Controller Design using Model-based Simulation Software

**Model Electro-Mechanical Prototype Devices**

This low-cost, model-based simulation software with hardware integration for real-time controller implementation allows users to model electro-mechanical prototype devices. This solution provides both simple and complex control algorithms that users with no prior knowledge of programming or microcontrollers can easily implement. The hardware controller is built around TI Delfino controllers, and with a fluid graphical interface and commonly-used mathematical toolbox add-ons, this technology helps users design any controller easily. The software offers built-in target-specific code generation, and for advanced design requirements, features a direct code-based simulation using a fast and predictive incremental compiler. This product can be used in any application that requires a controller, from hobby electronics to industrial motors to robotics controls applications.

**Easier Controller Design**

Currently available options are either easy to use but expensive (i.e., Matlab-dSpace) or low cost but difficult to use (i.e., traditional microcontrollers requiring programming knowledge). In addition, valuable code-based programming features are not currently available with model-based programming. This model-based simulation software solution is very low cost (< $200), easy to use, and incorporates code-based programming into model-based programming, offering greater ease of use, faster development and a highly interactive environment.

**BENEFITS AND FEATURES:**

- Low acquisition cost
- Hardware controller built around widely used TI Delfino controllers
- Fluid graphical interface and commonly used add-ons

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• Any controller can be designed with ease
• Built in target-specific code generation: one-click, fast hardware deployment of designed model
• For advanced design requirements, direct code-based simulation feature using fast and predictive incremental compiler

APPLICATIONS:

• Any application that requires a controller
• Hobby electronics
• Industrial motors
• Robotics controls

Phase of Development - Prototype. Software and device developed; currently undergoing testing. Software supports model based simulation; hardware has been developed.

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