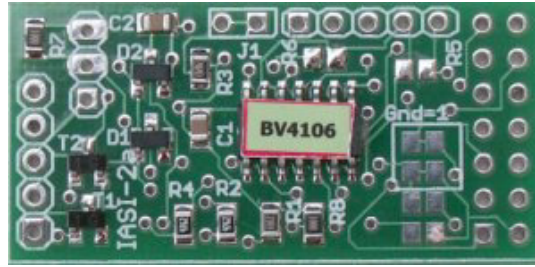


Quick Start Guide for using the BV4106 GPIO Board



1. Introduction

The BV4106 is a General Purpose Input Output board that incorporates some extra features such as Pulse Width Modulation and triggering of a digital channel on a preset analogue value. This document is intended as a 'get you going quick' guide to supplement the data sheet.

2. Connections

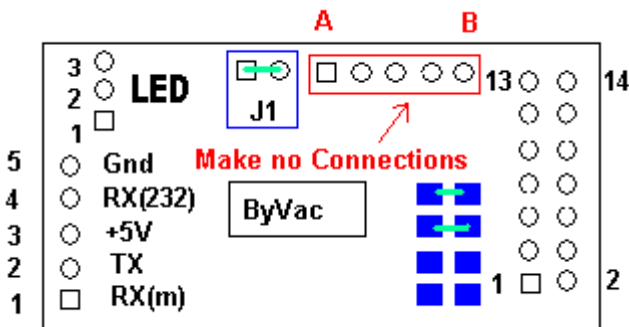


Figure 1 The GPIO Module connections

Figure 1 shows three connections and one jumper, the illustration shows the board looking from above with the components facing towards you. Note that the jumper has a shorting link that may need to be cut if multiple devices are used on the same bus.

Pin	Cmd	Description
1		Ground
2		Analogue Reference [1] (output)
3	DA (WA)	Digital I/O A (PWM)
4	DB	Digital I/O B
5		Ground
6	DC	Digital I/O C
7	DD	Digital I/O D (also at J1) [2]
8		+Ve Power (also pin 3 IASI)

9	DE	Digital input E [3]
10		n/c
11	PA VA TA	Analogue channel A
12	PB VB TB	Analogue channel B
13	PC VC TC	Analogue channel C
14	PD VD TD	Analogue channel D

Figure 2 Connection for the 14 way connector

2.1. The IASI Connection

This is the 5 way connection to the left of the board and is the communication to either a PC or a microcontroller.

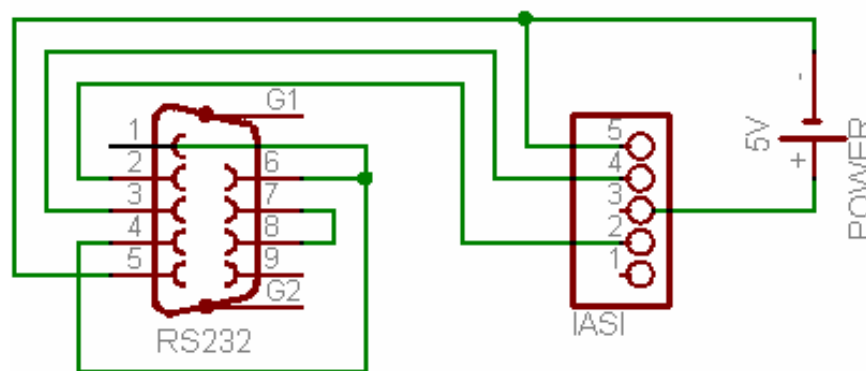


Figure 3 Connecting to PC COM Port

The power to the module requires about 4 to 6V but if logic is to be controlled (quite likely) then a regulated 5V supply will be required between pins 3 and 5. Figure 3 shows how to connect the interface to a standard Com. port. There is no need for a voltage translation device such as a MAX232 if only one device is being used. NOTE Pin 1 is always a square pin.

Once connected the device will be ready to respond to commands issued from the PC. a terminal emulator program should be used such as HyperTerminal, however a free terminal emulator is available and much easier to use called BV terminal. This is included in this pack or it can be downloaded from www.byvac.co.uk

3. Terminal Software

Any terminal software (software that is used with the COM ports) can be used for this display, if you have Microsoft Windows then ideally use BV Terminal. This can be obtained free from www.byvac.co.uk. This is only one file, simply drop the exe file into a suitable directory and launch, there is no installation or set up. The file will write a configuration file to the directory to keep track of the settings, but that's all.

The next section instructions are for BV Terminal, see later for setting up HyperTerminal.

4. Using BV Terminal

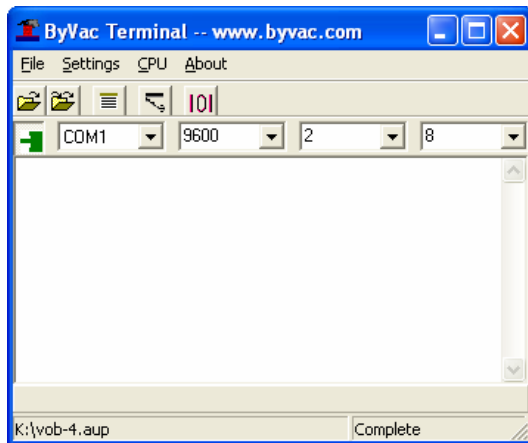


Figure 4 BV Terminal Software

5. Establishing Communication

Select the Com. port that you have the device connected to using the drop down list, only available Com. ports will be shown. Press the small red icon to the left of the BV Terminal window and this should turn green to show that a connection to the selected COM port has been made. If you get an error at this stage then you have selected the wrong COM port or you do not have a COM port on your system.

When the icon is green press <enter> a couple of times until a **L>** prompt is seen, this process establishes the baud rate. In Figure 4 this is shown as 9600 but it can be any you choose up to 57,000. There is no real advantage at this stage for having a higher baud rate, see Figure 5.

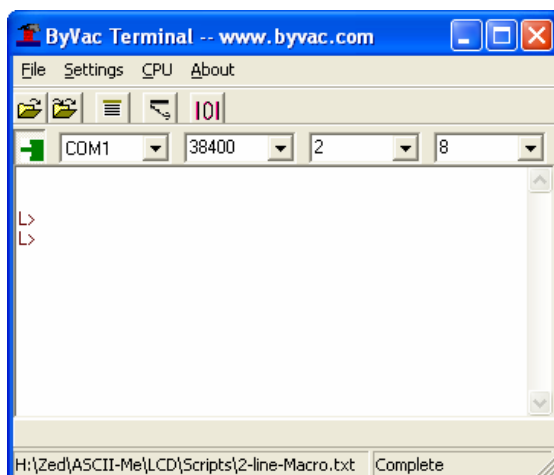


Figure 5 Establishing the Baud Rate

As can be seen from Figure 5 the Baud Rate will be established so setting the actual baud rate on the terminal is not that important.

6. A few Simple Commands

Try some simple commands to become familiar with the interface, for example:

za

The above will return the current address, this will be 00 by default, try changing it to say D1 by:

zaD1

Try **zv**, this will print the version details. Once communication has been established try some simple commands:

7. Further

Now that communication has been established you will need to connect up hardware to the 14 way connector. As an example connect an LED up to the 3 way connector using pins 1 and 3.

Pin	Description
1	+Ve supply
2	Digital channel D
3	Series resistor (100R)

Table 1 LED Connector

This connector is intended to drive an LED and for this it has incorporated a 100R resistor between pins 2 and 3.

This is connected to digital channel D so when the LED is connected set this channel to output:

DD -o

Setting the output low: **DD0** will cause the LED to be illuminated and high: **DD1** will extinguish the LED.

For more information, refer to the datasheet and also the web site.