

User Guides

Caspian C Com Board User Guide



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1. Introduction

This board allows driving all different Caspian C module interface versions (RS232-3.3V, RS232-12V, SPI, I²C and Analog) with a simple USB interface.

This Caspian C is then controlled by a PC application: FocusLab

2. Caspian C-Com board

2.1. Hardware description



Only one module can be connected at a time, on one of these 5 headers.



Never plug a module to an inappropriate connector. This could generate permanent damage due to different voltage levels.



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2.2. Functional description

This board allows accessing the Caspian C module registers through a unique serial interface. The onboard USB chip CP2102 (with its associated drivers) will generate a **Virtual Com Port (VCP)** when plugged on a PC.

The VCP drivers are available for various OS:

http://www.silabs.com/products/mcu/pages/usbtouartbridgevcpdrivers.aspx

Once the driver is installed and the VCP generated, the Caspian module connected to the Caspian C Com Board can be controlled using the UART protocol detailed in the Caspian C data sheet, whatever the communication protocol of the Caspian C (analog, SPI, I²C, RS232).

The bridge board microcontroller translates the input UART protocol to the specific module's communication protocol.

2.3. Board control

The board is powered and controlled by the USB connector.

At power up, or after reset (reset button pressed), the board will automatically check what module type is connected.

Once the module is detected, the bridge board will stay in this operating mode until a new reset (or power up). The LED will blink every 3 seconds, in order to identify the operating mode:

- 1 blink: analog mode
- 2 blinks: I²C mode
- 3 blinks: RS232-3.3V mode
- 4 blinks: SPI mode
- 5 blinks: RS232-12V mode

After the Caspian C Com Board is set in either operating mode, the module can be controlled through the potentiometer "Manual voltage control".

Turning this button between min and max will set the driver voltage between 24V and 70V.

To get accurate control of the voltage, use the FocusLab application.

3. Quick start

Here are the steps to use the bridge board with your **Caspian C** module:



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