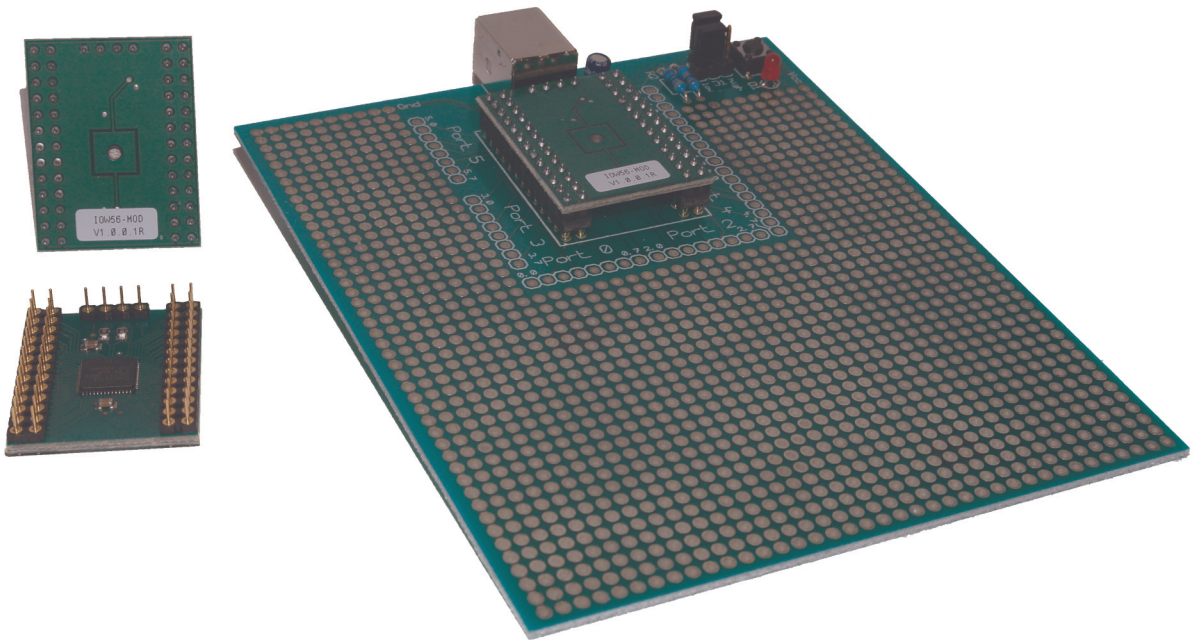


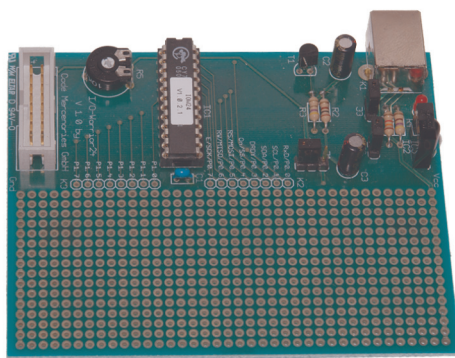
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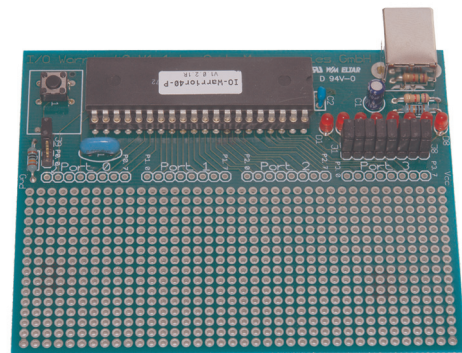
IO-Warrior 56



IO-Warrior 24



IO-Warrior 40





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Pressrelease

New IO-Warrior shipping: IO-Warrior 56

The universal USB I/O controllers of Code Mercenaries do have a new family member.

The IO-Warrior56 combines an extended temperature range with significantly increased data rates and 50 I/O pins. This makes it the most sophisticated chip of the IO-Warrior family. IO-Warrior56 is the solution for many I/O applications on USB. The 50 I/O pins can be either controlled direct or higher functions of the chips can take control of some of the pins to offer IIC, SPI, 8x8 key matrix, 8x64 LED matrix, and control of alphanumeric or graphic display modules. Any of these functions can be activated individually and they can be used at the same time in any combination.

USB operation has a temperature range from -10C to +85C allows the use in many industrial applications.

Software support is available for Windows 2K/XP, Linux (Kernel 2.6 and up), and MacOS X.

IO-Warrior56 is available in two package versions: As a module with 100mil spaced pins or as a chip in a MLFP56 package (chips are subject to minimum order quantities). All necessary components for running IO-Warrior56 are contained on the module, so adding a USB cable is sufficient to get a working unit. A starter kit with a large breadboard area is available for Euro 69 plus VAT.

At the back of this binder you will find a CD with product photos and data sheets.



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IO-Warrior - Overview

The IO-Warrior chips are a family of universal I/O controllers for the USB. With shrinking availability of serial and parallel ports on standard computers a new way has to be found to connect specialized hardware. USB is a very clean solution, though it requires quite a learning curve to master the protocol implementation.

IO-Warrior chips remove the requirement to deal with all the details and complexities of the USB.

The IO-Warrior pins can be used either as simple direct I/O lines, or more complex functions of the chips can be used to simplify certain tasks. IIC, SPI, controlling display modules and several other functions can be handled by local intelligence in the chips, which results in much more speed and lower complexity than implementing these functions by simple I/O.

Currently the IO-Warrior family consists of the following chips:

IO-Warrior24 - Low Speed USB, 16 I/O pins

IO-Warrior24 PowerVampire - Low Speed USB, 12 I/O pins, dedicated function pins to draw power off the USB

IO-Warrior40 - Low Speed USB, 32 I/O pins

IO-Warrior56 - Full Speed USB, 50 I/O pins



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IO-Warrior56 - IIC

The IIC master interface of the IOW56 can be run at either 50, 100 or 100kbit/sec. Clock stretching for handshaking with slaves is supported.

Since IOW56 is a full speed USB device it can drive the IIC close to the theoretical maximum data rate.

IO-Warrior56 - SPI

The SPI master function of IOW56 allows maximum bit rates of 12MHz and a peak data throughput of 62kByte/sec.

IO-Warrior56 - LED Matrix

Compared to the LED matrix function of IOW24 and IOW40 the IOW56 allows double the number of LEDs to be driven with a 64x8 matrix. Using a couple external shift registers and drivers it is possible to control up to 512 LEDs. This can be used for dot matrix, 7 segment or any display or indicator arrangement you need.

IO-Warrior56 - LCD Interface

IOW40 and IOW24 are already capable of controlling display modules compatible to the HD44780 controllers (alphanumeric displays and a couple graphic displays). IOW56 takes this capability a big step further by adding most of the available graphic display modules. This allows complete user consoles to be built around IOW56.

IO-Warrior56 - Key Matrix

Like IOW40 the IOW56 has the capability to read a matrix of up to 8x8 keys or switches.



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About us and our products

Code Mercenaries is a supplier for the industrial input device and peripheral market since 1998. The keyboard controller family "KeyWarrior", combined keyboard and mouse controller family "KeyWarrior Combo", and mouse controller family "MouseWarrior" serve as basis for a significant number of the European industrial input device manufacturers. During the last few years we also saw a significant number of design wins in North America.

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 is the joystick/mouse hybrid controller MW24J8 which is switch selectable to work as a mouse or joystick allowing cursor control or data input. Applications for the IO-Warrior are very diverse. Basically only the number of pins and the data rate put limits on 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.

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 the USB or PS/2 is encapsulated in our chips so that the device manufacturer does not need to care about these details but rather can concentrate on what they can do best. Like a manufacturer does not need to care about details of USB but can fully devote their engineering to creating rugged and reliable keyboards.