

Pre-programmed Eobody2 Universal Board

■ ■ ■ *Applications*

Plug sensors thru USB

Industry
Sensors
Robotics
Step motors control
Automation
Meta instruments
New controller design
Movie industry
Interactive objects and spaces
Architecture & home design

■ ■ ■ *Features*

Plug&play

No programming/soldering required
High speed USB
Protocoles compatibility: USB/MIDI
ESS based
Free editor MAC/PC compatible
16 digital I/O
13 analogue I/O
Internal memory
Reprogrammable for other apps
New EoMessage Max object to control objects

Description

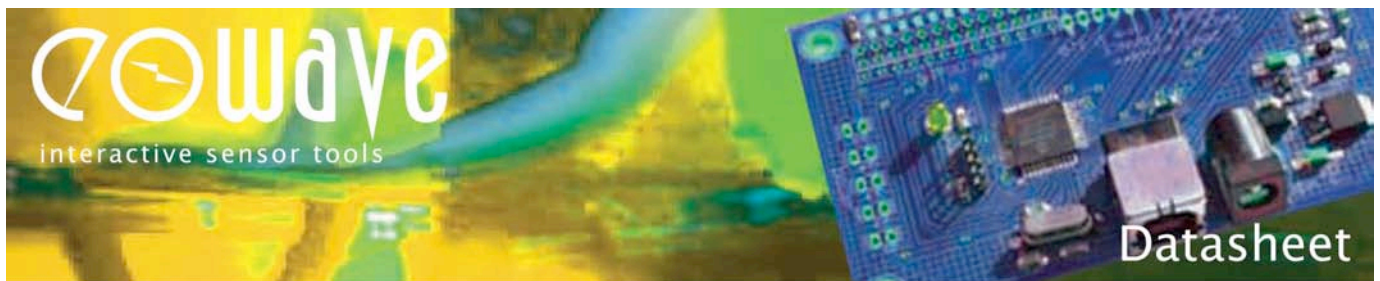
The Eobody2 Universal Board is a pre-programmed analogue/digital USB converter with 16 digital I/O and 13 analogue inputs. It enables to connect sensors directly to a computer thru hi-speed USB with no programming needs and no soldering. Recognized as a USB interface, it is easily configurable and compatible with any MIDI software. The board program is so versatile that it turns the Eobody2 Universal Board into a powerful and cost effective converter, which can be used for diverse applications such as music, video, robotics, and industry... And in case its program would not fit your needs, it is fully reprogrammable. A free MAC/PC compatible software editor makes it very easy to use for everyone.

■ ■ ■ *Eowave and ESS DSP based technology*

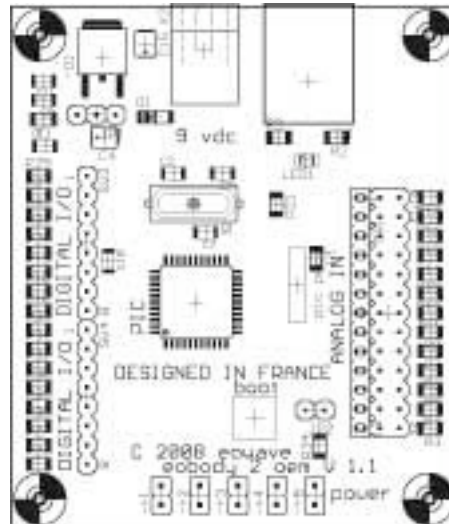
Eowave ESS DSP (Eobody2 Sensor Systems) is an integrated solution for sensor to digital protocols standard needs. Today, with years of research into sensor technology for music & video applications, Eowave proposes a new versatile solution, which can be easily integrated by any developers to create new kinds of controls. Eowave also proposes a full range of compatible sensors (see www.eowave.com).

■ ■ ■ *MIDI compatibility*

All major operating systems (Windows, OS, Linux) include generic MIDI drivers. Eobody2 Universal Board MIDI compatibility eases the configuration process - with no need for proprietary drivers, as well as it ensures a full compatibility with all MIDI compatible softwares like Director, Ableton Live, Steinberg Cubase, Logic Audio, Cakewalk, Isadora, Pure Data, Max/MSP... A plug&play board!



General Overview



Connections

- > 1 USB input
- > 9VDC: power supply input
- > 16 x 1 pin line for digital I/O
- > 13 x 3 pins line for analogue inputs 0/+5V

Connectors

Analogue inputs 3 pins connectors to plug directly sensors on the board with no soldering.

Powering

The Eobody2 Universal Board is self powered by USB. For special use requiring more power than USB delivers, a 9V DC power supply can be added to deliver 500 mA.

Internal fuse

An internal fuse avoids electrical damages.

LED1

A LED lights when right powered.

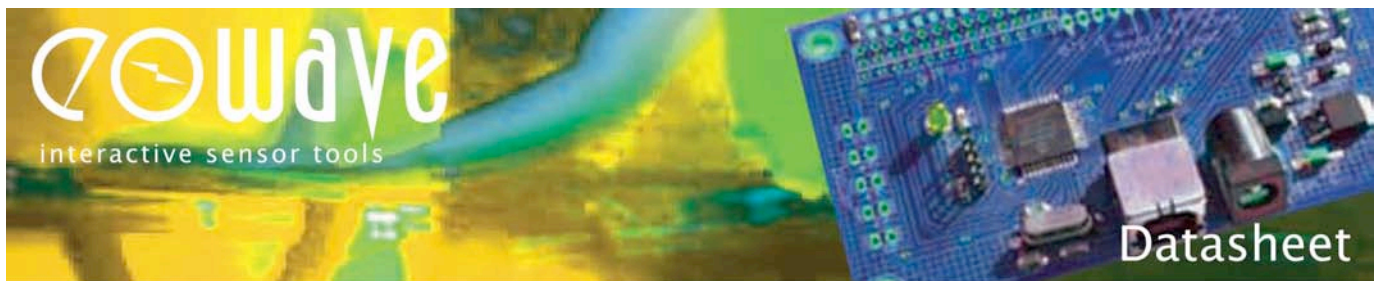
16 Digital I/O

Each digital I/O has a 10K resistor which is connected to VDD and can be unsoldered if needed. Accepts 0/+5V voltage.

13 Analogue I/O

Each analog input has a 474K resistor connected to VSS which can be unsoldered if needed. Accepts 0/+5V voltage (sensors for example).

Converters: 7 to 10 bits



■ ■ ■ **A Pre-programmed Board**

The Eobody2 Universal Board is pre-programmed. It means that it does not require any programming skills to be used. This feature makes of the Eobody2 Universal Board a very unique product on the market. It has been programmed to be as versatile as possible, but if you need other specifications, it can be reprogrammed for other special needs (see reprogramming the Eobody2 Universal Board – pic prog).

- > Ready to use preconfigured Digital I/O (note or program change)
- > Choose the first note and get the following 16)
- > Ready to use pre-configured Analogue I/O
- > Per default CC 1 on input 1 ... CC 13 on input 13
- > Message format types can be changed with the editor.
- > MIDI Compatibility: ready to use with MIDI compatible softwares.

Internal board Program Specifications

Based on the Microchip 18F4550 (www.microchip.com)

Direct access to all Microchip processor features (sampling, PWM, frequency tracking, usart...)

Reprogramming the board (pic prog)

The board can be updated/reprogrammed via USB with the Microchip Bootloader.
No PIC programmer needed.

■ ■ ■ **Eobody2 Universal Board Software editor**

The Eobody2 Universal Board software editor increases the versatility of the board, offering powerful signal processing capabilities, I/O configuration, message types format...

- > Free MAC/PC compatible software editor.
- > Analogue and digital I/O configuration
- > Save function to save editor settings in the board internal memory (memory boot).
- > Signal processing features: inverse, zoom, offset, noise gate, filter, MIDI channel selection, message types format, value
- > 7 message format types: Control change 7 bits/ CC 10 bits/ note on trigger/Program change/ pitch bend/ pitch bend mapped 14 bits /monophonic aftertouch
- > Direction of digital ports I/O setting
- > Possibility of controlling digital ports with note on/off messages or SYSEX stream (e.g. to make a keyboard)
- > EoMessage, a dedicated Max object developed by Eowave to control any ESS DSP based interfaces.

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