

AutoTron 2200

Features

- Rugged, high-performance industrial PC
 - Fanless, low-power and power consumption design 41W(Typical)
 - Support for all standard PC peripherals
 - Sturdy, compact size
- I/O-expandability, equipped with AD/DA, Encoder, Frequency In/Out and DI/O modules
- The suite offering
 - AutoTron 2200 (PCI express)
- Onboard Core™ i3-1.7GHz / 8GB DDR RAM / 8GB SSD Power supply input Max. 60W (12V/24VDC ± 20%)
- Stand-alone ability, Simulink Real-Time self-installed software tools are able to run on stand-alone mode. Users can burn the pre-set Simulink model to SSD without an Internet connection.



AutoTron 2200 is an affordable and robust multi-function platform for rapid control prototyping applications. Developed by TeraSoft Inc, a leading professional engineering solutions provider based in Taipei, Taiwan, AutoTron 2200 works seamlessly with the MathWorks® family of products including MATLAB®, Simulink®, Simulink Real-Time, MATLAB Coder and Simulink Coder, enabling engineers to model physical systems and execute them in real-time under harsh environmental conditions.

AutoTron 2200 is a rugged, high-performance industrial PC with no moving parts inside. The product supports all standard PC peripherals including video, mouse, and keyboard. For engineers who have real-time analysis and control systems testing needs, AutoTron 2200 offers an excellent mix of performance, compact size, sturdiness, and I/O expandability. A selection of I/O options are available providing, support for SCI, TCP/IP, and PCI express based AD/DA, DI/O and frequency I/O modules that address numerous prototyping requirements. AutoTron 2200 is integrated with MATLAB/Simulink and related control modules allowing the user to conduct real-time modeling and simulation of control systems, rapid prototyping, and hardware-in-the-loop testing without the need of manual code generation and complicated debug processes. This results in significant cost savings and reduced development time.

AutoTron 2200 for Rapid Prototyping

When configured as part of a rapid prototyping system, AutoTron 2200 is attached to a host computer running the standard MathWorks tools such as MATLAB, Simulink, Simulink Real-Time and Stateflow® (optional), operating under the Microsoft® Windows® operating system in non real-time mode. AutoTron 2200 acts as a target PC where the user's application runs on a real-time operating system provided by Simulink Real-Time

Applications are built on the host PC using Simulink, with Simulink Real-Time providing blocks to connect to I/O hardware. Simulink Coder generates and compiles C-code modules and links them to a Dynamic Linked Library (DLL). Simulink Real-Time transforms this DLL to a real-time application and downloads it onto the AutoTron 2200 target PC.

AutoTron 2200 can be configured for use in functional rapid prototyping, on-target rapid prototyping, or hardware-in-the-loop testing.

AutoTron 2200

Specification

AutoTron 2200 (PCI express)
<ul style="list-style-type: none">- Core™ i3-1.7GHz- 8GB DDR RAM- 8GB SSD- I/O-expandability provided through standard PCI express bus- Support 6 different I/O modules including of AD、DA、Encoder、 Frequency In/Out and DI/O- 106(W) x 139(D) x 198(H) mm, 2.4 kg- 12V/24VDC \pm 20%

- External power for 110 to 220VAC, 50Hz to 60Hz environment,

- Hardware accessory(for AutoTron 2200)

- USB
- Terminal Connector x 6
- Power supply (110~220 Voltage)
- User manual and tutorial CD

- Software

- Inverted pendulum control demonstration Simulink model
- DC motor position/speed control demonstration Simulink model

- Environment

- Operating Temperature : -20 ~60° C(-4~140° F) @ 5~85% RH with 07.m/s airflow
- Storage Temperature : -40 ~85° C(-40~185° F)
- Relative Humidity : 10 ~95% RH @ 40° C, non-condensing
- Shock Protection : Operating, IEC 60068-2-27, 50G half sine, 11ms
- Vibration Protection : Operating, IEC 60068-2-64, 1Grms, random, 5~500Hz, 1 hr/axis



AutoTron 2200

Support IO



AutoTron 2200 I/O specs are as below

I/O Types	
AD	8 channels, +/-10 volts, 14bits,
DA	8 channels, +/-10 volts, 14 bits, 10mA Max.
Encoder	4 channels, 32 bits, 0V/5V, A/B/Index
D/I/O	8 channels DIN, 8 channels DOUT, TTL
Frequency I/O	4 channels

AutoTron 2200

Demonstration

AutoTron 2200 for Rapid Prototyping

When configured as part of a rapid prototyping system, AutoTron 2200 is attached to a host computer running standard MathWorks tools such as MATLAB Simulink, Simulink Real-Time and Stateflow(optional), operating under the Windows OS in non-real-time mode. AutoTron 2200 acts as a target PC on which the user's application is based. It uses a real-time kernel and runs under a real-time multi-tasking OS.

Applications are built on the host PC using Simulink, with Simulink Real-Time providing various I/O blocks. RTW generates and compiles C-code modules and other static C-modules and links them to a Dynamic Linked Library (DLL). Simulink Real-Time transforms the DLL to a Simulink Real-Time Kernel specific target application and downloads it onto the AutoTron 2200 target PC.

AutoTron 2200 can be configured for use in functional rapid prototyping, on-target rapid prototyping, or hardware-in-the-loop testing.

Demo 1- Inverted Pendulum Control

* System requirements

- MATLAB, Simulink, Simulink 3D Animation, MATLAB Coder, Simulink Coder, Simulink Real Time
- AutoTron 2200
- DC motor driver circuit and control plant* (EMECS)