BUNDLE ORDER NO. 62W4244
CHIPKIT EDU STARTER PACK

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chipKIT EDU Start Pack includes a chipKIT™ uC32™ Board (TDGL017), chipKIT™ Basic I/O Shield (TDGL005) and a PICkit 3 In-Circuit Debugger/programmer (PG164130). Items can also be ordered separately.

The chipKIT development platform is a 32-bit Arduino based solution that enables hobbyists and academics to easily and inexpensively integrate electronics into their projects, even if they do not have an electronic-engineering background. The platform consists of PIC32-based development boards and open-source software that is compatible with the Arduino programming language and development environment. The chipKIT hardware is compatible with existing 3.3V Arduino shields and applications, and can be developed using a modified version of the Arduino IDE and existing Arduino resources, such as code examples, libraries, references and tutorials.

TDGL017 - chipKIT™ uC32™ Board Individual item Order#: 27W2153

The chipKIT™ uC32 is based on the popular Arduino™ open-source hardware prototyping platform and adds the performance of the Microchip PIC32 microcontroller. The uC32 is the same form factor as the Arduino™ Uno board and is compatible with Arduino™ shields. It features a USB serial port interface for connection to the IDE and can be powered via USB or an external power supply.

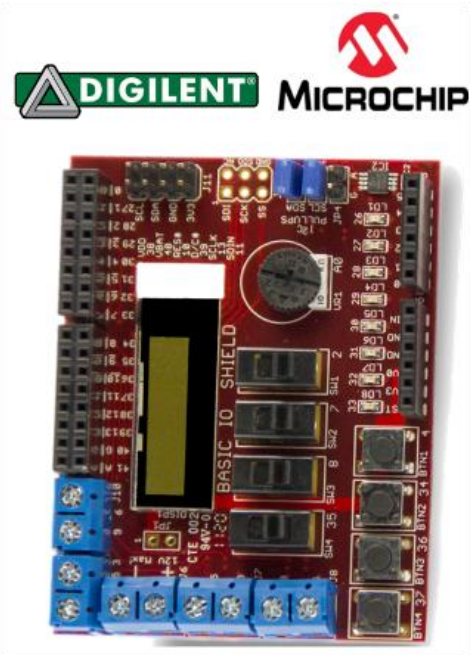
The uC32 board takes advantage of the powerful PIC32MX340F512 microcontroller. This microcontroller features a 32-bit MIPS processor core running at 80MHz, 512K of Flash program memory and 32K of SRAM data memory.

The uC32 can be programmed using the Multi-Platform Integrated Development Environment (MPIDE), an environment based on the original Arduino IDE modified to support PIC32. It contains everything needed to start developing embedded applications. In addition, the uC32 is fully compatible with the advanced Microchip MPLAB® IDE and the PICKit3 in-system programmer/debugger.

The uC32 provides 42 I/O pins that support a number of peripheral functions, such as UART, SPI, and I2C ports and pulse width modulated outputs. Twelve of the I/O pins can be used as analog inputs or as digital inputs and outputs.

- Microchip® PIC32MX340F512H microcontroller (80 MHz 32-bit MIPS, 512K Flash, 32K SRAM)
- Compatible with many existing Arduino code samples and other resources
- Arduino Uno form factor
- compatible with many Arduino shields
- 42 available I/O pins
- two user LEDs
- 12 analog inputs
- 3.3V operating voltage
- 80Mhz operating frequency
- 75mA typical operating current
- 7V to 15V input voltage (recommended)
- 20V input voltage (maximum)
- 0V to 3.3V analog input voltage range
- +/-18mA DC current per pin

TDGL005 - chipKIT™ Basic I/O Shield Individual item Order#: **55T3948**



chipKIT Basic I/O Shield is a input/output expansion board designed for use with chipKIT microcontroller boards such as the Uno32™ and the Max32™. Designed to the same form factor as the Uno32 board it can also be used with the Max32 board.

The Basic I/O Shield is designed to provide a range of input/output devices suitable for beginners learning about microcontrollers and various types of I/O devices or for use by more advanced user to provide inputs or outputs for their own projects.

The Basic I/O Shield provides simple digital input devices such as switches and buttons, and digital output devices such as discrete LEDs and high current open FET drivers. It provides more advanced devices such as an I2C EEPROM, an I2C temperature sensor, and organic LED graphic display. A potentiometer is also provided for use as an analog input device.

PG164130 - PICkit 3 In-Circuit Debugger Individual item Order#: **25R8311**

PICkit 3 In-Circuit Debugger/Programmer uses in-circuit debugging logic incorporated into each chip with Flash memory to provide a low-cost hardware debugger and programmer that can reprogram any PIC microcontroller with a simple push of a button.

Working with MPLAB IDE, the PICkit 3 allows for debugging and programming of PIC® and dsPIC® Flash microcontrollers at a most affordable price point using the powerful graphical user interface of the MPLAB Integrated Development Environment (IDE). The MPLAB PICkit 3 is connected to the design engineer's PC using a full speed USB interface and can be connected to the target via an Microchip debug (RJ-11) connector (compatible with MPLAB ICD 2, MPLAB ICD 3 and MPLAB REAL ICE). The connector uses two device I/O pins and the reset line to implement in-circuit debugging and In-Circuit Serial Programming™.

PICkit 3 Features

- USB (Full speed 12 Mbits/s interface to host PC)
- Real-time execution
- MPLAB IDE compatible (free copy included)
- Built-in over-voltage/short circuit monitor
- Firmware upgradeable from PC/web download
- Totally enclosed
- Supports low voltage to 2.0 volts (2.0v to 6.0v range)
- Diagnostic LEDs (power, busy, error)
- Read/write program and data memory of microcontroller
- Erase of program memory space with verification
- Freeze-peripherals at breakpoint
- Program up to 512K byte flash with the Programmer-to-Go