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chipKIT™ PGM Programmer/Debugger Reference Manual

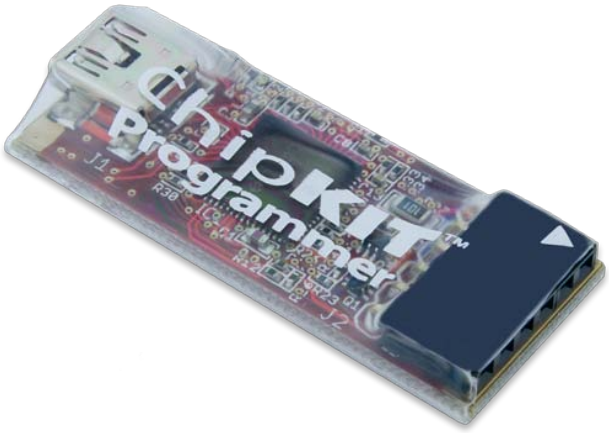
Revised March 3, 2015
This manual applies to the chipKIT PGM rev. A

Overview

The chipKIT PGM is a simple, low cost, module that supports in-system programming and debugging of applications written for Microchip® PIC-based microcontroller boards such as the chipKIT and Cerebot™ boards.

The chipKIT PGM is designed to work with the MPLAB® and MPLAB X development environments available from Microchip. This allows the chipKIT boards, for example, to be used as a more traditional microcontroller development platform using the professional tools available from Microchip.

The chipKIT PGM can also be used from within the MPLAB or MPLAB-X development environments to enable in-system debugging of sketches developed using the Arduino® compatible MPIDE development environment.



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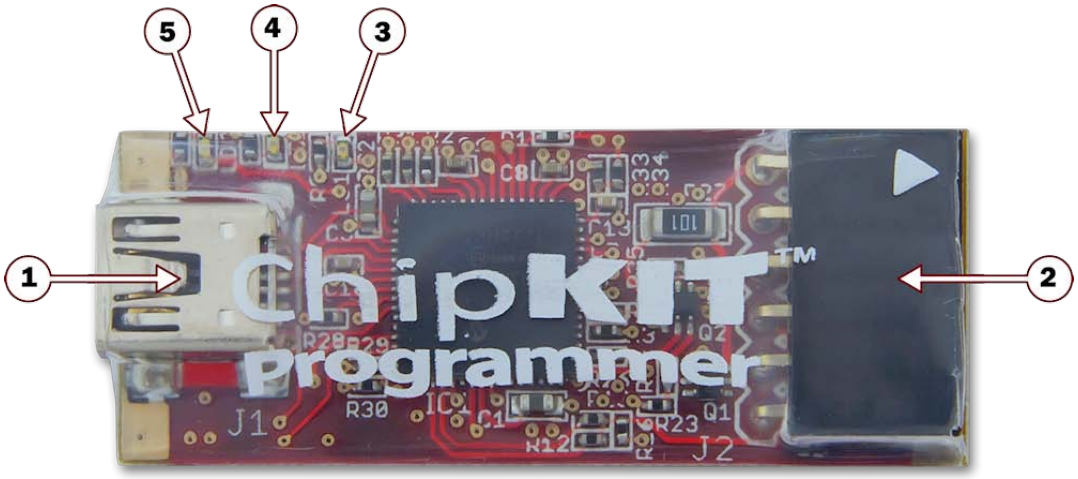
chipKIT PGM Hardware Overview

The chipKIT PGM has the following features:



1. **USB Connector**

   This is a standard mini USB connector. Use the provided cable to connect the chipKIT PGM to an available USB port on the PC workstation.

2. **Programming Connector**

   Connect the chipKIT PGM to the target board using this connector. The white triangle marker indicates the Pin 1 end of the connector.

3. **Status LED**

   This LED indicates that the chipKIT PGM has connected to the target device and is ready for use.

4. **Activity LED**

   This LED is an activity indicator. It blinks when the programmer/debugger software is communicating with the target device.

5. **Power LED**

   This LED illuminates when the chipKIT PGM is receiving power via the USB port from the host PC.

Using the chipKIT PGM

The chipKIT PGM uses a programmer/debugger circuit licensed from Microchip. Use of the chipKIT PGM requires a supported version of either the MPLAB IDE or the MPLAB X IDE from Microchip. The licensed debugger is supported in version 8.63 or later of the MPLAB IDE and all versions of the MPLAB X IDE.

The MPLAB or MPLAB X IDE can be downloaded from the Microchip web site at: www.microchip.com/mplab. These software suites include a free evaluation copy of the Microchip C32 compiler for use with the PIC32 microcontroller family.

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The appropriate version of the IDE should be downloaded from the Microchip website and installed. This will install the necessary software and drivers to enable use of the chipKIT PGM.

Once the desired version of MPLAB has been installed, connect the supplied USB cable to the mini-USB connector on the chipKIT PGM and to an available USB port on the PC.

Connect the chipKIT PGM to the ICSP port on the target board and start the MPLAB IDE.

The chipKIT PGM behaves similarly to the Microchip PICkit™ 3 Programmer/Debugger and can be used in a similar way.

In the MPLAB IDE, select `Licensed Debugger` from either the `Programmer.Select Programmer` menu or the `Debugger.Select Tool` menu. The IDE will connect to the device and identify that it is a 'chipKIT Programmer by Digilent'. When the licensed debugger is selected, the MPLAB IDE will check the version number of the firmware running on the debugger and offer to update it if is out of date with the version of MPLAB being used.

At this point, the chipKIT PGM is ready for use.

Debugging MPIDE Sketches Using the chipKIT PGM

For detailed information on how to use the chipKIT PGM and the MPLAB IDE to debug MPIDE sketches, please refer to the document “Debugging chipKIT with MPLAB IDE” available on the chipKIT wiki: www.chipKIT.org/wiki.

This document is in the Application Notes section at the bottom of the Documenation page on the wiki.

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Declaration of Conformity

In accordance with EN ISO/IEC 17050-1:2010

Manufacturers Name:	Digilent, Inc.
Manufacturers Address:	1300 NE Henley Court Pullman, WA 99163 U.S.A.

Application of Council Directives:

EMC	2004/108/EC

Standards:

EMC	EN55022:2010 EN55024:2010

Product Name:	chipKIT PGM
Product Model Number:	Digilent P/N 210-242
Digilent Product Category:	Programming Solutions

We, the undersigned, hereby declare that the equipment specified above conforms to the above Directives and Standards.

Location: Pullman, WA

Signature: *Clint Cole*

Date: August 23, 2012

Full Name (print): Clint Cole

Title: President

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

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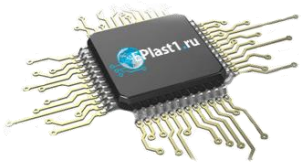
- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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