

ReaLINK® CP-1002 Controller Prototyping System

On Board Self-Test ... like having a tech 24/7

XANALOG'S ReaLINK® product line consists of real-time controller prototyping hardware solutions for use with the Mathworks Simulink®. A unique feature of XANALOG's ReaLINK products is their ability to self test the entire system: computer hardware and software as well as all analog and digital real-time I/O.

Getting started with ReaLINK

The CP-1002 product interfaces your controller implemented in Simulink to real signals for real-time rapid controller prototyping. The system comes pre-assembled and ready-to-go. Simply connect your CP-1002 system to a host machine with MATLAB®/Simulink, start up the On-Board Self Test and you are up and running in real time. To make your job even easier, use ReaLINK Self-Test models as templates for your project. That way you are starting with a properly configured real-time Simulink MODEL which can save you hours—even days of effort.

Single point support

XANALOG is your single point of contact for both the real-time hardware and its use with MATLAB/Simulink software. ReaLINK makes it possible for its users to concentrate on their controller project and to outsource controller-prototyping matters to XANALOG. After all, XANALOG has been manufacturing and supporting PC-based real-time hardware-in-the loop and controller-prototyping systems since 1986.

KEY FEATURES

- Each ReaLINK system is thoroughly tested with the latest version of MATLAB/Simulink
- Real-time simulation and testing right out of the box
- On-Board Self Test hardware and software
- Open-system COTs hardware saves you money
- Open-system COTS hardware allows for expanding your system to meet your needs (Just speak with our engineers, we can add many different interfaces to our systems)
- Single point support for your hardware and software
- At any time you can verify the system using the same procedure that we do
- Self-Test Model can be used as a template to drop in your own Simulink model



XANALOG ReaLINK for Simulink is a ready-to-use, out-of-the-box system that seamlessly links with The Mathworks Simulink

XANALOG®

www.xanalog.com

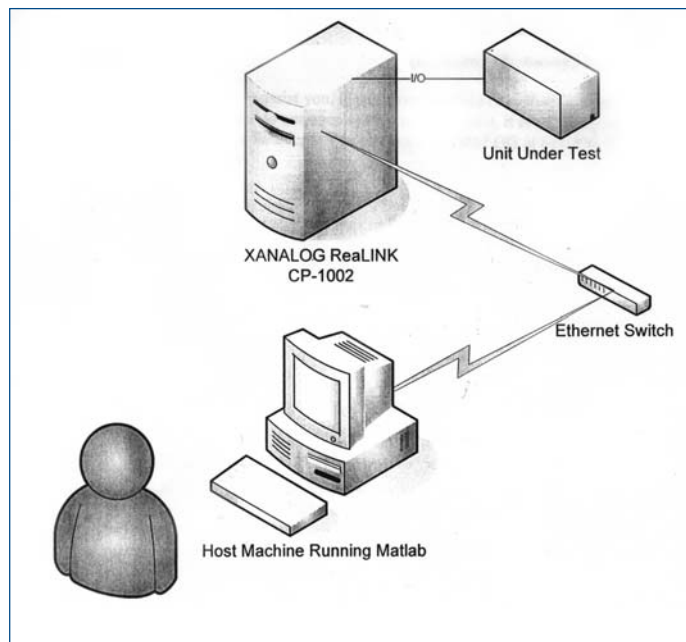
SELFTEST
ON-BOARD
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SPECIFICATIONS

Processor	<ul style="list-style-type: none"> ■ x86 compatible ■ 1GHz Clock (upgradeable) ■ 256MB RAM
Analog Output	<ul style="list-style-type: none"> ■ 6 D/A channels ■ 16-bit resolution (1 in 65,536) ■ Switch selectable output ranges ■ One D/A per channel ■ Output ranges: $\pm 10V$, $\pm 5V$, 0-10V, 0.5V ■ Output current: $\pm 5mA$ min. ■ Output resistance: $<0.1W$ ■ Short circuit current: 40mA min. ■ Range selection: Switch selectable ■ Output setting: (to 0.003%) 5ms typ., 10ms max. ■ Output updates: Independent or simultaneous
Analog Input	<ul style="list-style-type: none"> ■ 16 single-ended / 8 differential analog inputs ■ 16-bit resolution ■ 100kHz maximum sample rate ■ 4 digital inputs ■ 4 digital outputs ■ 3 counter timers
Digital and Serial I/O	<ul style="list-style-type: none"> ■ 24-bits of digital I/O ■ RS-232 Synchronous or Asynchronous
Pulse Functions	<ul style="list-style-type: none"> ■ Counters: 10, 16-bit ■ I/O levels/drives: CMOS family ■ External input frequency: up to 7MHz ■ On-board XTAL: 10MHz (divided by 10 or 2) ■ XTAL stability: 100ppm ■ Functions (2 functions at a time): event counting, pulse width measurement, frequency measurement, frequency division, generating complex duty cycles and much more ■ Supports one-shot and continuous modes
Chassis	<ul style="list-style-type: none"> ■ Industrial Desktop Chassis ■ Removeable wall/bench-mount flanges included ■ 3.5" Floppy Drive Bay ■ Width: 9.29" ■ Height: 6.76" ■ Depth: 16.37"

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SYSTEM DIAGRAM

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More on On-Board Self Test

Every ReaLINK product is shipped with wrap-around wiring harnesses and a means of generating test signals for every signal interface that is shipped with the product. The digital-to-analog (D/A) channels are wired to the analog-to-digital (A/D) channels by the wrap-around harnesses. The same with digital I/O, Serial links such as RS-232 and CAN Bus are also wired back for testing. The SIMULINK SelfTest model generates signals and then passes the received values to MATLAB where the expected values are compared to the observed values. MATLAB then provides a report on systems status. This allows for ease of system verification, as well as troubleshooting. You can know that our system is performing as expected before you hook it up to any of your own hardware.

Hardware Requirements

In CP-1002 System requires a Host machine capable of running MATLAB, as well as an Ethernet connection to link the Host machine to the CP-1002.

Software Requirements

The CP-1002 System requires the following on the Host Machine:

- Microsoft® Windows® 2000 or XP
- MATLAB
- Simulink
- Real-Time Workshop
- xPC Target
- C++ Compiler (Such as Microsoft's Visual C++)

Ordering Information

XANALOG Price: \$9,950*
ReaLINK® CP-1002

*excluding Mathworks Software

Our engineers stand ready to assist you. If you have interface or performance needs not covered by the CP-1002, due to our open system configuration, it is relatively simple to add additional modules and functions. You can reach XANALOG at +1 617 876-3900 to talk with an engineer today.

The MathWorks
Connections Program