

# Customizable Motion Control Solution Supporting Large Distances

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Motion control solutions for controlling a movement of motorized mechanical subsystems for accelerators, telescopes or similar spatially distributed systems require high degree of flexibility regarding the use and connectivity. One platform should fit different applications and provide cost effective solutions. A connection to the control system (CS) is required on one side, while on the other side a connection to a variety of motors, position encoders and other feedback devices must be provided. In case of more complex mechanics, an advanced kinematics control is essential to provide features such as motion tuning, interpolation and controlled acceleration. An embedded computer is used for SW-flexibility and CS-support. Motion control capabilities are provided by separate HW; programmable multi axis controller. Signal adaptation for a direct connection of the equipment is managed by an interface board. Easy installation and debugging is provided by low-level local control; front panel switches and indicators, RS232 or direct keyboard and monitor access. An advanced approach is required in case of a larger distance between the motor controller and the motors with position encoders.

