MICROCHIP

Microchip - DM240021 - DM240021 MPLAB Starter Kit

Product Overview:

The MPLAB Starter Kit for PIC24H MCUs connects directly to the USB port on a personal computer (PC). The PC USB connection supplies communications and power to the board.

The starter kit includes debug and programmer circuitry that allows applications to be programmed onto the board's PIC24H MCU device and then debugged, all using MPLAB IDE.

The sensor signals from an on-board triaxial analog accelerometer are routed to the fast on-chip ADC module in the PIC24H MCU for software processing. This feature allows the Starter Kit to be manoeuvred by tilting. Based on the sensed acceleration due to the tilting of the board, a visual output is generated on the on-board OLED display controlled by the Parallel Master Port (PMP) module. Additionally, the speech segments are audibly produced through the on-board speaker via the output compare module as a Pulse-Width Modulated (PWM) digital waveform. This output is converted to an analog speech signal by a low-pass filter on the starter kit board. Alternatively, applications can use the conditioning circuitry to plug-in a wide range of analogue sensors, grab the sensor signals through the ADC and process them.

Kit Content:

- MPLAB Starter Kit for PIC24H MCU with integrated debugger
- MPLAB Starter Kit CD containing MPLAB IDE, MPLAB C Compiler, application notes, and sample programs
- USB cable

Key Features:

- Board includes integrated debugger / programmer
- USB powered
- PIC24H128GP504 MCU with 128 KB Flash and 8 KB RAM
- Features a tri-axial analog accelerometer, 128x64 OLED display, on-board speaker
- Low cost speech play back of G.711 compressed speech

- Visual display on OLED display using Microchip Graphics library
- Switches for application utility
- Separate analog conditioning circuitry to plug-in wide range of sensors for sensor signal processing
- CD contains MPLAB IDE with full editor, programmer and debugger; MPLAB C Compiler; code examples and user's guide

Ordering Information:

Products:

Part Number	Manufacturer	Farnell P/N	Newark P/N
DM240021	Microchip	1710671	11R8091

Associated Products:

Part Number	Manufacturer	Description	Farnell P/N	Newark P/N
PIC24HJ128GP504-I/PT	Microchip	MCU, 16BIT,128K FLASH,40MIPS,44TQFP	1576883	11N5836
PIC18F67J50-I/PT	Microchip	MCU 8BIT 128K FLASH, SMD, TQFP64	1439559	17M0972
MCP1727-3302E/SN	Microchip	V REG, LDO, 1.5A, SMD, SOIC8, 1727	1331497	34M7431
25LC010A-I/SN	Microchip	Serial EEPROM IC	1331378	72J3649

Similar Products:

Part Number	Manufacturer	Description	Support Device	Farnell P/N	Newark P/N
MA240012	Microchip	PIC24H 100P to 100P TQFP Plug-In Module use w/ Explorer 16 (DM240001 or DM240002)	PIC24H	1712079	88K5499
MA240015	Microchip	PIC24F Plug-In Module use w/ Explorer 16 (DM240001 or DM240002)	PIC24F	1712106	98M1509
MA330011	Microchip	dsPIC33 GP 100P to 100P TQFP Plug-In Module use w/ Explorer 16 (DM240001)	dsPIC33	1712046	56K6941
DM240001	Microchip	Explorer 16 kit(100-PIN)	Explorer 16	1146554	04M6008

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Document List:

Datasheets:

Part Number	Description	Size
PIC24HJ128GP504	PIC24HJ32GP302/304, PIC24HJ64GPX02/X04 and PIC24HJ128GPX02/X04 Data Sheet	5MB
PIC18F67J50	PIC18F87J50 Family Data Sheet	7.38MB
MCP1727 datasheet	1.5A, Low Voltage, Low Quiescent Current LDO Regulator	788KB
Serial EEPROM IC datasheet	25LC010	451KB

Application Notes:

File Name	Size
PIC24H Human Machine Interface for Massage Chairs	-
PIC24H Human Machine Interface for HVAC	-
PIC24H Sensors for Automotive Stability Control	-
PIC24H Electric Bike	-
PIC24H GPS/GSM Automotive Alarm	-
PIC24H Universal Relay Board	-

Hardware & Software:

File Name	Size
External Sensor Demo for PIC24H Starter Kit	114KB
MPLAB Starter Kit for PIC24H Demo files	1265KB
MPLAB Starter Kit for PIC24H Demo files with Optimizations off	2777KB
PIC24H Demo Files for Explorer 16	24KB

Others Resources:

File Name	Size
n-Circuit Debugging Interface Options with dsPIC DSC	-
16-bit MCU and DSC Programmer's Reference Manual	-
dsPIC33F/PIC24H Flash Programming Specification	-