

NI DIAdem real-time extension based on TwinCAT

TwinCAT application

- cyclic data acquisition of up to 100 channels at a sampling rate of 1 kHz
- cyclic output of up to 100 channels at a sampling rate of 1 kHz
- scaling (conversion of hardware signals into physical signals) for all input and output channels based on a scaling table with 25 points per channel
- generation of selected output signals by function generator (waveforms: sine, square, triangle, sawtooth; frequency, amplitude and offset adjustable)
- generation of selected output signals from a setpoint curve file in DIAdem TDM format
- storage of the acquired and generated signals in DIAdem DAT format
- optional: PID control of selected output signals, controller parameters configurable from DIAdem

DIAdem application

- VBS scripts for accessing TwinCAT variables
- DAC diagram for visualizing the data of the TwinCAT application
- VBS scripts for generating and transferring setpoint curves

Documentation

- description of all commands and parameters

optional: setup

- ready-to-use installation on the target system including integration of application-specific bus hardware