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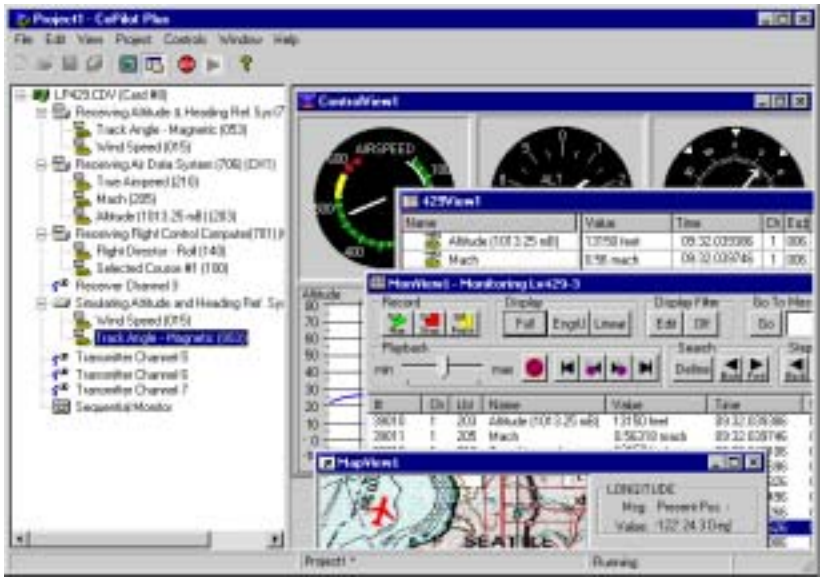
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Find the *Astronics / Ballard Technology LP429-3/2R2T* at our website: *Click HERE*

CoPilot 429 and CoPilot 429 Plus

Simulation & Analysis Software for ARINC 429



Features

- For ARINC 429 testing, simulation, and analysis
- Monitor, record, filter, and play back databus activity
- View data in engineering units
- View data through virtual instruments, strip charts, and moving map displays
- Reexamine bus activity with software playback
- Play back monitored data on to the 429 databus
- Customize CoPilot with scripts
- Available in two options: CoPilot 429 and CoPilot 429 Plus
- For Ballard's 429 boards

The CoPilot System

CoPilot 429 is part of the CoPilot System—a complete line of software and hardware interfaces to ARINC 429, ARINC 708, and MIL-STD-1553. Multiple boards and protocols may be hosted in a single CoPilot project. A CoPilot 429 System consists of CoPilot 429 and a Ballard 429 interface board. CoPilot 429 can be ordered in two versions: Standard and Plus.

CoPilot 429Overview

CoPilot 429 is an intuitive program that simplifies the simulation and testing of ARINC 429 avionics systems. Users can transmit and receive on 429 databuses with just a few clicks of the mouse. Then, while the bus is running, data can be entered and displayed in engineering units.

Features built into CoPilot 429 automate the detection of installed hardware and bus activity and simplify the development of transmit schedules. The powerful Sequential Monitor saves time-tagged messages to a host file for subsequent processing and analysis. An ARINC 429 database of Equipment IDs, labels, and engineering units specifications is also included.

CoPilot 429 Plus comes with all the features of CoPilot Standard—plus a variety of graphical displays, expanded monitor capability, two playback options, and customization through VBScripts.

Intuitive Databus Interface

The ARINC 429 databus is represented in CoPilot by an Explorer®-style hardware tree. When CoPilot 429 is started, incoming messages are automatically detected, posted in the hardware tree, and associated with the appropriate attributes from the ARINC 429 database. Alternatively, users may select messages of interest on each channel from a list of labels associated with the transmitting device.

Transmit schedules that meet ARINC timing specifications are built automatically from the user's list of labels. Users may also view or customize transmit schedules. Data for transmit messages may be continuously altered through the Data Generator, Engineering Unit Editor, or custom scripts.

Engineering Units

CoPilot 429 translates raw data into easily understood engineering units based on specifications in the ARINC 429 database. Label names, parity, SDI, SSM, and error conditions are clearly displayed. The translation of labels can also be controlled individually.

Messages in the hardware tree are assigned to display windows through a drag and drop operation.

Powerful Monitor

CoPilot users can collect databus activity indefinitely through the concurrent monitor, even if all channels are fully loaded. Users can save 100% of databus information or use filters to create a highly

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selective record. Messages can be displayed in engineering units or a binary, octal, or hexadecimal format. When data collection is complete, users can focus on channels or labels with display filters. Display



filters can also be used in combination with highlighting to specify the contents of export files and playback files. A variety of charting, analysis, and search tools simplify the evaluation of monitored data.

CoPilot OLE Automation

Using OLE Automation technology, users can control CoPilot from third-party applications and host Automation-compliant documents directly in CoPilot. Plus users can control third-party applications via Automation with CoPilot scripts.

CoPilot 429 Plus

CoPilot 429 Plus contains all the features of CoPilot 429 Standard, plus powerful graphical displays, scripting, and software and hardware playback.

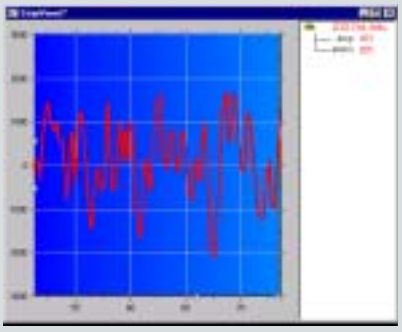
Graphical Displays

Plus users can quickly simulate aircraft instruments, view data values in strip charts, or create moving map displays.

Virtual Instruments—Automatically generate pre-configured controls from ARINC 429 labels or import from a library of virtual aircraft instruments and other ActiveX controls.



Strip Charts—Create dynamic, two-dimensional strip charts. Configure the display during simulation, and quickly review the dataset to analyze data trends in depth.



Moving Map—Display aircraft position by linking positional data to a moving map display. Import a map background or generate a photographic or topographical map using the built-in TerraServer® engine.



Scripting Routines

Scripts can be used to respond to bus events, create programmable triggers, or transfer information between CoPilot and other applications. Modify one of the example VBScripts or write your own.

Software Playback

Software playback allows previously recorded data to be replayed through CoPilot as if being received from the bus. Consequently, monitored data can be reexamined through engineering unit displays and instruments.

Hardware Playback

Monitored data can be replayed onto the 429 databus at the original speed based on time-tags or at a user-selected rate. Monitored data can be modified to test special conditions.

Specifications

CoPilot 429 supports Ballard's PCI, cPCI, PCMCIA, ISA, BUSBox (USB), and OmniBus (PCI/cPCI/Ethernet/USB) families of ARINC 429 boards.

CoPilot 429 runs under Windows® 95/98/NT/2000/Me/XP. Internet Explorer® 5 or higher is required.

Ordering Information

Buying a CoPilot System (hardware and software together) provides significant savings over purchasing these components separately. Consult the Ballard website or individual hardware brochures for order numbers.

If you already own a Ballard 429 board, you can create a CoPilot system by purchasing **SW-429-CS** (CoPilot 429 Standard) or **SW-429-CP** (CoPilot 429 Plus). Includes CD with software, reference manual, tutorial guide, online help, and example projects and scripts.

Call for additional information or a free evaluation copy of CoPilot.

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