

PICDEM™ System Management Kit

Summary

The PICDEM™ System Management Kit is a demonstration and training tool designed for individuals interested in system integration and design of a variety of applications. PIC® microcontrollers provide a wide variety of integrated peripherals ideally suited for these tasks.

System integration refers to the consolidation of multiple systems into a single system. The PICDEM System Management Board provides an I²C™ communications bus typically found in applications, such as personal computers or rack mount servers. The bus connects to multiple devices used to monitor and record the health and status of a computer system. The PICDEM System Management Board integrates the functions of a dedicated Real-Time Clock (RTC), serial EEPROM, thermal management controller and analog-to-digital converter into a single PIC microcontroller.

In conjunction with the PICkit™ Serial Analyzer (included in the kit), communication to the emulated devices on the bus can be managed and monitored. The PICkit Serial Analyzer is a low-cost development tool that allows communication between a PC and the serial protocol of the system under test.

The PICDEM System Management board is populated with Microchip's Mid-Range PIC16F886 microcontroller, which supports the following components or functions:

- \overline{MCLR} and switch, interrupt push button switches
- 4 LEDs
- I²C communications (SDA and SCL)
- USART communications (TX and RX)
- In-Circuit Serial Programming™ (ICSP™) programming pins (ICSPDAT and ICSPCLK)
- PWM output fan control
- Fan tachometer input line
- Heating element control line
- Temperature sensor input line from MCP9700
- 32.768 kHz crystal clock (T1OSO and T1OSI)
- 3V lithium battery backup



Features

Key features of the PICDEM System Management Board include:

- Emulates 24LC02 Serial EEPROM
- Emulates I²C real-time clock
- I²C thermal management controller using MCP9700 temperature sensor
- Control of 2-, 3- and 4-wire fans (3-wire fan supplied)
- +3V lithium battery
- FREE! Microchip's MPLAB® IDE software for a complete code development environment
- FREE! HI-TECH PICC™ LITE C Compiler (contained on the MPLAB IDE CD)
- FREE! CCS PCB Baseline C Compiler Installed with MPLAB IDE 7.41 or greater



MICROCHIP

Microchip Technology Incorporated

PICDEM™ System Management Kit Contents:

- PICDEM System Management printed circuit board with 3-wire fan
- PICkit™ Serial Analyzer
- +3V lithium button cell battery
- Two CD-ROMs, which include:
 - PICDEM™ System Management User's Guide
 - PICkit™ Serial Analyzer User's Guide
 - PICkit™ Serial Interface software
 - System Management GUI
 - Schematic and layout
 - Source code
- +12V Power Supply
- MPLAB® Integrated Development Environment (IDE)

Ordering Information:

Part Number	Description
DM164123	PICDEM™ System Management Kit

Host System Requirements:

- PC-compatible system with an Intel Pentium® class or higher processor, or equivalent
- CD-ROM drive
- Available USB port
- Microsoft Windows® 98 SE, Windows 2000 or Windows XP®
- MPLAB IDE version 7.40 or later

Development Tools from Microchip

Part Number	Development Tool	Description
SW007002	MPLAB® IDE – includes: MPASM™ Assembler, MPLINK™ Linker/MPLIB™ Librarian and MPLAB® SIM Software Simulator	Integrated Development Environment (download free of charge at www.microchip.com)
SW006011	MPLAB® C18 C Compiler	C Compiler for PIC18CXXX MCUs
SW006012	MPLAB® C30 C Compiler	C Compiler for 16-bit PIC24 MCUs and dsPIC® DSCs
DV164101	PICkit™ 1 Flash Starter Kit	Flash Starter Kit
DV164120	PICkit™ 2 Starter Kit	Starter Kit
DV164005	MPLAB® ICD 2	In-Circuit Debugger
ICE2000	MPLAB® ICE 2000 Modular In-Circuit Emulator	Full-featured Modular In-Circuit Emulator for PIC12, PIC16 and PIC18 MCUs
ICE4000	MPLAB® ICE 4000 Modular In-Circuit Emulator	Full-featured Modular In-Circuit Emulator for PIC18 MCUs and dsPIC® DSCs
DV244005	MPLAB® REAL ICE™ In-Circuit Emulator Probe Kit	All-in-One In-Circuit Emulator/Programmer Solution for Microchip Flash Products
AC244002	MPLAB® REAL ICE™ In-Circuit Emulator Performance Pak	Includes High-Speed Driver to Replace Standard Driver Board For High-Speed LVDS Communications and a High-Speed Receiver Board
DV003001	PICSTART® Plus Programmer	Entry-level Development Kit with Programmer
DV007004	MPLAB® PM3 Universal Device Programmer	Full-featured Modular Device Programmer
DM303006	KEELOq® Security ICs Evaluation Kit II	Encoder/Decoder Evaluator
DV103003	microID® Developer's Kit	13.56 MHz Anticollision microID® Developer's Kit for MCRF355 and MCRF360
DV164121	PICkit™ 2 Debug Express	Programmer/Debugger



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