



CAGE/NCAGE Code: 3FNFO

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High Quality Data Acquisition and Embedded Control Products



## PAC Motion Control Application for Chipset Manufacturing

### Preface:

Due to the constant evolution in industrial chipset manufacturing, automated assembly machines have become a crucial element in ensuring high tolerances, and low margin of error in this high precision process. With chip sets getting smaller and more complex by the second, it is no wonder that manufacturing tolerances have become exceedingly tight; requiring manufacturers to implement precision assembly devices to carry out finalization. Although previously relegated solely to PLC based control, many manufacturers are now implementing programmable automation controllers into mass manufacturing, due to the ease in which users can access and configure system protocols in real time! With the flexible architecture of programmable automation controllers, precision manufacturers are fully capable of taking advantage of the multitude of programming languages compatible with PAC architecture (C, C#, C+, VB, Ladder Logic, etc). With this in mind, ICP DAS PAC users benefit not only from familiar control language compatibility, but also a standardized familiar operating system (Windows CE.net or Embedded Linux); allowing for the ultimate in simplified user interface!

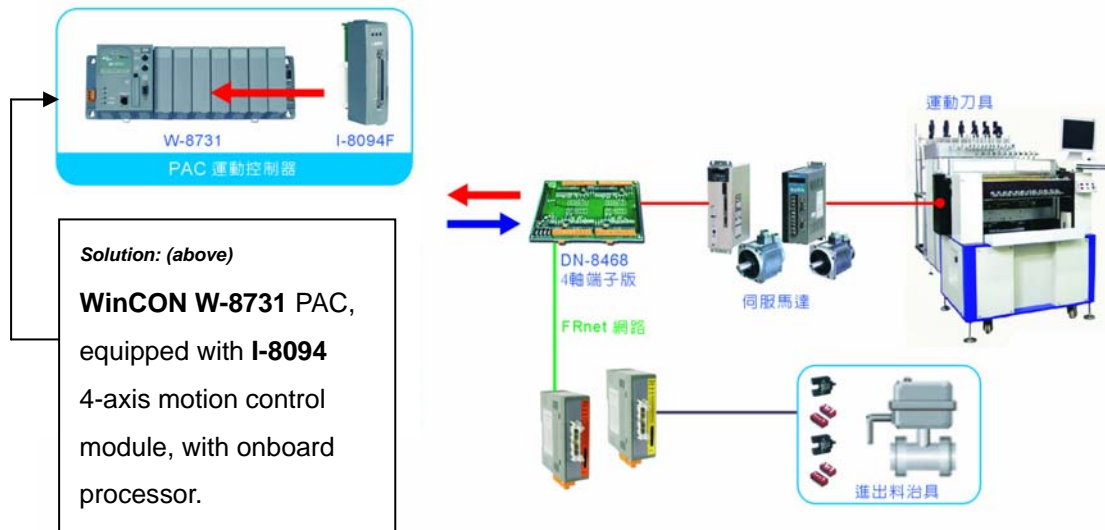
### Application Requirements

The main requirements for the aforementioned application lie mainly in the ability of the controller to hyper-thread a multitude of key system processes at any given time. The PAC would need to be capable of precise 4-axis motion control, all while simultaneously performing a bevy of real-time data acquisition functions, to ensure that the assembly process was in sync with a multitude of external procedures all being performed concurrently. Secondly, the PAC would also need to function as a local and remote HMI point, for users to locally access production information, or to remotely analyze daily productivity.

### Proposed Solution:

With a stringent infrastructure of application requirements to adhere to, ICP DAS proudly chose to nominate the W-8000 WinCON programmable automation controller, to handle every aspect of the application. Ideally, to accomplish all of the tasks originally outlaid, ICP decided upon the implementation of 1 x W-8731 WinCON PAC, 1 x I-8094 4-axis motion control module, as well as 2 x I-8050 universal digital input/output modules, for data acquisition capabilities.

## System Architecture:



## Conclusion:

With all of the associated I/O in place, and the motion controller interface set, the W-8000 proved to provide an exponential increase in control capabilities over the existing PC/PLC architecture. By implementing PAC technology, users have a vast array of compatible commercial-off the shelf I/O and specialty modules, to customer tailor their application to suit their exact needs! Reliability has also been greatly increased, due to the fan-less and disk-less structure of the WinCON PAC, as well as the standardized ICP DAS NVH certification with every module!

By showcasing the robust capabilities of the WinCON PAC, ICP DAS once again exemplifies the extreme versatility, and user friendly architecture of today's premier programmable automation control technology. With its modular structure, localized HMI, industry standard interface, and wide array of compatible accessories, the W-8000 WinCON PAC will save you both time and money on any application!