



Microchip - DV164037 - DV164037 Development Board Kit

Product Overview:

Explorer 16 (with MPLAB ICD 3) Development Board Kit. The development board provides a low-cost, modular development system for Microchip's new line of 16-bit microcontroller families, including the PIC24, PIC24H and the 16-bit digital signal controller family, dsPIC33F.

As provided, the development board works as a demo board right from the box, and also has the ability to extend its functionality through modular expansion interfaces. The Explorer 16 board supports MPLAB ICD 2 for full emulation and debug capabilities, and also allows 3V controllers to interface with 5V peripheral devices.



Kit Content:

The Explorer 16 Development Board Kit contains the following:

- The Explorer 16 Development Board.
- A preprogrammed PIC24FJ128GA010 Processor Installation Module (PIM), already installed to the board
- A preprogrammed dsPIC33FJ256GP710 PIM
- An RS-232 cable
- The Explorer 16 Development CD ROM, containing:
 - This User's Guide
 - Data Sheets for the PIC24FJ128GA family and dsPIC33FJ256GP family
 - Schematics and PCB drawing files for the PIM modules
 - Example programs for use with the PIC24 and dsPIC33F devices
 - Files detailing general purpose expansion boards that can be used with the Explorer 16 board (provided in Gerber format).

Key Features:

- 100-pin PIM riser, compatible with the PIM versions of all Microchip PIC24F/24H/dsPIC33F devices
- Direct 9 VDC power input that provides +3.3V and +5V (regulated) to the entire board

- Power indicator LED
- RS-232 serial port and associated hardware
- On-board analog thermal sensor
- USB connectivity for communications and device programming/debugging
- Standard 6-wire In-Circuit Debugger (ICD) connector for connections to an MPLAB ICD 2 programmer/debugger module
- Hardware selection of PIM or soldered on-board microcontroller (in future versions)
- 2-line by 16-character LCD
- Provisioning on PCB for add on graphic LCD
- Push button switches for device Reset and user-defined inputs
- Potentiometer for analog input
- Eight indicator LEDs
- 74HCT4053 multiplexers for selectable crossover configuration on serial communication lines
- Serial EEPROM
- Independent crystals for precision microcontroller clocking (8 MHz) and RTCC operation (32.768 kHz)
- Prototype area for developing custom applications
- Socket and edge connector for PICtail™ Plus card compatibility
- Six-pin interface for PICkit 2 Programmer
- JTAG connector pad for optional boundary scan functionality

Ordering Information:

Products:

Part Number	Manufacturer	Farnell P/N	Newark P/N
DV164037	Microchip	1771308	25R7377

Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
PIC24FJ128GA010-I/PT	Microchip	16BIT MCU 128K FLASH 8K RAM, SMD	1146523	56K7341
PIC18F4550-I/PT	Microchip	8-Bit Microcontroller IC	9321365	08J9633
25LC256-I/P	Microchip	EEPROM SERIAL 256KB, PDIP8	1331398	92C7459

Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
DM240002	Microchip	Explorer 16 kit(44-PIN)	PIC24F	1754668	54M4471
DM240001	Microchip	Explorer 16 kit(100-PIN)	dsPIC33F	1146554	04M6008
MA320001	Microchip	PIC32MX360F512L PLUG-IN MODULE	PIC32M	1523316	73M8723
AC164137-1	Microchip	MRF49XA PICtail/PICtail Plus Daughter Board (433.92 MHz)	MRF49	1736502	14R8658
AC164137-2	Microchip	MRF49XA PICtail/PICtail Plus Daughter Board (868/915 MHz)	MRF49	1736503	14R8659
MA240012	Microchip	PIC24H 100P to 100P TQFP Plug-In Module use w/ Explorer 16 (DM240001 or DM240002)	PIC24H	NA	88K5499
MA240015	Microchip	PIC24F Plug-In Module use w/ Explorer 16 (DM240001 or DM240002)	PIC24F	NA	98M1509
MA330011	Microchip	dsPIC33 GP 100P to 100P TQFP Plug-In Module use w/ Explorer 16 (DM240001)	dsPIC33	NA	56K6941

Document List:

Datasheets:

Part Number	Description	Size
DM240002	dsPIC® Digital Signal Controllers	2.84 MB

PIC24FJ128GA010	PIC24FJ128GA Family	3.51 MB
PIC24F16KA102 Module	PIC24F16KA102 Plug-in Module Information Sheet	93KB
MA240013	PIC24FJ64GA004 PIM (MA240013) Manual	132KB

Application Notes:

File Name	Size
AN100 How to build a Linux Wireless Sniffer	56KB
100-pin Plug-In Module (PIM) Dimensions	14KB
AN1247 - Communication Device Class (CDC) Host	351KB
AN1192 - MRF24J40 Radio Utility Driver Program	839KB

Hardware & Software:

File Name	Size
dsPIC33F Demo Files for Explorer 16	25KB
MiWi(TM) P2P for PIC18, PIC24, dsPIC, PIC32	7.81MB
MiWi(TM) Protocol Stack for PIC18, PIC24, dsPIC, PIC32	4.95MB
PIC24F Demo Files for Explorer 16	46KB
PIC24F16KA102 Demo Files for Explorer 16	278KB
PIC24H Demo Files for Explorer 16	24KB

Others Resources:

File Name	Size
DM240001 BOM and Schematics	866KB
dsPIC33FJ128GP804 PIM Information Sheet	289Kb
dsPIC33FJ12GP202 PIM Information Sheet	393KB
dsPIC33FJ256GP710 100-pin to 100-pin TQFP Plug-In Module (PIM) Information Sheet	672KB