

Next-generation ultra-high-performance real-time simulation and control platform

Procyon is an ultra-high-performance real-time simulation and control platform, customizable for a diverse range of applications. By integrating one or more quad-core CPU boards with necessary function boards and running simulation and control models in real time, the Procyon makes a very powerful model-based development platform that accommodates a variety of customer needs such as rapid control prototyping and hardware-in-the-loop testing, etc.

Procyon uses A&D's VirtualDSPConsole as a visual front end for system monitoring

and parameter setting. MATLAB/Simulink is used for modeling and control development. Blocksets for the function boards are provided and can be easily integrated in the solution.

A&D HiL solutions based on Procyon perform the modeling, control, I/O and communication tasks all from the same platform. The tightly coupled virtual and physical systems ensure high speed, low latency and consequently high performance.



The Procyon Simulation and Control Platform

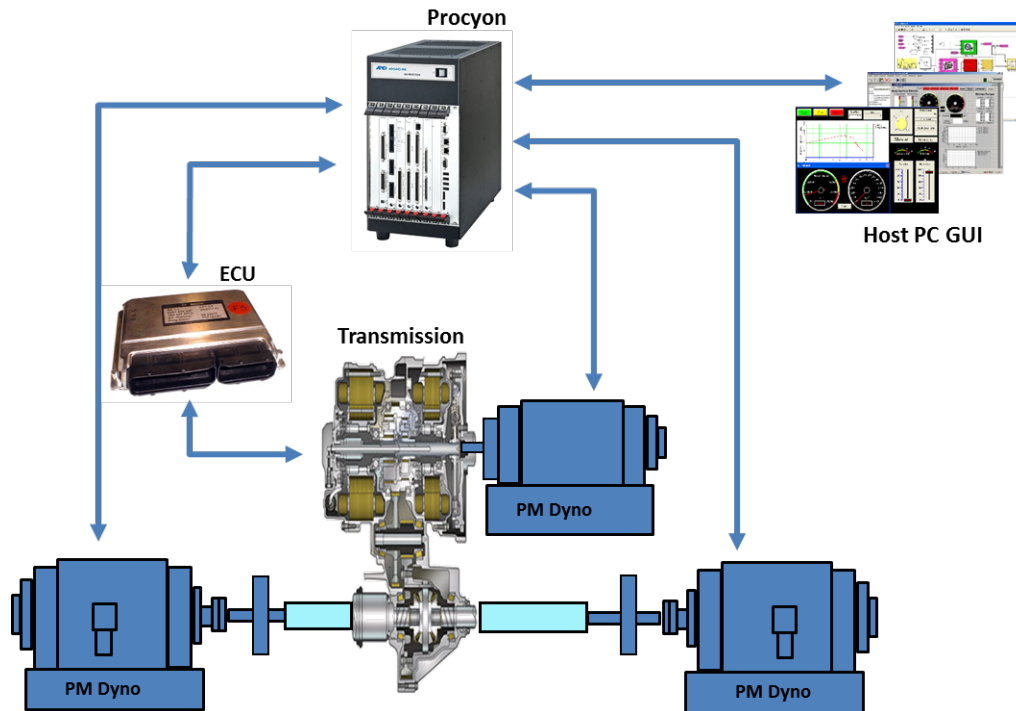
Highlights

- Multi-core/multi-CPU system support
- Direct connection of the I/O interface to the CPU provides faster closed-loop control
- Real-time application development environment with MATLAB/Simulink and A&D VirtualDSPConsole
- Open system specification enables third-party I/O board development
- Flexible system configuration

Typical Applications

- Distributed processing and control
- Hardware-in-the-loop testing
- Real-time data acquisition, processing and analysis
- Vehicle dynamics simulation
- Control algorithm development
- Advanced research and development

Example Application: Transmission-in-the-Loop



System Boards

- System board with Intel Xeon
- 3.5 GHz Core CPU
- Engine HiL board
- Analog input board, 32ch, 16bit @800kHz
- Analog input board, 16ch, 250kHz (simultaneous sampling)
- Analog output board, 32ch, 16bit @ 800kHz
- Digital I/O board (Flex channel)
- Multi-function I/O board (A/D 12ch, D/A 8ch, DI 16ch, DO 16ch)
- Servo-controller board (4ch input/1ch output)
- Box-to-box Synchronization board
- PWM I/O board
- Box-to-box Communication board
- Network board (CAN, Serial, K-Line, LIN)

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