



# ST52T420/E420

## 8-BIT INTELLIGENT CONTROLLER UNIT (ICU) Three Timer/PWMs, ADC, WDG

BRIEF DATASHEET

### Memories

- Up to 4 Kbytes OTP
- 128 bytes of RAM
- Readout Protection

### Core

- Register File Based Architecture
- 55 instructions
- Hardware multiplication and division
- Decision Processor for the implementation of Fuzzy Logic algorithms

### Clock and Power Supply

- Up to 20 MHz clock frequency.
- Power Saving features

### Interrupts

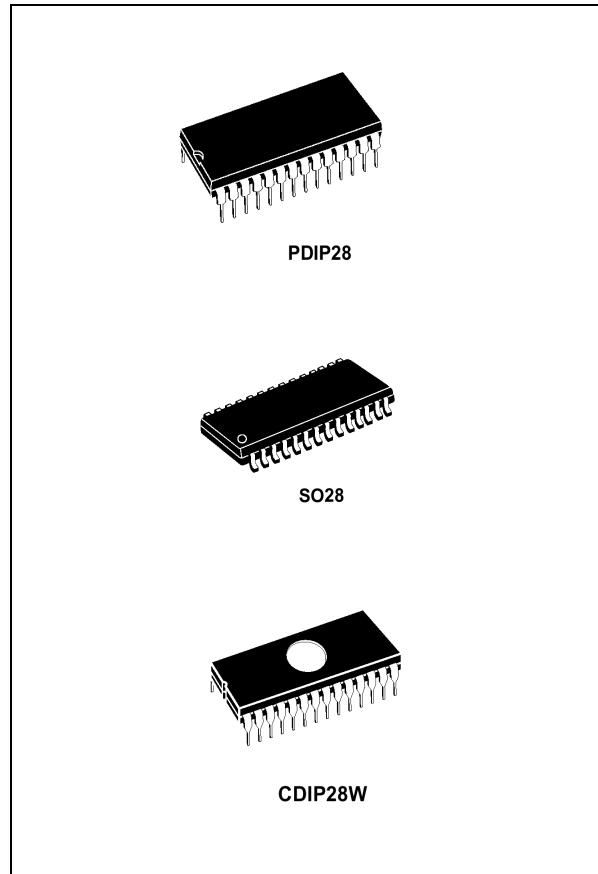
- 5 interrupt vectors
- Top Level External Interrupt (INT)

### I/O Ports

- 19 I/O PINs configurable in Input and Output mode
- High current sink/source in all pins.

### Peripherals

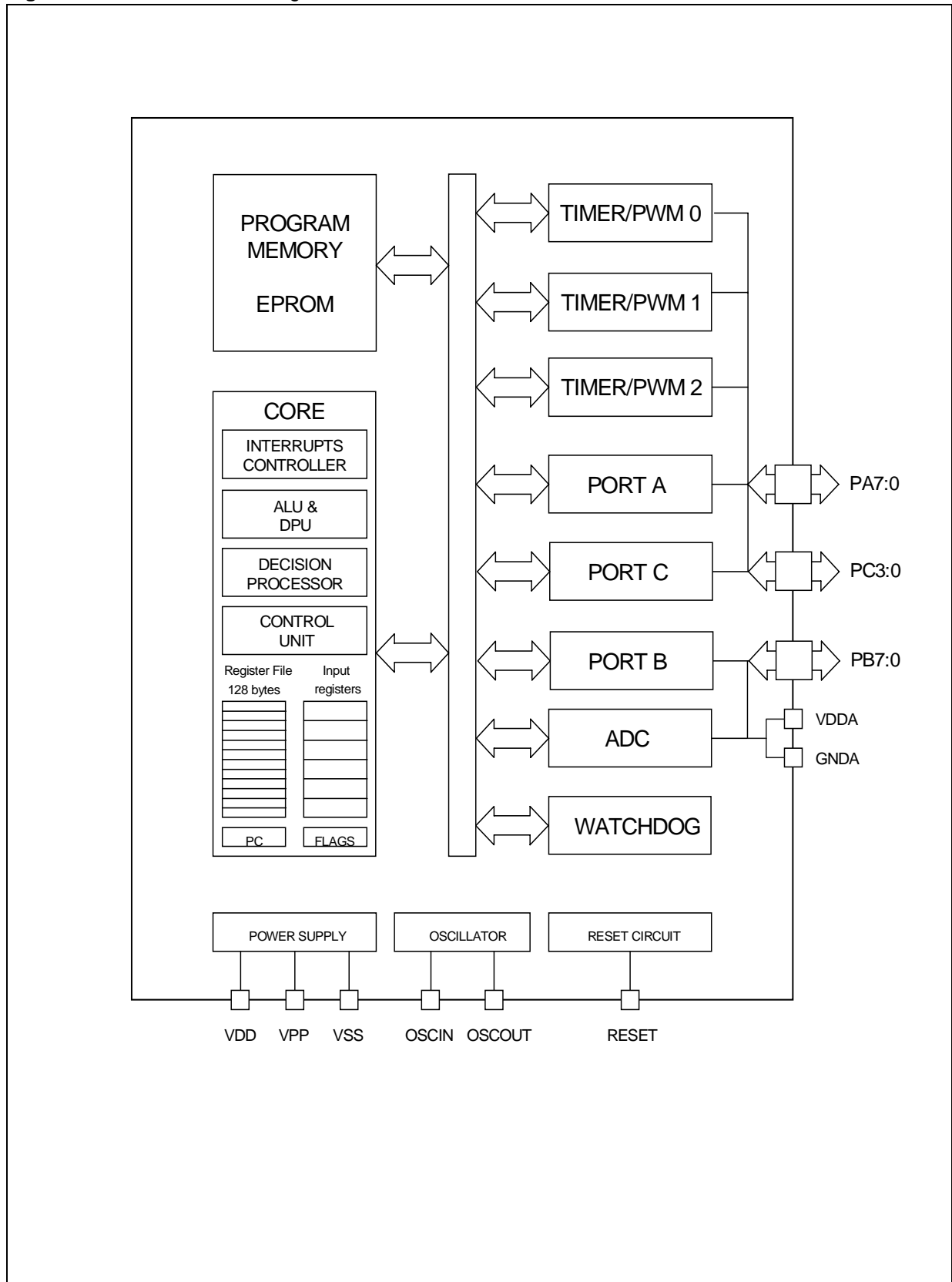
- 3 Programmable 8-bit Timer/PWMs with internal 16-bit Prescaler featuring:
  - PWM output
  - Input capture
  - Output compare
  - Pulse generator mode
- On-chip 8-bit Sample and Hold A/D Converter with 8-channel analog multiplexer
- Watchdog timer



### Development tools

- High level Software tools
- Emulator
- Low cost Programmer
- Gang Programmer

Figure 1. ST52x420 Block Diagram



**Table 1. ST52x420 Devices Summary**

Device	NVM	RAM	Timers PWM	Triac Driver	ADC	Analog Comp	SCI	Others	I/O	Package
ST52T420G0py	1K OTP	128	3x8-bit	-	8-Ch	-	-	-	19	Dip/So 28
ST52T420G1py	2K OTP	128	3x8-bit	-	8-Ch	-	-	-	19	Dip/So 28
ST52T420G2py	4K OTP	128	3x8-bit	-	8-Ch	-	-	-	19	Dip/So 28
ST52E420G2D6	4K EPROM	128	3x8-bit	-	8-Ch	-	-	-	19	CDip 28

**Table 2. ST52x420 Common Features**

COMMON FEATURES	ST52x420
Watchdog	Yes
Temperature Range	From -40° to +85°
Operating Supply	3 - 5.5 V
CPU Frequency	Up to 20 MHz.

**Legend:**

- Sales code:** ST52tnnncmpy
- Memory type (t):** F=FLASH, T=OTP, E=EPROM
- Subfamily (nnn):** 400, 410, 420, 430, 440
- Pin Count (c):** Y=16 pins, F=20 pins, G=28 pins, K=32/34 pins, J=42/44 pins
- Memory Size (m):** 0=1 Kb, 1=2 Kb, 2=4 Kb, 3=8 Kb
- Packages (p):** B=PDIP, D=CDIP, M=PSO, T=TQFP
- Temperature (y):** 0=+25, 1=0 +70, 3=-40 +125, 5=-10 +85, 6=-40 +85, 7=-40 +105

Full Product Information at <http://mcu.st.com>

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