



We Design

# Case Study S5 to S7 Conversion

## Introduction

Siemens flagship S5 PLC and IO system was the backbone of many control systems from 1979. However, all good things must come to an end and its cancellation (2005), discontinuation (2014) and removal of all support (2020) has long since come and gone.

Given the huge success of the S5 in its heyday it comes as no surprise that there are still installations in service on this platform to this day.

## Project Outline

We were engaged by a global blue chip pharmaceuticals company to perform an upgrade on one such installation to convert from S5 to the latest ET200MP remote IO, whilst simultaneously upgrading the sites central processor, an obsolete S7-400 CPU and associated communications cards (CPs).

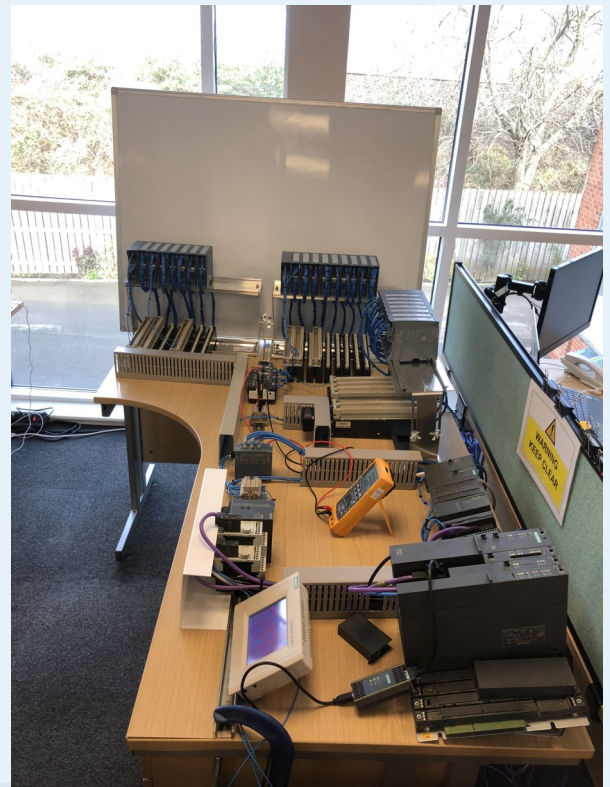
## Project Approach

Through partnership with Siemens, we engineered a solution utilising their proprietary S5 adaptors. These, along with our bespoke wiring, allow the existing S5 connector terminals to plug straight in to the new chassis with minimal need for rewiring on site.

Through extensive bench testing we de-risked the site work to ensure a seamless integration process during a tight shutdown window.

Functionality testing was performed to confirm:

- Profibus communications (Simocode, Micromaster, G120C),
- Profinet connection to the new ET200MP remote IO racks,
- TCP connections to 3rd party CPU's.
- 100% IO checks to confirm compatibility with the existing panel wiring and the new IO .



We Specialise



We Integrate



We Install



We Bot



We Manage



We Design

Working closely with the Client we scheduled the site works for a planned production outage. The site installation of the new ET200MP racks, and the replacement of the redundant S7-400 Processor and Communications cards was successfully executed well within the timeframe available to us.



We Specialise

### Conclusion

Thanks to the pre-site bench testing efforts communications to all remote partners recovered without issue and the field IO to the newly installed ET200MP was tested without a single wiring issue. The system was promptly returned to service with a minimum of downtime and without the need for any unplanned production interruption.



We Integrate

Overall this project was equivalent to a brain transplant with the consequences almost as severe as this would have taken down the production capability for the entire site.

If you have any projects of a similar nature, or any PLC, HMI or SCADA requirements don't hesitate to get in touch with our controls and

### Contact Us

From concept to completion or at any stage we have the skills, capability, judgement and drive to support your projects.

Call us now to find out what we've been up to and how you can take benefit from our lessons learned over the past 20 years.



We Install



We Bot



We Manage

### Contact Us

Tel: 01482 898 080

Email: [info@inspecsystems.co.uk](mailto:info@inspecsystems.co.uk)

Web: [www.inspecsystems.co.uk](http://www.inspecsystems.co.uk)

Inspec Systems Limited  
1st Floor Sidings House  
Sidings Business Park  
Freightliner Road  
Hull