Special Chips

Contents

TI C2000

https://training.ti.com/c2000-devices-training-series   **Summary of Data**

C2000 real-time MCUs are scalable, ultra-low latency, real-time microcontrollers designed for efficiency in power electronics. Learn about what makes C2000 ideal for real-time solutions, and the benefits you get when you choose C2000. **2:42 video**

https://training.ti.com/why-c2000-mcus-your-real-time-needs?context=1137766-1147516

The Essential Guide for Developing With C2000™Real-Time Microcontrollers (57 Pages)

https://www.ti.com/lit/an/spracn0c/spracn0c.pdf?ts=1635166966219&ref_url=https%253A%252F%252Fwww.ti.com%252Fmicrocontrollers-mcus-processors%252Fmicrocontrollers%252Fc2000-real-time-control-mcus%252Foverview.html
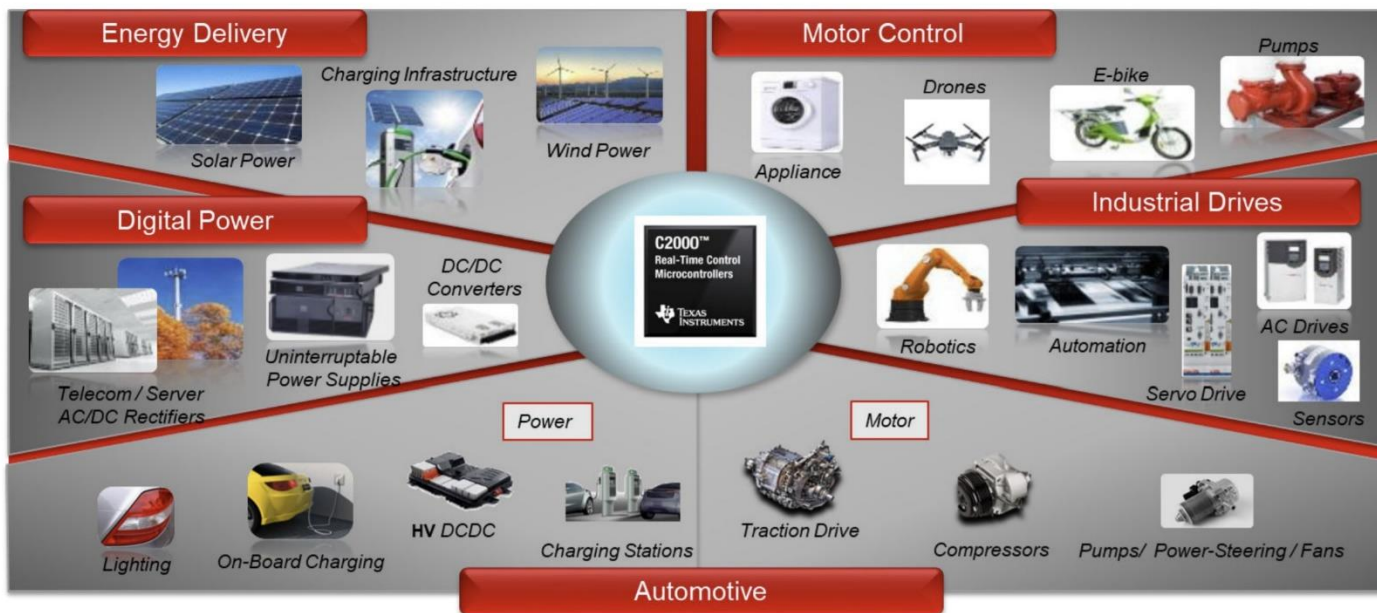

Figure 1-1. Common C2000 Real-Time Control Applications

An Open Alternative to Intel and ARM: What is RISC-V?

MATTHEW HUGHES @MATTHEWHUGHES
OCTOBER 2, 2020, 8:00AM EDT

https://www.howtogeek.com/691224/an-open-alternative-to-intel-and-arm-what-is-risc-v/

Risk five – open-source microprocessor!

4 Microchip PIC32MM Low power Applications

https://www.youtube.com/watch?v=2L4ICI1tNUA   **3:36**

## 5 TI 432

The **MSP432** is a mixed-signal microcontroller family from Texas Instruments. It is based on a 32-bit ARM Cortex-M4F CPU, and extends their 16-bit MSP430 line, with a larger address space for code and data, and faster integer and floating point calculation than the MSP430. Like the MSP430, it has a number of built-in peripheral devices, and is designed for low power requirements.

https://www.ti.com/lit/ug/slau144j/slau144j.pdf   **643 Pages!**

5_1 Our Rice Design   OPTICAL NOSE
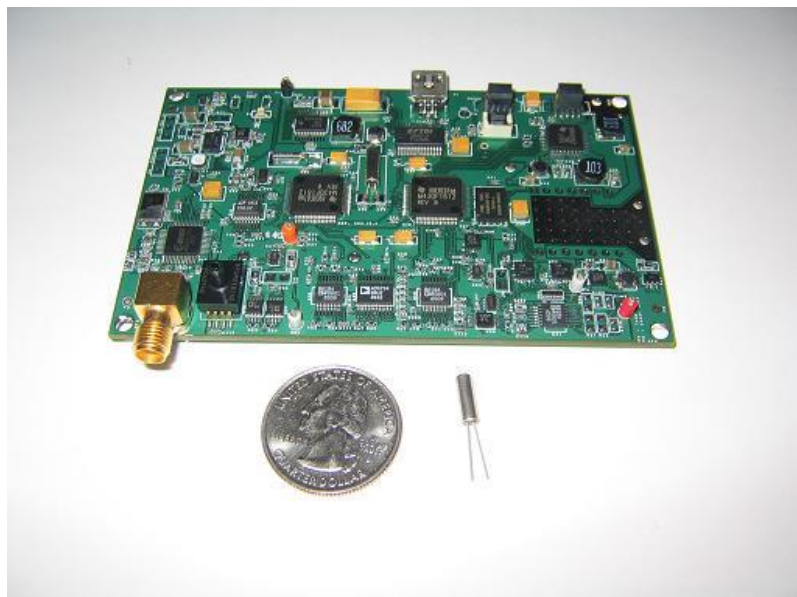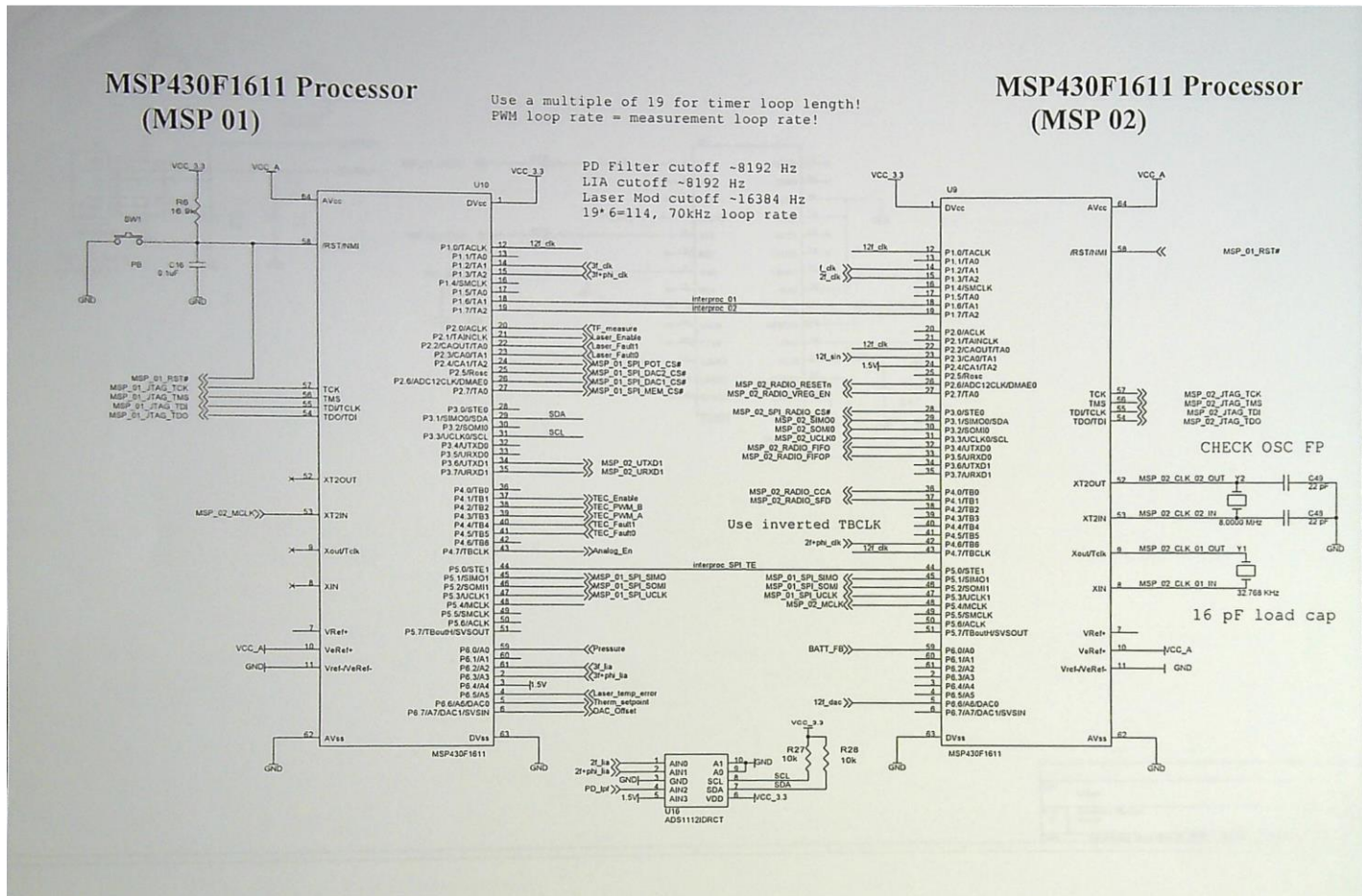
6   One Chamber Design Let's Look Closer

7   6_1 VIEW THE SPECIFICATIONS

https://www.seisco.com/supercharger

HOW DOES IT WORK IN PRACTICE

Seisco Supercharger Demonstration - Short Version

https://youtu.be/ucBhHlJmE8k   6:57
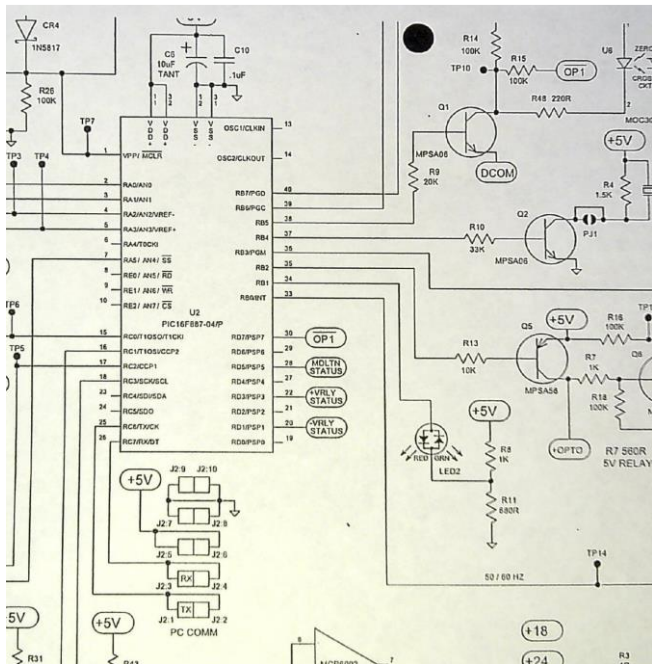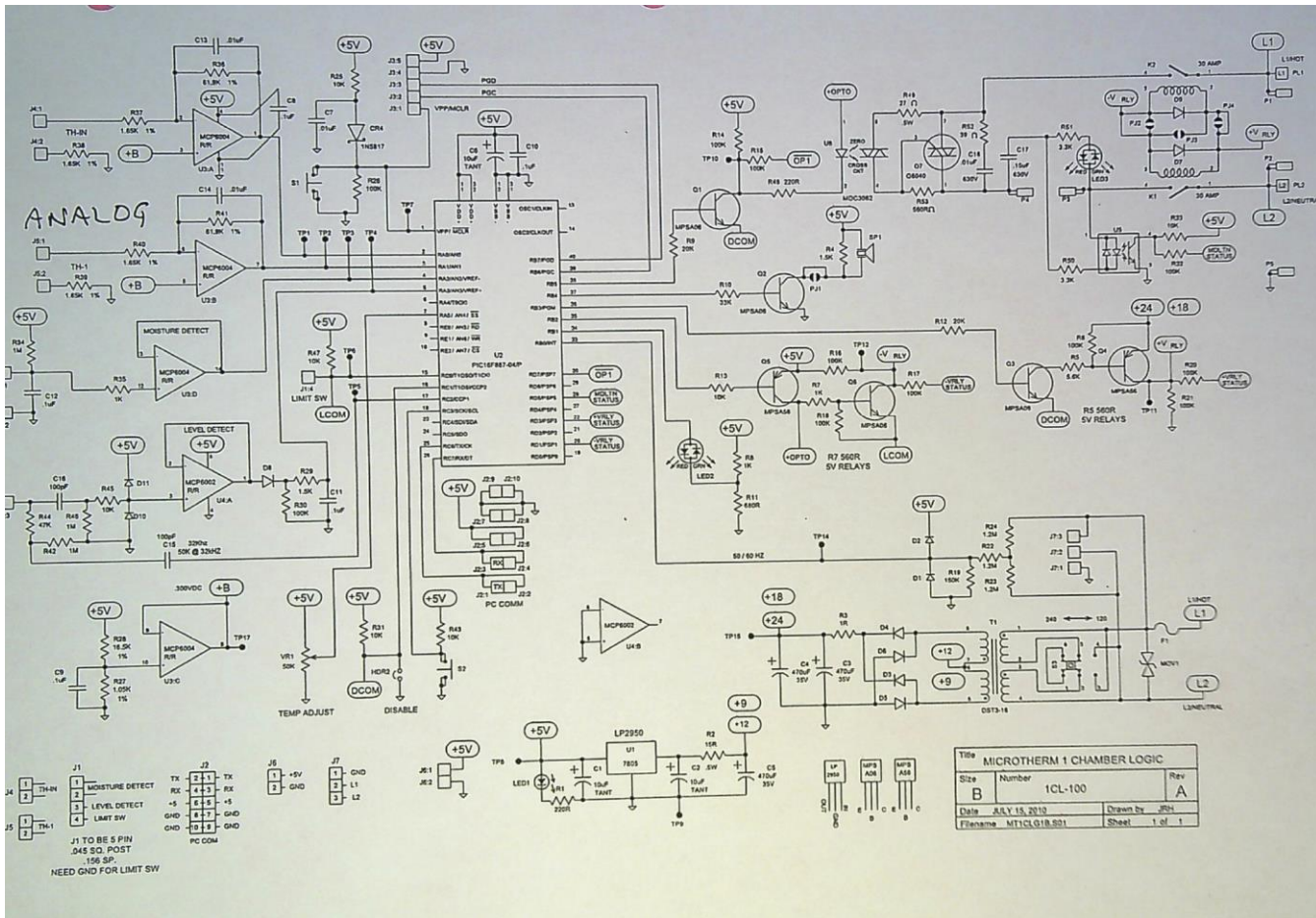
DETAILED SPECS   240V SUPERCHARGER

https://61c201d1-8456-4e55-835b-
d4c905be6bd4.filesusr.com/ugd/152e44_c64495d88d174a2790aea895854eba89.pdf

https://www.seisco.com/history--accomplishments?lightbox=i197s   Facilities in Houston

MICROTHERM 1 CHAMBER LOGIC

Size	Number	Rev
B	1CL-100	A
Date	JULY 15, 2010	Drawn by	JRH
Filename	MT1CLG1B.S01	Sheet	1 of 1

8   Other Powerful Chips for Specific Applications

7_1 PIC32MZ DA Series MCUs
Microchip offers the PIC32MZ DA graphics MCUs with 32 MB of integrated DRAM

https://www.digikey.com/en/product-highlight/m/microchip-technology/pic32mz-da-series-mcus

7_2 CPU + FPGA

Blemel Patent   US 6938177 Blemel (Try Google Patents – Download pdf)

US 6938177_Blemel.pdf   (pdf version of Patent)

https://patents.google.com/patent/US6938177B1/en?oq=US+6938177+Blemel

7_3 FPGAs vs Microcontroller

FPGA vs CPU vs GPU vs Microcontroller: How Do They Fit into the

Processing Jigsaw Puzzle?
FPGA vs CPU vs GPU vs Microcontroller.pdf   (pdf version_

https://www.arrow.com/en/research-and-events/articles/fpga-vs-cpu-vs-gpu-vs-microcontroller

View the cheat sheet.

7_4 Polar Fire

PolarFire® SoC Icicle Kit, Microchip's RISC-V-Based SoC FPGA Development Kit

https://www.youtube.com/watch?v=wip-mpxsR8k   **3:39**

NEXT LECTURE WIRELESS