

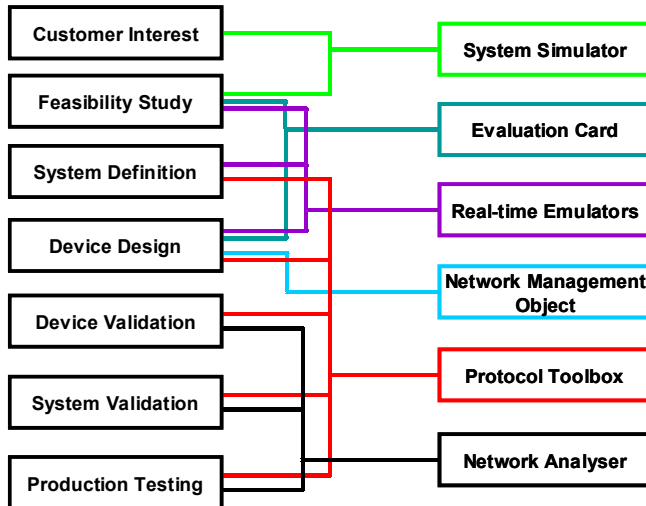
# Product Datasheet 3.0.4



The leading automotive infotainment networking solutions supplier

## Cayuga® Tools

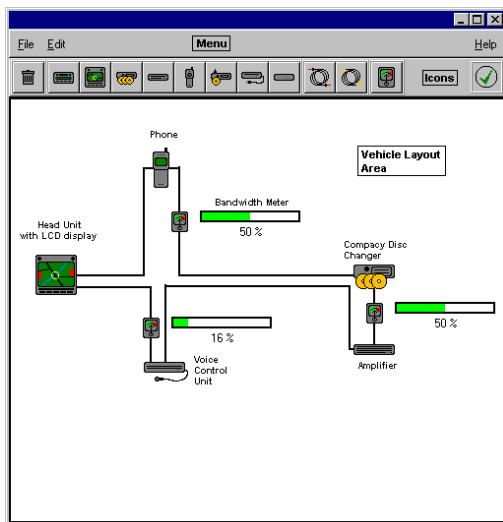
From Concept to Production the Cayuga® family of Tools supports the development of both products and complete D2B systems. Based on a portable hardware for maximum convenience, these flexible tools enable fast development and debug of all areas.



- **Cayuga® System Simulator** – offers quick evaluation of network bandwidth and configurations
- **D2B Evaluation Card** – for rapid evaluation of D2B SMARTWIRE™, D2B OPTICAL, CONAN® & SuperCONAN®
- **Cayuga® Emulation Kit** – a range of fully functional device emulators running on our Portable PowerBOARD (A-OPB) hardware platform.
- **Cayuga® Portable Network Analyser** for real-time monitoring of all bus traffic in hex and textual formats.
- **Cayuga® Protocol Toolbox** – a structured database management system for browsing and updating the D2B message database.

### System Simulator

The system simulator is designed to give a visual evaluation of specific ring configurations showing the connectivity and bandwidth distribution when a given set of devices is installed in a D2B system.



Using this tool, the user is able to experiment with different use-cases and see the effect of positioning devices at

different node positions, thereby gaining maximum benefit from D2B's segmented bandwidth allocation.

The drag-and-drop interface is easy to use and includes a broad selection of pre-defined devices, plus the option to define custom devices as necessary.

### D2B Evaluation Card

This card can be used to evaluate C&C's Conan® and SuperCONAN® transceiver devices and demonstrate the fundamentals of a D2B Network in any mode using either D2B SMARTWIRE™ or D2B Optical physical layer.

Cards can be linked together and have the capability to transport Control messages and digital source data.

Using on-board jumpers for configuration and simple I2C/SPI interfaces for user-control, the card can be set-up as a D2B Master or Slave and the on-board Codec can be configured to supply or consume audio source data as required.

- CONAN® or SuperCONAN,
- SMARTWIRE or Optical
- Serial Control via I2C or SPI
- Codec for conversion of audio to I2S
- Phono connectors for audio in/out

## Cayuga Emulation Kit

The Cayuga Emulation Kit comprises a D2B hardware emulation platform, the 'A-OPB', available in both D2B Optical and D2B Smartwire options, plus a range of software emulators, designed to run on Windows PCs.

The Cayuga emulators can be mixed in a D2B network with 'real' devices to accurately emulate a full or partial system. Populating a ring with real-time emulators in this way enables device software to be developed with a high degree of confidence so that it will be compliant with the target system.

- Includes both Master (i.e. 'Head Unit') and Slave devices.
- Runs on C&C's standard D2B Network Management Object for robust and fully functional real time emulation.
- Enables development before device hardware availability leading to shorter design times.

## Cayuga Network Analyzer

The Cayuga® Portable Network Analyser is a simple and intuitive tool to use, capturing all of the control messages from all nodes in any position in the D2B network to a timing resolution of 10us.

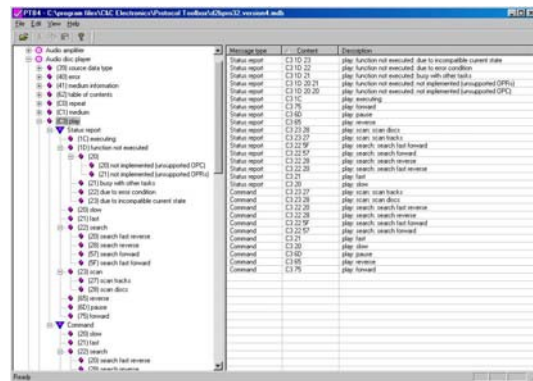
Connected to a PC and 12V DC supply, the unit can be used in vehicle or in the workshop as a test or debug tool.

The Hex to Text conversion facility allows users to see the actual function commands e.g. <play><forward>, which are color coded for easy identification as to the source or type of command. In addition, flags are used to highlight key errors including bi-phase, loss of lock and parity, for easy recognition and analysis.

Captured data can be stored on the PC hard disk for later analysis in spreadsheet or database programs.

## Protocol Toolbox

The D2B Protocol Toolbox is a powerful and intuitive software application for browsing and editing all D2B messages, from device level to application level, in both hex code and textual form.



Data can be output in XML/TXT format for viewing and analysis in a wide variety of software applications, or in BIN format for viewing messages in real time with the D2B Network Analyzer.

D2B Application Protocols are fully compatible with IEC-61883 messaging structure and are already defined for many devices including CD Player, Amplifier, Telephone, Digital Receiver, MP3/Tape Player, and User I/O devices.

The D2B Protocol Toolbox also assists D2B systems integrators by decoding communication messages and helping

### Order information:

For further information on the D2B Training Courses or any other C&C Electronics products, please visit our Web site or contact our office.

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to detect protocol violations.