MCU 8-bit PIC RISC 14KB Flash 2.5V/3.3V/5V Automotive 44-Pin TQFP T/R

Manufacturer:	Microchip Technology, Inc
Package/Case:	TQFP44
Product Type:	Embedded Processors & Controllers
RoHS:	RoHS Compliant/Lead free RoHS
Lifecycle:	Active

Images are for reference only

Inquiry

General Description

This powerful yet easy-to-program (only 35 single word instructions) CMOS FLASH-based 8-bit microcontroller packs Microchip's powerful PIC® architecture into an 40- or 44-pin package.The PIC16F887 features 256 bytes of EEPROM data memory, self programming, an ICD, 2 Comparators, 14 channels of 10-bit Analog-to-Digital (A/D) converter, 1 capture/compare/PWM and 1 Enhanced capture/compare/PWM functions, a synchronous serial port that can be configured as either 3-wire Serial Peripheral Interface (SPI™) or the 2-wire Inter-Integrated Circuit (I²C™) bus and an Enhanced Universal Asynchronous Receiver Transmitter (EUSART). All of these features make it ideal for more advanced level A/D applications in automotive, industrial, appliances or consumer applications.

Key Features

Factory calibrated to ±1%

Software selectable frequency range of 8 MHz to 32 kHz

Software tunable

Two-Speed Start-Up mode

Fail-safe clock monitoring for critical applications

Clock mode switching during operation for low-power operation

Power-Saving Sleep mode

Power-on Reset (POR)

Selectable Brown-out Reset (BOR) voltage

Extended Watchdog Timer (WDT) with its own on-chip RC oscillator for reliable operation

In-Circuit Serial Programming™ (ICSP™) via two pins

In-Circuit Debug (ICD) via two pins

100,000 erase/write cycle enhanced Flash program memory, typical

1,000,000 erase/write cycle data EEPROM memory, typical

Data EEPROM retention > 40 years

Self-reprogrammable under software control

Programmable code protection

1 input only pin

36 I/O

High sink/source current 25 mA

Interrupt-on-pin change option

TMR0: 8-bit timer/counter with 8-bit prescaler

TMR1 enhanced: 16-bit timer/counter with prescaler, External Gate Input mode and dedicated low-power 32 kHz oscillator

TMR2: 8-bit timer/counter with 8-bit period register, prescaler and postscaler

Capture/Compare/PWM (CCP) module

Enhanced Capture/Compare/PWM (ECCP) module with auto-shutdown and PWM steering

Master Synchronous Serial Port (MSSP) module SPI™ mode, I2C™ mode with address mask capability

Supports RS-485, RS-232 and LIN compatibility

Auto-Baud Detect

Auto-wake-up on Start bit

Ultra Low-Power Wake-up (ULPWU)

10-bit 14 channel Analog-to-Digital (A/D) Converter

Programmable on-chip Voltage Reference (CVREF) module (% of VDD)

Fixed 0.6 Vref

Comparator inputs and outputs externally accessible

SR Latch mode

Recommended For You

PIC16F84A-20/P	PIC16F54-I/P	PIC18F2320-I/SP
Microchip Technology, Inc	Microchip Technology, Inc	Microchip Technology, Inc
DIP18	DIP	DIP28

PIC18F2685-I/SP	PIC16F767-I/SO	PIC16F630-I/SL
Microchip Technology, Inc	Microchip Technology, Inc	Microchip Technology, Inc
SPDIP-28	SOP	SOP14

PIC16F15345-I/SO

Microchip Technology, Inc

SOP20

PIC16F84-04/P

Microchip Technology, Inc

DIP18

PIC18F4320-I/PT

Microchip Technology, Inc

QFP

PIC16C622A-04/P

Microchip Technology, Inc

DIP

PIC16F84A-04/P

Microchip Technology, Inc

DIP18

PIC18F2480-I/SP

Microchip Technology, Inc

DIP

PIC16F628-04/P

Microchip Technology, Inc

DIP

PIC16F877-20/L

Microchip Technology, Inc

PLCC44

PIC16F676-I/P

Microchip Technology, Inc

DIP-14

PIC16F15345-I/SO

Microchip Technology, Inc

PIC16F84-04/P

Microchip Technology, Inc

PIC18F4320-I/PT

Microchip Technology, Inc