

PIC 24 Data and Applications; dsPIC33

PIC General 8/16/32 bit

<http://www.microchip.com/design-centers/microcontrollers>

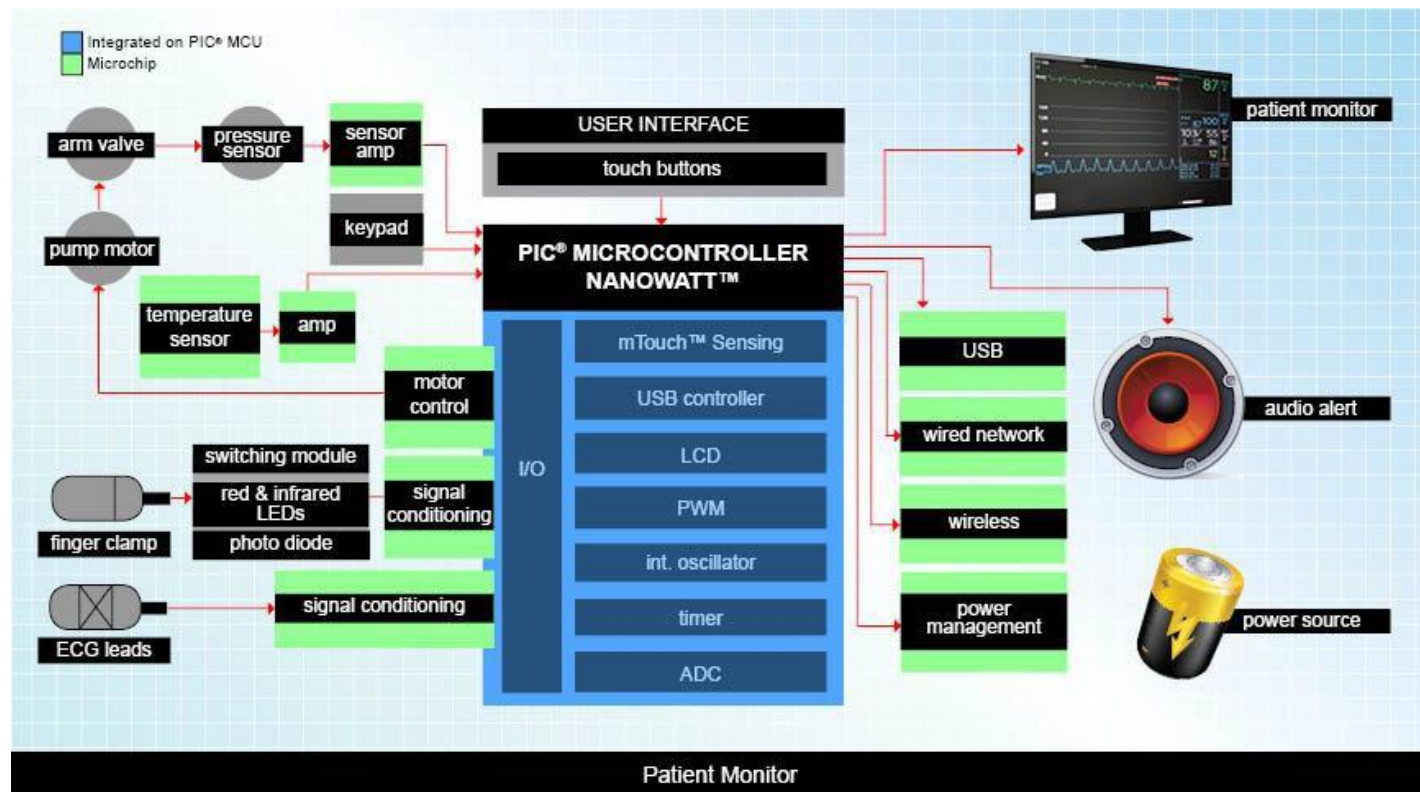
PIC24FV32KA304 FAMILY

<http://www.microchip.com/wwwproducts/en/PIC24F32KA304>

MEDICAL APPLICATIONS

<http://www.microchip.com/design-centers/medical>

To meet the demands faced by designers of patient monitors, Microchip offers a broad portfolio of highly integrated Microcontrollers (MCUs), graphics technology, software libraries and connectivity solutions. This broad offering also enables innovation in the design of stand-alone biometric devices such as blood pressure monitors, pulse oximeters, ECG/EKG, etc. Microchip delivers solutions that support patient monitoring functions like low-noise analog signal conditioning, touch-sensing technology, LCD control, wired and wireless connectivity, motor control and high-speed memory.



EMBEDDED SYSTEMS

16-bit Embedded Control Solutions PIC24 Microcontrollers • dsPIC® Digital Signal Controllers

PIC24F Family The PIC24F is a cost-effective, low-power family of microcontrollers, featuring devices with eXtreme Low Power (XLP) technology

dsPIC33F and dsPIC33E Families

The dsPIC family of Digital Signal Controllers (DSCs) feature a Digital Signal Processor (DSP) engine, including a single-cycle 16×16 MAC and 40-bit accumulators, for enhanced math capabilities and implement high-speed precision control loops with the simplicity of a traditional microcontroller. The dsPIC33 DSCs offer up to 70 MIPS performance and include features for high-efficiency motor control, digital power supplies and other embedded control applications, including operation up to 150°C and support for both 3V and 5V applications. The dsPIC33 families are ideally suited for:

- Motor control applications • Digital power applications
- Digital lighting applications • Automotive applications
- Industrial applications • High-performance applications

Microchip's PIC24 Microcontrollers and dsPIC® Digital Signal Controllers

<http://ww1.microchip.com/downloads/en/DeviceDoc/00001032Q.pdf>

Microchip's Motor Control and Drive Solutions

Electric motors are estimated to consume around 45% of all electricity in the world today according to International Energy Agency (IEA). Electric motors are everywhere—in your washer, dryer, refrigerator, car, fan, pumps, air conditioner, etc. They make our lives easier, so it is important that they run as efficiently as possible.

Microchip provides products and solutions (hardware and software) to address the many different motor types, including brushed DC, stepper, brushless DC, permanent magnet synchronous, AC induction and switched reluctance motors.

You can shorten your development cycle by using our free motor control software with application notes and tuning guides. Our scalable motor control development tools promote rapid prototyping for low-voltage and high-voltage systems including dual motor control options.

Microchip's PIC Microcontrollers (MCUs), dsPIC, Digital Signal Controllers (DSCs) and SAM Cortex® series devices contain innovative motor control PWM peripherals including complimentary waveforms and dedicated time base. For applications that require variable speed with constant torque and field-oriented control for greater efficiency, the high-performance PIC32MK and dsPIC DSC core devices includes DSP instructions for more precise control.

Our single-chip motor control and motor drive solutions enable simpler designs and decrease board space, and are often used as companion chips with PIC MCUs, dsPIC DSCs and ARM based MCUs

<http://ww1.microchip.com/downloads/en/DeviceDoc/00000896M.pdf>

PIC24 MCUs and dsPIC33 DSCs | Easy Migration in a Platform Design

1,578 views Jul 29, 2021 About 9 Minutes

WORTH A LOOK:

<https://www.youtube.com/watch?v=5z2QLKyxTJo>

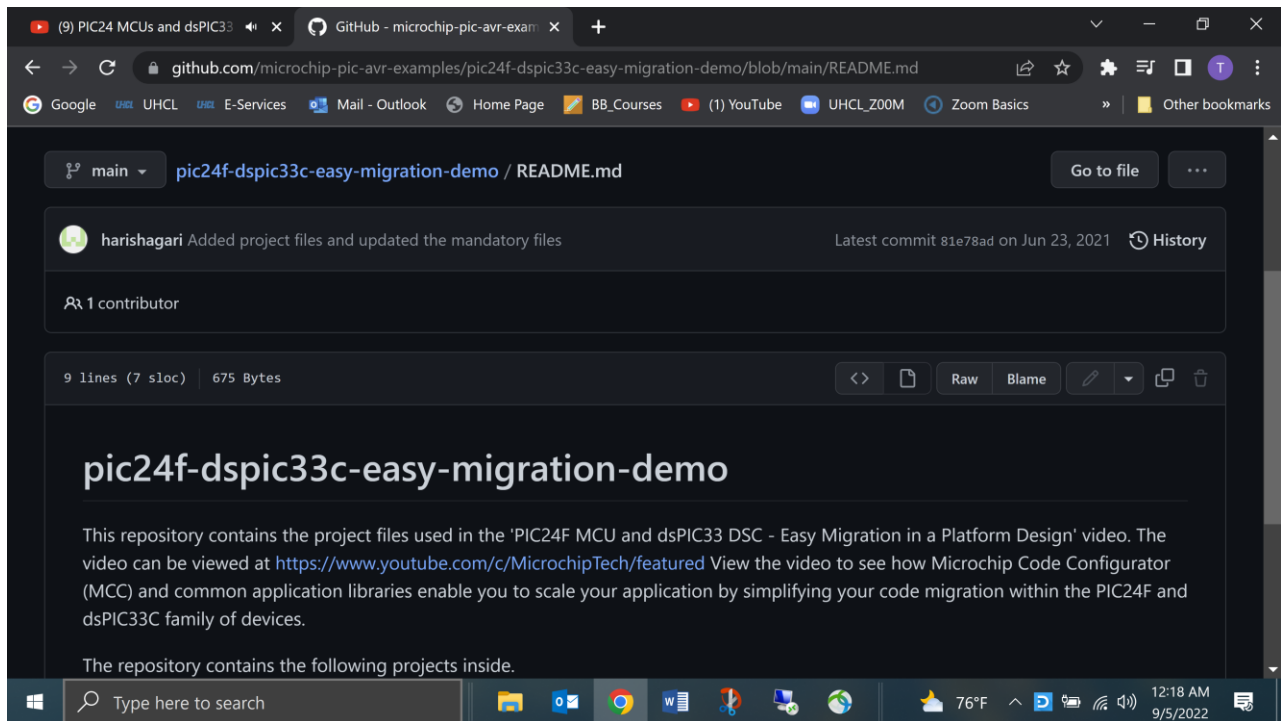
This video will introduce you to the common development ecosystem that enables you to use the low power PIC24F MCUs and the robust dsPIC33 DSCs in a complete platform design and demonstrates easy migration across device families.

To learn more, visit <http://www.microchip.com/PIC24-dsPIC33>

- 0:00 Easy Migration in a Platform Design – Intro
- 2:09 End Application – Examples
- 2:48 PIC24 and dsPIC33 Platform Reuse
- 4:17 Migration Demonstration
- 8:17 Summary

You can download the code examples form our GitHub page:

<https://github.com/microchip-pic-avr-examples/pic24f-dspic33c-easy-migration-demo>



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