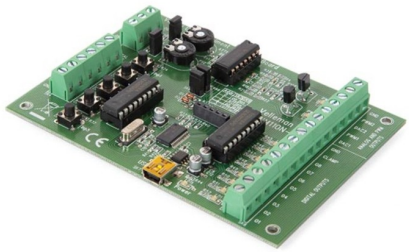
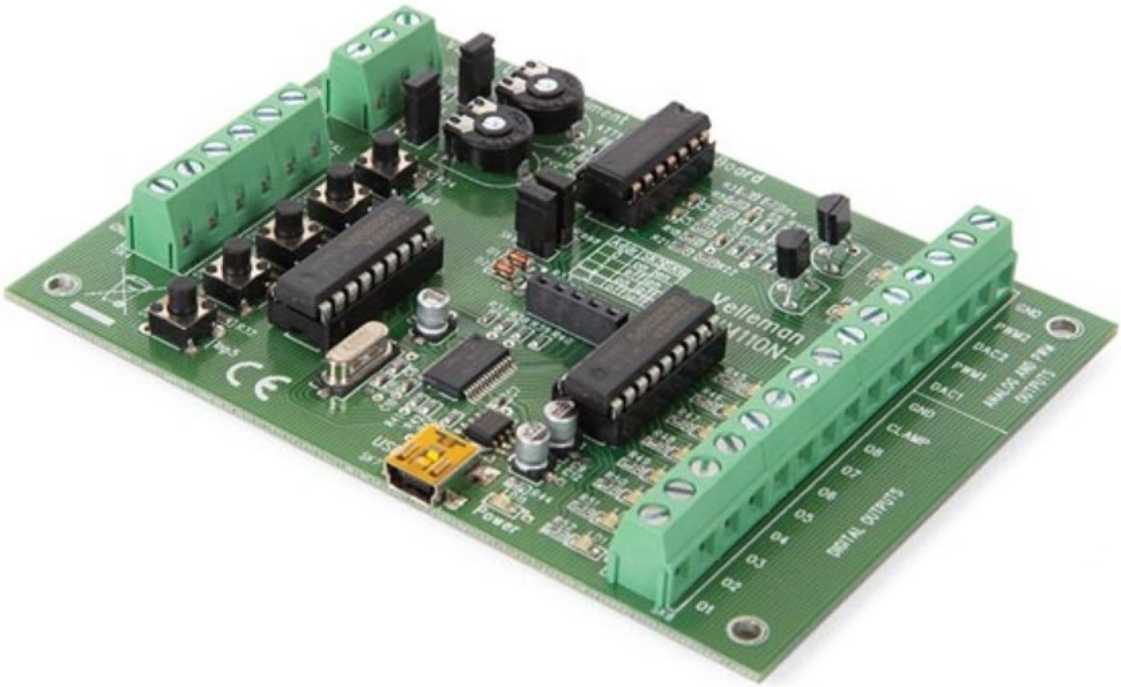


VELLEMAN HVM110NG’1 Usb Experiment Interface Board User Manual

USB EXPERIMENT INTERFACE BOARD
VM110N



short user manual

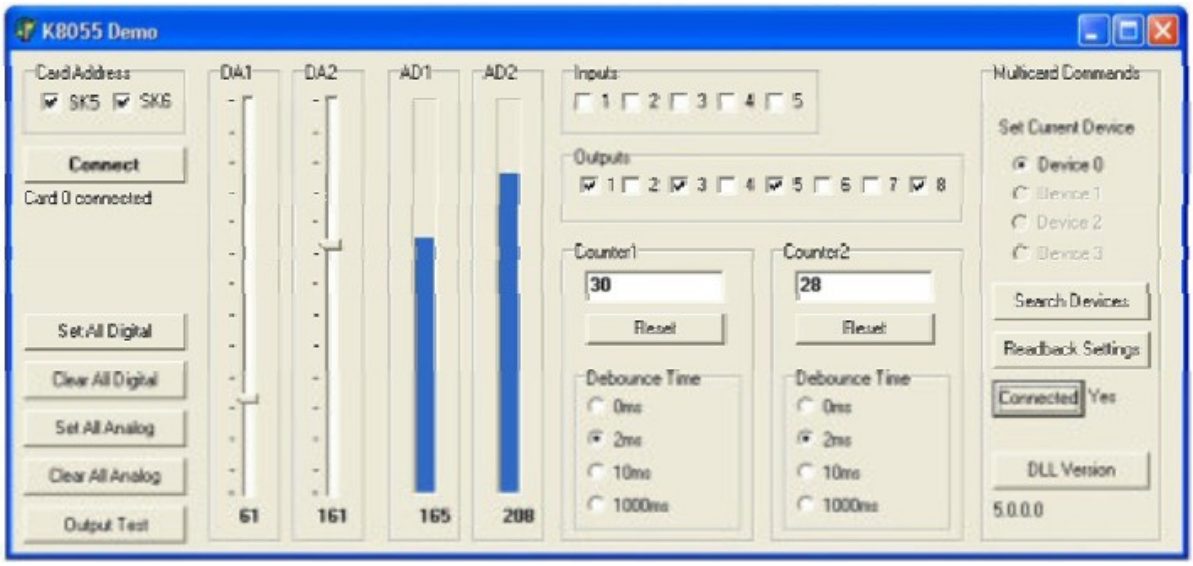
Contents

WARRANTY

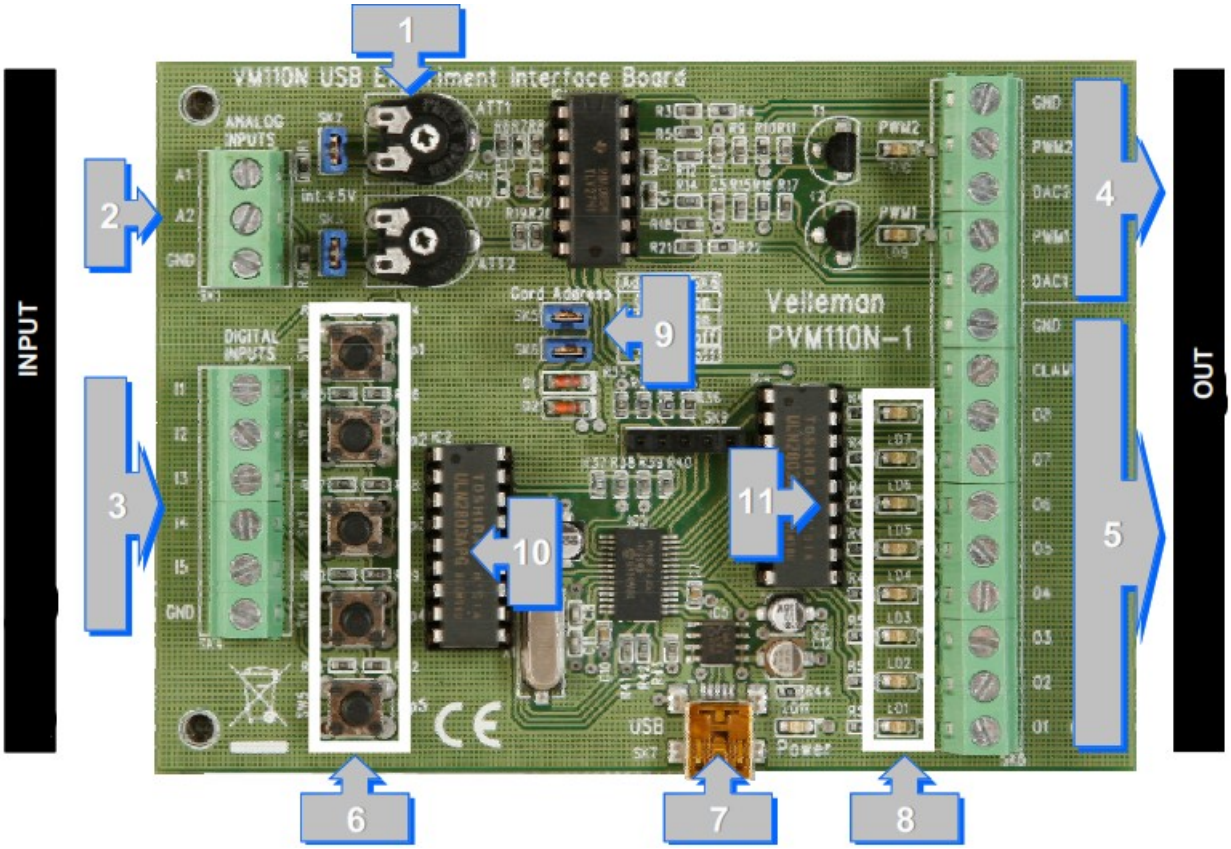
This product is guaranteed against defects in components and construction from the moment it is purchased and for a period of TWO YEAR starting from the date of sale. This guarantee is only valid if the unit is submitted together with the original purchase invoice. VELLEMAN Ltd limits its responsibility to the reparation of defects or, as VELLEMAN components Ltd deems necessary, to the replacement or reparation of defective components. Costs and risks connected to the transport, removal or placement of the product, or any other costs directly or indirectly connected to the repair, will not be reimbursed by VELLEMAN components Ltd. VELLEMAN components Ltd will not be held responsible for any damages caused by the malfunctioning of a unit.

Diagnostic / test software

See the product page on our website for the latest available software & manual



Description

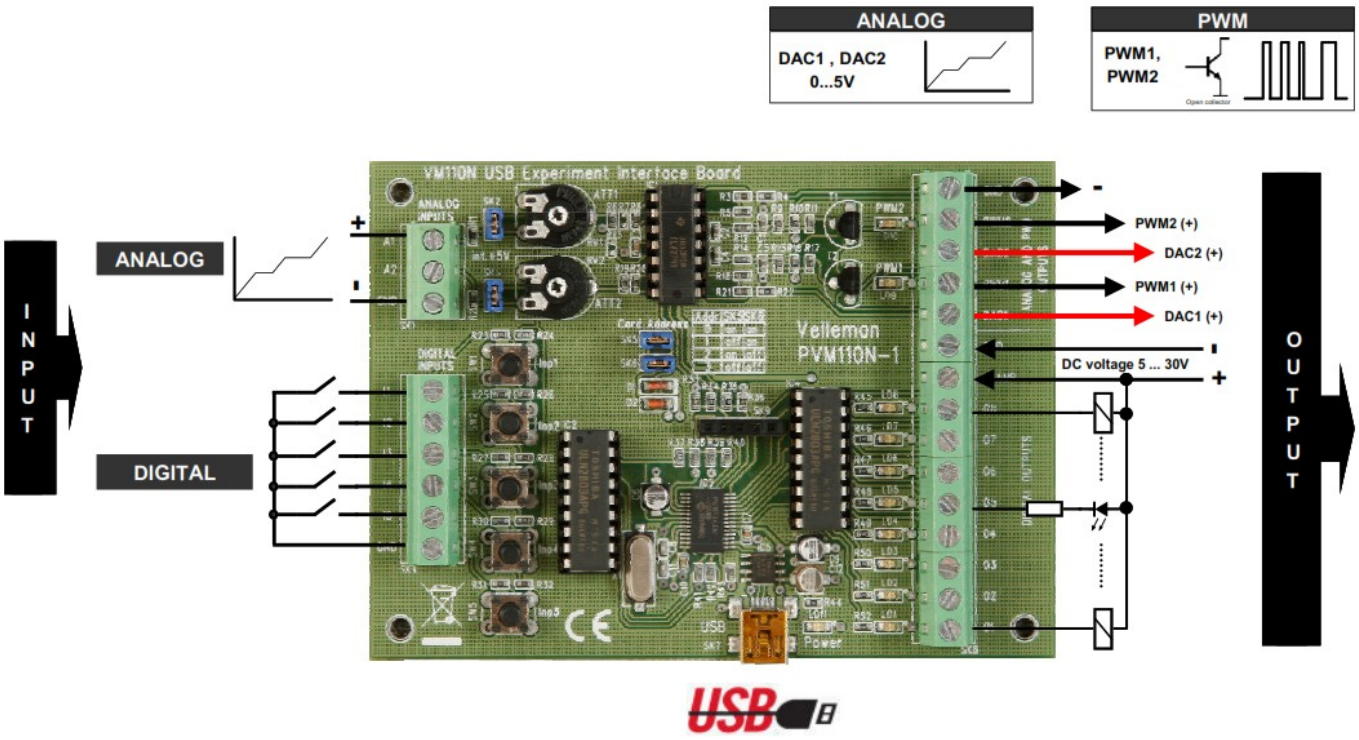


	Internal Test-voltage Externs analogue spanning A1/A 2		Regeling Internal Test-voltage

1. Analog input adjustment
2. analogue inputs

3. digital inputs
4. analogue outputs
5. 8 digital open collector outputs
6. Test buttons
7. USB
8. Output LED indicators
9. Adress selection
10. Digital input protection with ULN2803
11. Digital output protection with ULN2803

Connection diagram



WARNING

PLEASE NOTE THAT THE GROUND OF THE BOARD IS NOT ISOLATED FROM THE COMPUTER GROUND!

Specifications and features

The VM110N interface board has 5 digital input channels and 8 digital output channels. In addition, there are two analogue inputs and two analogue outputs with 8 bit resolution. The number of inputs/outputs can be further expanded by connecting more (up to a maximum of four) cards to the PC's USB connectors. All communication routines are contained in a Dynamic Link Library (DLL) K8055D.DLL. You may write custom Windows (XP or higher) applications in Delphi, Visual Basic, C++ Builder or any other 32-bit Windows application development tool that supports calls to a DLL. Source code for Visual Basic , Visual C++, Visual C#, Excel, Delphi and Borland C++ Builder included.

Features

- minimum system:
  - Pentium class CPU
  - USB1.1 or higher connection
  - Windows xp or higher
- DIAGNOSTIC / TEST SOFTWARE:
  - separate output / input test
  - clear all / set all function
  - counter function on inputs 1 and 2 with adjustable debounce (max 2KHz depends on total I/O load)
  - analogue output set sliders
  - analogue input bar-graph indication
- 100% compatible with: VM110 & K8055 cards

Specifications

- 5 digital inputs (0= ground, 1= open) (on-board test buttons provided)
- 2 analogue inputs with attenuation and amplification option (internal test +5V provided)
- 8 digital open collector output switches (max 50V/100mA) (on-board LED indication)
- 2 analogue outputs:
  - 0 to 5V, output resistance 1K5
  - PWM 0 to 100% open collector load max 100mA / 40V (on-board LED indication)
- general respons time: 2ms per command
- power supply: through USB approx. 70mA
- dimensions: 110 x 80mm / 4.3 x 3.2″

SAFETY INSTRUCTIONS

- All repairs should be executed by qualified technicians.
- Avoid the installation of the module in locations with standing or running water or excessive humidity. Indoor use only !
- Handle the module gently and carefully. Dropping it can damage the circuit board.
- Never exceed the protection limit values indicated in the specifications.
- As safety requirement vary, please check with your local authorities.
- Velleman modules are not suitable for use or as part of life support systems, or systems that might create hazardous situations of kind..

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Documents / Resources

	VELLEMAN HVM110NG'1 Usb Experiment Interface Board [pdf] User Manual HVM110NG 1 Usb Experiment Interface Board, HVM110NG 1, Usb Experiment Interface Board , Experiment Interface Board, Interface Board, Board