



# Embedded Control and Data Acquisition

## Saltec / Altamira Iron Ore Mining Facility Application Story

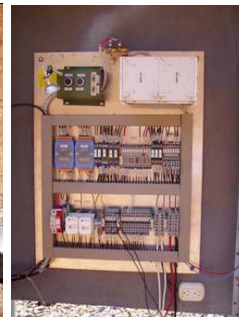
[Saltec SA](#), an international leader in large scale surveying equipment, and industrial contracting solutions, has chosen to implement [ICP DAS](#) embedded controllers at the Altamira iron ore mining facility, in Southern Chile. Saltec has chosen to implement a series of [ICP DAS I-7188XGD](#) ISaGRAF powered embedded controllers. In this particular application, Saltec has implemented the I-7188XGD modules to control railway safety functions for the mining facility's ore transport system. By using ICP's [I-7188XGD](#) modules, Saltec is able to monitor and control an emergency "run-away track", in the event of a brake failure of any of the facility's locomotives.

The [I-7188XGD](#) itself, is a robust member of [ICP DAS](#)'s family of compact embedded controllers. The module is powered by a 40MHz AMD CPU, with 512Kb of static RAM, and 512Kb of flash memory. The module also features: a real time clock, battery back up, optional 10BASE-T Ethernet port, remote configuration diagnostics, and 14 user defined I/O lines. The specific controllers used by Saltec are utilizing a proprietary version of ISaGRAF control software; enabling them to function redundantly as reciprocal fail safes, ensuring consistent and dependable safety on the facility's ore transport system.

Saltec was elated with ICP's abilities to produce a product which was able to withstand the harsh exposure of the elements, while offering phenomenal control and reliability in a PLC. Being that the [I-7188](#) series embedded controllers are rated to operate between -25°C and 75°C, they are able to withstand the ever-changing ecosystem of southern Venezuela. Saltec also mentioned that they were impressed with the level of technical support [ICP DAS](#) provided, when initially setting up the dual redundancy safe guard function. By implementing [ICP DAS](#) embedded controllers; Saltec made the Altamira Iron Ore Mining Facility a safer and more efficient establishment.



I-7188XGD Module



*Special thanks to Roland Marten; Vice President of Saltec SA, who provided the much appreciated documentation of the actual product application.*