

Socket USB

Features

- ✍ Self-contained USB 2.0 to UART module
- ✍ 3.3V 100mA regulated power supply output
- ✍ Self powered or bus powered options
- ✍ Baud Rates from 300bps to 921.6kbps
- ✍ 512 Byte receive and transmit buffers
- ✍ Hardware or XON/XOFF handshaking supported
- ✍ Asynchronous serial host interface
- ✍ Footprint and protocol compatible with all Copeland Communications high speed socket modems
- ✍ Works with Existing COM Port PC applications
- ✍ Windows 98/2000/XP support
- ✍ MAC OS-9 and OS-X support
- ✍ SocketModem™ compatible
- ✍ Small footprint – 1.045” X 2.54”
- ✍ -40 to +85°C operating temperature

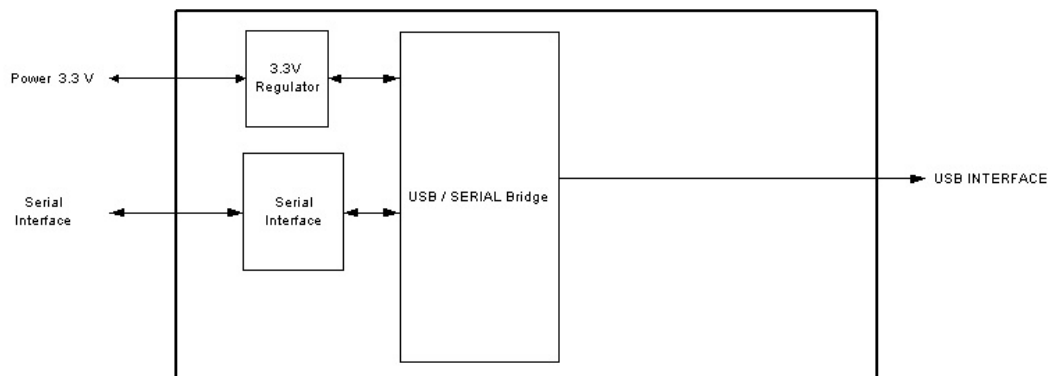
Applications

- ✍ Global Embedded applications
- ✍ Point-of-sale terminals
- ✍ Set-top boxes
- ✍ Vending & gaming machines
- ✍ Updating RS-232 designs
- ✍ Security Systems
- ✍ Remote monitoring & control
- ✍ Remote telemetry and SCADA
- ✍ OEM applications
- ✍ Bridge for other CCI products

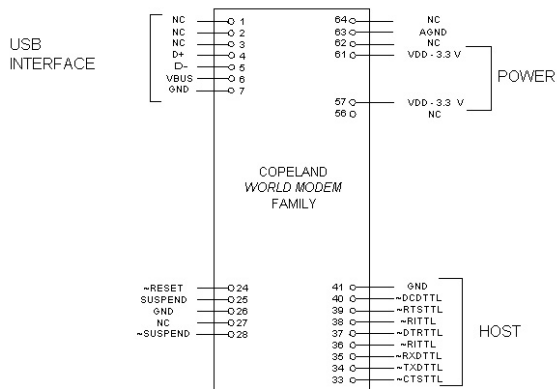
Description

The CC-USB is a compact, integrated USB to TTL asynchronous serial interface adapter. The module supports serial host communications via a flexible internal UART. The module conforms to the industry standard SocketModem™ mechanical and interface specifications. Because of its built-in features and flexibility, many applications and OEM products can be created using the Socket USB. The form factor is compatible with the CCI World Modem™. The flexible design can be configured as a bridge for USB to other socket modules. It may also be ordered as a drop in replacement to other CCI modules. On-board and off board USB connector connections may also be specified.

Block Diagram

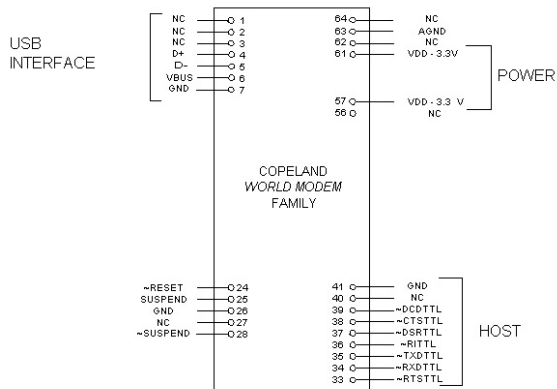


Host Interface



Note: Signals on pins 24,27,33-40 are TTL.

Serial Host Interface (-S model)



Note: Signals on pins 24,27,33-40 are TTL.

Serial Host Interface (-B model)

Detailed Specifications

Item	Specification
Data Rate	
300 to 921.6 kbps	
USB Interface	
Compatibility	USB 2.0 Compliant; Full Speed (12 Mbps), USB Suspend supported
Host support	Standard Windows, Mac and Linux Virtual COM port drivers
Asynchronous Serial Interface	
Data Formats	Asynchronous TTL 8 Data bits, 1 Stop bit, Selectable Parity: Odd, Even, None
Flow Control	CTS, RTS, DCD, RI
Features	
Data buffering	512 Byte Receive and 512 Byte Transmit buffers
Event Character Support	
Power Requirements	
Voltage	3.3 V Output (USB powered) 3.3V Input (Self powered)
Current	100 mA output Maximum Operating (USB powered) TBD (Self powered) TBD mA Standby
Environmental	
Temp Range	-40 to +85 °C
Compliance ¹	TBD

USB Interface

The Universal Serial Bus function of the CC-USB is a USB 2.0 compliant full-speed device with integrated transceiver and connectors (-B and -U models). USB signals are also connected to pins 4 through 7 of the Socket interface, so the designer can place the USB connector more conveniently on the PCB. The USB function controller manages all data transfers between the USB and the UART as well as command requests generated by the USB host controller and commands for controlling the function of the UART.

The CC-USB Suspend signals are supported for power management of both the CC-USB as well as external circuitry. The CC-USB will enter Suspend mode when the Suspend signaling is detected on the bus. On entering Suspend mode, the CC-USB asserts the Suspend and ~Suspend signals. These signals are also asserted after a CC-USB reset until the device configuration during USB Enumeration is complete.

The CC-USB exits the Suspend mode when any of the following occur:

1. Resume signaling is detected or generated.
2. USB Reset signal is detected
3. Device reset occurs.

On exiting the Suspend mode, the Suspend and ~Suspend signals are de-asserted. During CC-USB reset, the Suspend and ~Suspend signals float high temporarily. a 10K pull down resistor can be used to hold the ~Suspend signal low during reset if is used in the system design.

Asynchronous Serial Interface

The CC-USB Asynchronous Serial Interface is a complete UART consisting of Receive and Transmit signals as well as RTS,CTS, DSR, DTR, DCD and RI control signals. RTS/CTS, DSR/DTR and XON/XOFF flow control are supported.

The UART is programmable to support a number of baud rates and data formats. Supported data rates and formats are:

Data Bits: 8

Stop Bits: 1

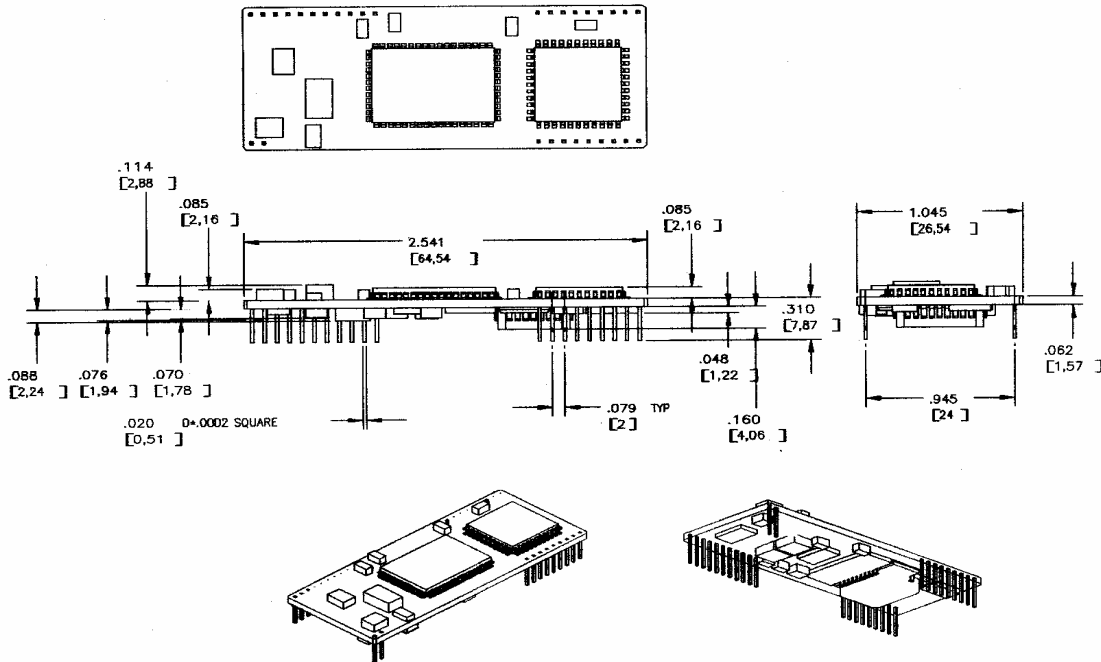
Baud Rates: 300, 600, 1200, 1800, 2400, 4800, 7200, 9600, 14.400, 19200, 28800, 38400, 56000, 57600, 115200, 128000, 230400, 460800, 921600

COM Port Device Drivers

The CC-USB COM port device drivers allow a CC-USB based device to appear to the PC's application software as an additional COM port. Application software running on the PC accesses the CC-USB just like a standard COM port. This relieves the application software of any USB specific code.

Voltage Regulator

The CC-USB -R models include a voltage regulator. This allows the CC-USB to be configured as either a USB bus-powered device. When enabled, the 3V regulator output appears on pin 57 of the module interface and can be used to power external 3V devices. On non-R models, pin 57 is a 3.3V power supply input. -R models are configured for a maximum of 100mA output supply. Other current output options are available. Contact CCI for details.



Ordering Information

CC-USB-BSUR

- B** – Bridge, Female connectors on top of PCB with mini USB-B connector on board
- S** – Serial, Male connectors on bottom of PCB
- U** – USB-B connector
- R** – Voltage Regulator

Valid order options:

CC-USB-B
CC-USB-S
CC-USB-SU

CC-USB-BR
CC-USB-SR
CC-USB-SUR

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