



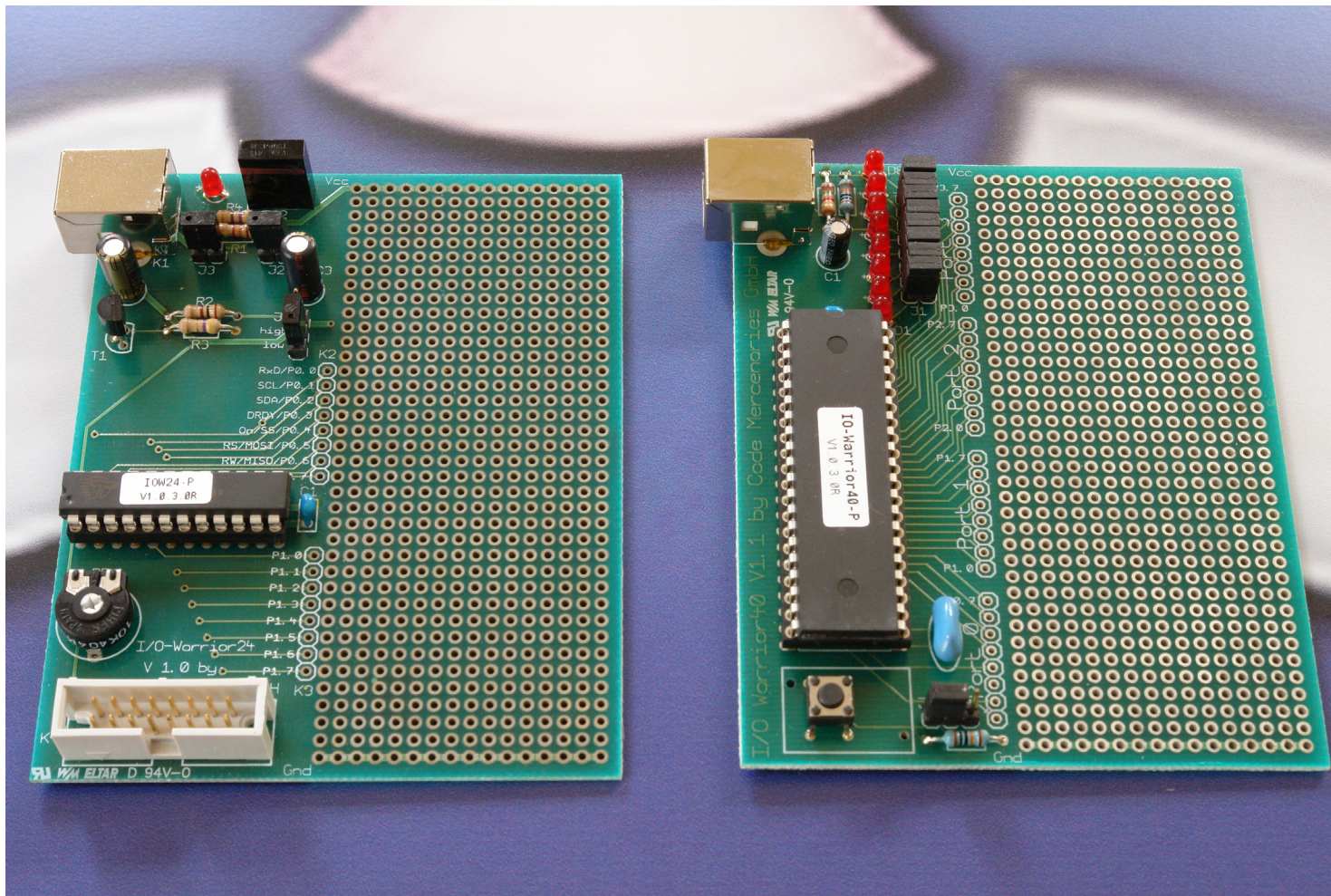
Code Mercenaries Hard- und Software GmbH

www.codemerchs.com

LED-Lighting • Keyboardcontroller • Mousecontroller • Joystickcontroller • I/O-Controller • rotary encoder controller

Press Release

Generic USB I/O Controllers IO-Warrior24 and IO-Warrior40 updated





Press Release

Code Mercenaries ships an updated version of the popular generic USB I/O controllers IO-Warrior24 and IO-Warrior40 with new features.

The IO-Warrior chips are a family of universal USB I/O controllers. In addition to simple I/O pins they support functions like I2C, SPI, LED matrix, key matrix, driving LCD modules, and receiving IR remote control signals.

The now shipping new Version V1.0.3.0 of the chips adds a number of new functions.

IO-Warrior24 now has two capture timers as a completely new function. They can be used to measure the time between falling and rising edges on one or two inputs with a resolution of $4\mu\text{sec}$. The count of a 24 bit long timer is reported at the moment when an event is detected. The timers can be used to take speed or frequency measurements.

Both IO-Warrior24 and IO-Warrior40 do now support clock stretching handshake on their I2C ports to allow communication with slower slaves. A programmable timeout prevents lockup if there is a malfunction on the I2C bus. Additionally both chips have the option to use the special protocol variant required to communicate with Sensirion humidity sensors. IO-Warrior24 allows to disable the internal pull-up resistors on the I2C to enable compatibility with lower voltage slaves.

The keymatrix function of IO-Warrior40 now allows a matrix size of 16x8 keys in addition to the 8x8 matrix.

The chips are available in DIL24 and SOIC24 packages for the IO-Warrior24 and SSOP48 as well as DIP40 module for the IO-Warrior40. Starterkits for either chip are available at a price of Euro 49 each (excl. VAT).

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Technical Data

- USB V1.1/2.0 Low Speed Device
- 32 I/O pins on IO-Warrior40
- 16 I/O pins on IO-Warrior24
- I2C-Master at 100 kHz, max. 750 bytes/sec
- Clock stretching handshake on I2C - NEW!
- Protocol for Sensirion humidity sensors - NEW!
- LCD modules with HD44780 or similar controller supported
- LED Matrix with up to 8x32 LEDs with a couple external components
- Simple to start with using the starterkits
- Uses standard system drivers
- Software support for MacOS, Linux, and Windows
- Easy to start with minimal USB know how

Specific for IO-Warrior24:

- SPI master interface, up to 2MHz, max. 750 bytes/sec
- Receiver function for RC5 IR remote control signals
- Two 24 bit capture timers with 4 μ sec resolution to measure event timing
- Package: DIL24 or SOIC24

Specific for IO-Warrior40:

- Key matrix with 8x8 or 16x8 (NEW!) keys
- Package: SSOP48 or module in DIL40 form factor.

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About us and our products

Code Mercenaries is a supplier for the industrial input device and peripheral manufacturers since 1998.

The keyboard and combined keyboard/mouse controller family KeyWarrior, and the mouse controller family MouseWarrior serve as basis for a large number of industrial input devices. A small but vital customer base are the manufacturers of products for the disability market and other speciality input devices.

The joystick controller family JoyWarrior serves a broad range of customers from industrial machine/vision control, professional and semiprofessional simulator control, to hobby and model building. A good option for front panel design are the joystick/mouse hybrid controllers MW24J8 and MW24H8 which are switch selectable to work as a mouse or joystick allowing both cursor control and data input via a joystick.

JoyWarrior24F8 is a low cost three axis acceleration sensor. With its small size and simple connection via a USB interface it opens a lot of new application options. The MouseWarrior24F8 variant of this sensor is a mouse replacement that needs no surface for operation.

Applications for the IO-Warrior universal USB I/O controllers are very diverse. Basically only the number of pins and the data rate limits the use of IO-Warrior. It is used in laboratory setups, test equipment as well as in hobby projects or full scale device production either as the core of a device or "just" the interface to USB. IO-Warrior chips control robots and telescopes, do quality control on production lines, take measurements in labs, control switches and displays in front panels or simulator cockpits, or work as the USB interface in many kinds of products.

SpinWarrior is a family of rotary encoder controllers with USB interface. Various models allow from 3 to 6 encoders to be connected to the USB and are suitable for motion control, measurement, or human interfacing applications.

Our philosophy is to provide complete solutions that allow our customers to concentrate on their own strength in developing their end products. The necessary know how for controlling interfaces like USB or PS/2 is encapsulated in our chips.

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