



# World Modem and Socket Module Evaluation Board

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## Features

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| ✂✂ Supports all CCI Socket Modem functions           | ✂✂ Supports all socket modules including modem, wireless, CAN and Ethernet. |
| ✂✂ RS-232, Digital Serial & Parallel Host Interfaces | ✂✂ RS-232 via DB-8 connector  |
| ✂✂ PCM Audio Support                                 | ✂✂ Supports RTS/CTS and XON/XOFF flow control                               |
|  | ✂✂ CAN support via header and DB-9 connector                                |
| ✂✂ Phone, Ethernet and CAN line-side interfaces      | ✂✂ RJ-45 for Ethernet network connection                                    |
| ✂✂ On-board modem status indicators                  | ✂✂  |
| ✂✂ Internal 3.3 and 5 volt modem power supply        | ✂✂ Convenient accessible cabling  |
| ✂✂ Speaker   | ✂✂ Mounting holes for mounting into prototype equipment                     |
|  | ✂✂ Universal AC/DC power input  |

## Description

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The socket module evaluation board is designed to support current and future Copeland Communications Socket Modules including the complete line of World Modems, CAN, Ethernet and wireless modules. The board provides a flexible platform for evaluation of CCI Socket Modules and system prototyping.

The evaluation board provides convenient connections to all CCI Socket Modules. Specific hardware is provided to support RS-232, digital serial and parallel host interfaces. Industry standard connectors are provided to interface to telephone, CAN and Ethernet networks.

## Block Diagram

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Insert Block Diagram

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Subject to technical changes  
# 03/03 Copeland Communications, Inc.

## Detailed Specifications

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The modem is based on the Silicon Labs SI3015 Silicon DAA and Si2400, Si2414, Si2433 or Si2456 DSP processor. The DSP processor determines the line speed of the modem. The DAA is line powered and isolated from the DSP and host side of the system by high voltage isolations capacitors. See the Si24xx data sheet for detailed description of circuit operation and system interface requirements.

The evaluation board specifications are as follows.

Item	Specification
<b>Data Rate</b>	
56K bps-28K	V.90
2400 bps – 33.6K bps	V.34
2400 bps – 14.4K bps	V.32bis
1200bps	V.22, V.23 or Bell 212A
300 bps	V.21 or Bell 103
<b>Data Format</b>	
Bit format	Selectable 8,9,10 or 11 bits per character
Compatibility	V.23, V.22bis, V.21, Bell 212A & Bell 103
Control	AT command set
<b>Host Interface</b>	
Serial	TTL - 8,9,10 & 11 bit asynchronous data @ 2400-19.2Kbps rate
	RS-232 with hardware flow control
Parallel	8 bit interface to data and control registers with 12 deep FIFO
Flow Control	CTS, RTS, DCD, RI
Interface Select	Two multi-pin jumper blocks with LED inciator
<b>Features</b>	
LED Indicators	
POWER	Power is applied to board
TXD	Transmit Data
RXD	Receive Data
CD	Carrier Detect
RI	Ring Indicator
<b>Power Requirements</b>	
Input Voltage	7-18 Volts (AC or DC)
	Any polarity
Output voltage	5VDC
	xxxmA max

## Host Interface

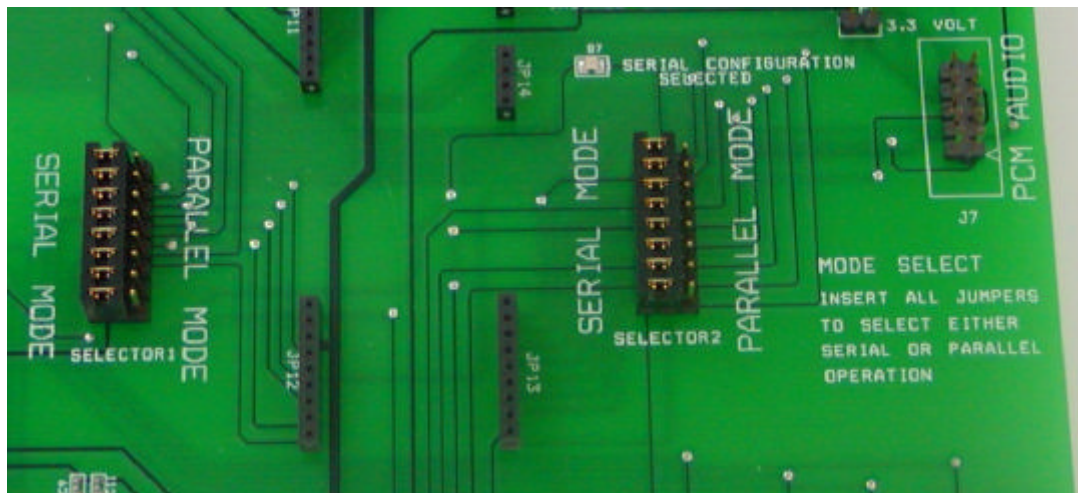
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The evaluation board supports RS-232 serial, TTL serial interfaces with hardware flow control and parallel interfaces.

### Serial/Parallel Interface Select

Two multi-pin jumper blocks select either serial or parallel interface mode. The position of **SELECTOR 1** and **SELECTOR 2** determine the operating mode. Install jumpers in the serial position for serial operation (default) or parallel position for parallel operation.

Note: Be sure to use the 8 position jumper plugs provided with the board to set the host interface mode or, if individual jumpers are used, that ALL jumpers are in either the SERIAL or PARALLEL modes.



**SERIAL MODE INDICATOR** (D7) will light when both jumpers are in the serial mode position.

To select the digital interfaces (serial or parallel) remove the RS-232 serial interface jumpers. This disconnects the RS-232 interface and drivers.

The module signals are connected directly to either the TTL serial interface (SERIAL I/F) or the TTL parallel interface (PARALLEL I/F) depending on the position of selector 1 and 2. Both Selectors 1 & 2 must be set to the either serial or parallel mode.

There are no buffers or drivers between the Socket Module and the evaluation board connectors. This provides the user direct electrical access to all the signals on the Socket Module.

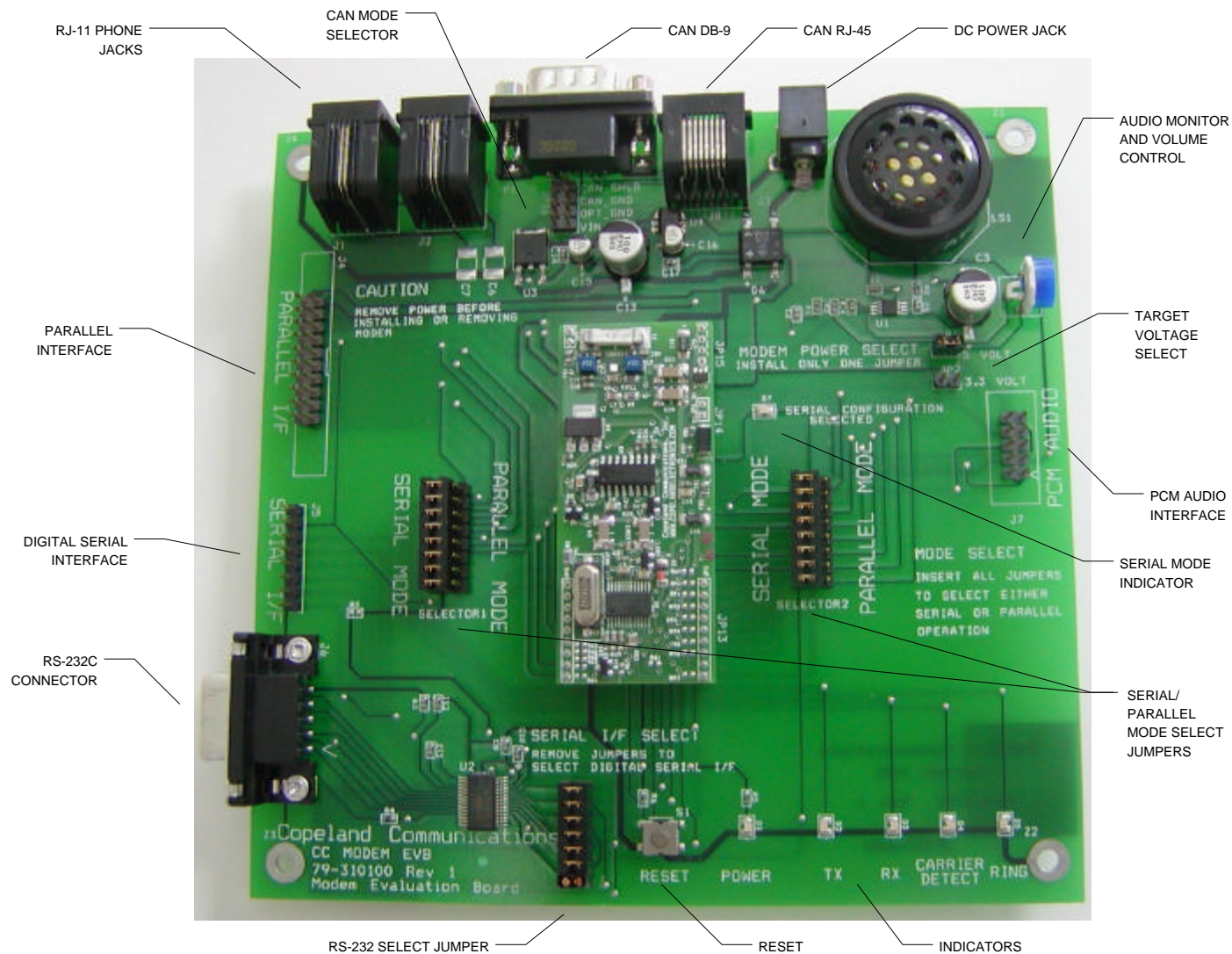
### RS-232 Interface

The user can select the RS-232 by installing the RS-232 Select Jumpers on JP3 (Labeled '**SERIAL I/F SELECT**' on Rev 1 of the PCB). This connects the socket module serial interface signals to the on-board RS-232 interface. The output of the RS-232 interface IC connects to the DB-9F connector. The RS-232 interface is fully voltage compliant and is configured as DCE (Data Communication Equipment).

Note: The RS-232 and digital serial interfaces can not be used at the same time.







QUICK STATE GUIDE

Your evaluation board is delivered configured for RS-232 serial operation.

	Option	Setting
Modem (Default configuration – RS-232 19.2KBPS N81)		
	Selector 1	Serial
	Selector 2	Serial
	Serial LED Indicator	Lit
RS-232 mode selected	Serial I/F Select	Installed
Target Voltage set to 5 volts	Module Power Selector	5 volt position
Modem Settings	Default host speed	19.2kbps default

## **Mechanical**

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The evaluation board is designed to support the entire family of Copeland Communications modules. These modules are designed on a dual in line package (DIP) configuration with 24mm row spacing and 2mm pin pitch.



## Ordering

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Evaluation Kit Including evaluation board, sample module, serial cable, AC adapter and users guide	CCI Order Number
Sample Module Included:	
9600 baud serial modem	<b>EVB-9600</b>
14.4 kb serial modem	<b>EVB-14.4K</b>
33kb serial modem	<b>EVB-33K</b>
56 kb serial modem	<b>EVB-56K</b>
No sample module	<b>EVB-None</b>
Options	Add suffix
European/Asian Version (230 VAC)	– <b>230 VAC</b>



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Subject to technical changes  
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