

# Power-OM Exploitable Results



## CANDTA - Connecting Genior Modular (OA) with FAGOR controls.

Until now ARTIS' monitoring solution Genior Modular mostly depended on a PROFIBUS connection to gather controller based sensor signals for monitoring purposes. Within the FP7 EC-Project Power-OM a prototype was realized, based on Genior Modular OA (Open Architecture), to capture controller signals using a second CAN bus interface.

The idea of capturing controller signals via Genior Modular with a CAN interface emerged during the collaboration between ARTIS and the control manufacturer FAGOR within the Power-OM project. Due to the fact that the FAGOR controls do not support the PROFIBUS interface, an alternative Plug & Play solution needed to be developed to transfer controller signals into the ARTIS monitoring devices.

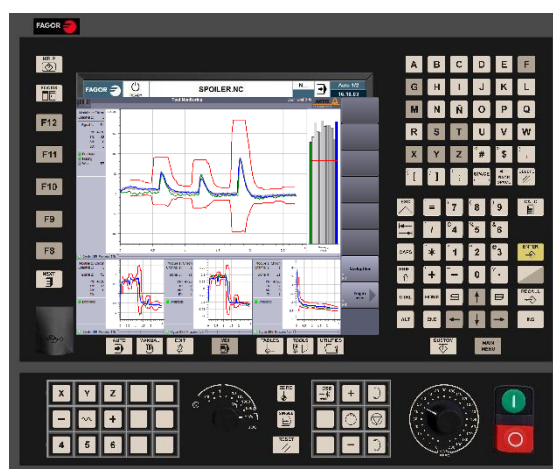
This solution therefore is of high interest for applications using a FAGOR control and requiring the ARTIS Genior Modular monitoring system based on internal or external sensors. Process monitoring helps machine users in metal cutting applications to increase production reliability and to realize automatic tool maintenance actions like tool change according to wear.

The exploitable result described here is using the CANopen protocol and provides a CANopen slave interface as a PlugIn for the communication with the FAGOR control. The CAN connection provides less data than the PROFIBUS interface but still passes enough data for standard monitoring using Genior Modular (7 sensor signals + single control information). Until now this prototype has been realized only on the Genior Modular OA platform. Product decision to include this technology has not yet been taken and depends on future customer requests.

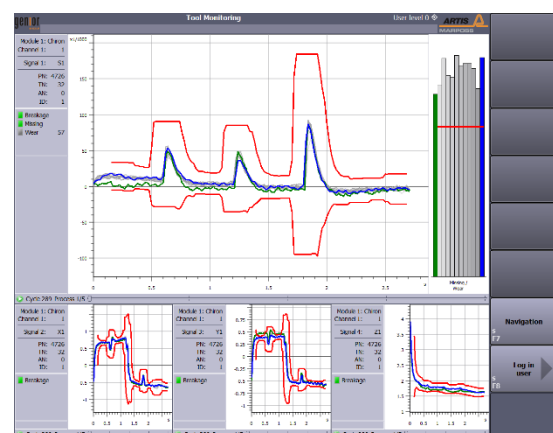
The main benefit of this prototype is to make the ARTIS monitoring solution capabilities of Genior Modular available for machine tool manufacturers using FAGOR control CNC8065, not depending on the PROFIBUS interface.



1) Schematic illustration of the CANDTA connection between Genior Modular OA and FAGOR CNC 8065



2) Genior Modular HMI running on FAGOR CNC using the CANDTA sensor interface



3) Genior Modular visualization with several Process channels on display

## Genior Modular, the fully automatic Tool and Process Monitoring System from ARTIS

With its modular architecture, Genior Modular is perfectly suited as the hardware basis for future requirements towards process monitoring, condition monitoring and predictive maintenance. As an already well established product it has the evaluation from the field as background for further development steps.

CANDTA as a Plug&Play real time interface to connect FAGOR CNC with monitoring unit Genior Modular represents a possible extension for this system. It enables data exchange in both directions, control and internal sensor signals to the monitoring device and external sensor signals to the control. This approach marks a milestone concerning ARTIS products due to the realization of a Plug&Play fieldbus interface in opposite to the state-of-the-art technology Profibus/Profinet and the according effort in PLC set-up.

More information can be found on  
[www.power-om.eu](http://www.power-om.eu) and <http://www.artis.de>