

ACER Taiwan - Display production with SIMATIC PCS 7



Customer Info

Customer
ACER

Business Group
ACER

Country
Taiwan

Location
Long Tan

Industrial sector
Semiconductor

Project:

ACER DISPLAY TECHNOLOGIES II (ADT "EAGLE")



ACER Display Technologies (ADT) is one of the leading manufacturers of TFT (Thin Film Transistor) Displays and PDP's (Plasma Display Panels). Applications for these displays range from notebook PC's to television sets.

In 1999 Siemens Taiwan was awarded by M+W Zander, one of the leading general contractors for industrial cleanrooms, the contract for the seamless process automation for the production facilities for the new Acer Display "Eagle" project at Lung Tan, Taiwan to.

Siemens were responsible for Engineering, Integration, Supply, Testing and Commissioning of the entire Facility Management Control System (FMCS) including utilities (ultra pure water, waste water, chemicals, ...).

A modern production plant of TFT displays today would be inconceivable without the use of the latest automation systems that ensure absolute constant clean room conditions and guarantee continuous supply of media.

The clean room conditions are subject to extremely high demands in terms of constant temperature (maintain temperature within ± 0.5 deg.C of a set parameter) pressure and humidity. Fluctuations to these parameters can result in a shutdown of the machine with the consequence of damaged product and lost production.

In addition to existing references, local presence and local expertise, a crucial factor in the selection of PCS7 was the Siemens "Totally Integrated Fab" concept.

This concept facilitates general and standard automation of the entire project (cleanroom and media) with a uniform user interface and general engineering.

A dedicated approved library of cleanroom function blocks enables the user to execute a risk free and fast track application.

The owner (ADT) saw in "Totally Integrated Fab" this as an opportunity to considerably reduce its overall costs (Total Cost of Ownership) and to keep the forecasted start of production dates by reduction of necessary integration efforts and risks of integration for the package units.

The number of signals to be processed by 12 x AS417H redundant controllers, 6 x AS416 controllers, 2 x AS414 controllers, 8 servers and 7 multi clients amounts to more than 17000 i/o's. Standard interfaces to third party equipment allowed an easy integration of these devices.

All units communicate over a Fast Ethernet 100MHz Fiber Optic ring. The use of a PROFIBUS fieldbus allowed an simple integration of dedicated field devices for power monitoring.

Web servers are installed for intranet and internet communication using Siemens@aGlance software.

SIMATIC PCS 7 performs the vital job of ensuring consistent continuous clean room conditions and uninterrupted media supply - 24 hours per day 365 days per year.

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More Information: www.siemens.com/semiconductor