

Industry: Transportation /// Materials Handling

Products Used: FX PLCs

Mitsubishi micro PLCs for aircraft loading

Norquip Ltd is a specialist airport ground support vehicle builder. They use Mitsubishi Electric FX series micro PLCs to control the operation of their vehicles which are used to load catering supplies onto aircraft.

The vehicles load fully stocked catering trolleys onto the aircraft via scissor lifts which rise up to 4.2 or 5.9 metres depending on the aircraft type they are loading. Before the lifts are operated the whole vehicle is raised off its suspension by hydraulic rams which extend out to the sides.



The FX PLCs control each stage of the operation including all the safety interlocks. These prevent the lifts from operating until the vehicle is stable on the hydraulic rams and uses high-speed limit switches to prevent the lifts from over reaching, so avoiding potential damage to aircraft. Their integral Real-time clocks (even on the smallest PLC) enable Norquip to use real-time switching on vehicle enunciators, allowing them to meet local noise restrictions regulations.

Application story first released February 1998 by Mitsubishi Electric UK

Mark Fowler, Senior Electrical Engineer at Norquip comments "Our vehicles go from a 71/2 ton chassis up to 17 tons and are specified to varying levels of sophistication. Mitsubishi offered us the best range of PLCs and expansion options to cover our needs."

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Norquip

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Norquip use GX-Developer which is Mitsubishi's PC based graphical programming tool to create the PLC projects. GX-Developer is an intuitive software package that offers a choice of programming languages. This flexible programming approach makes it appealing to all styles of programmer and allows the fast creation of projects.

Mark Fowler continues "One of the deciding factors on us using Mitsubishi Electric products is that their software is so easy to programme. I also got a high level of support from both Mitsubishi Electric and our local supplier Pneumatic Lines Ltd"