs www.lsgskychefs.com
 Panel PC CP72xx www.beckhoff.com/CP72xx

LSG Sky Chefs is the world's largest supplier of on-board airline services. These include airline catering, on-board service equipment and the associated logistics as well as the management of the on-board service and on-board sales. On top of that, the company is the industry leader in the management of the entire in-flight service procurement chain for several airlines. The companies from the LSG Sky Chefs Group achieved consolidated turnover of 2.1 billion euros in 2009.

Every hour, 15,000 crusty bread rolls are produced, packed and sealed for flight in the industrial bakery in Frankfurt.



© Photographer: Jens Görlich

LSG Sky Chefs in Frankfurt prepare First Class meals and Star Chef creations as well as 1,500 hot meals a day and over 1,700 special meals in 19 variations.



© Photographer: Jens Görlich