



# Ultra Low Power 8-pin Microcontroller

EM6580 has a 8kB FLASH memory and EM6680 a 3kB mask ROM memory. They come in small 8-pin SO and TSSOP packages and have a high integration level for best use in battery-operated and cost sensitive applications.

### Key Features

- ❑ Small 8-pin package
- ❑ True Low Current
- ❑ 4-bit ADC or 12 levels Voltage Level Detector
- ❑ High drive outputs
- ❑ No external component

### Additional features for flash device:

- ❑ Unique serial ID code of 52bits + 16bits CRC
- ❑ CPU clock: can be selected from 32 to 800kHz on the fly

### & BENEFITS

- ✓ Greater flexibility
- ✓ Ideal for portable and battery-operated applications
- ✓ Useful in simple analog sensing applications
- ✓ Save PCB space
- ✓ Cost effective

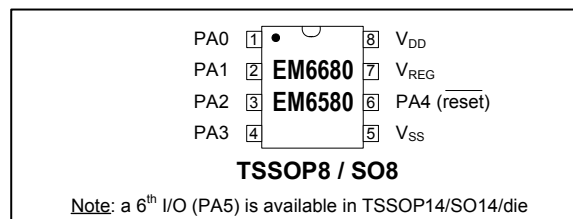
### And more...

- ❑ Max 5/6\* I/Os with 2 high drive outputs of 20mA
- ❑ Power-On-Reset with brownout control
- ❑ Original EM design: Sleep Counter Reset (automatic wake-up from sleep mode)
- ❑ Internal RC oscillator 32 kHz – 800 kHz with outstanding stability
- ❑ 8-bit serial interface

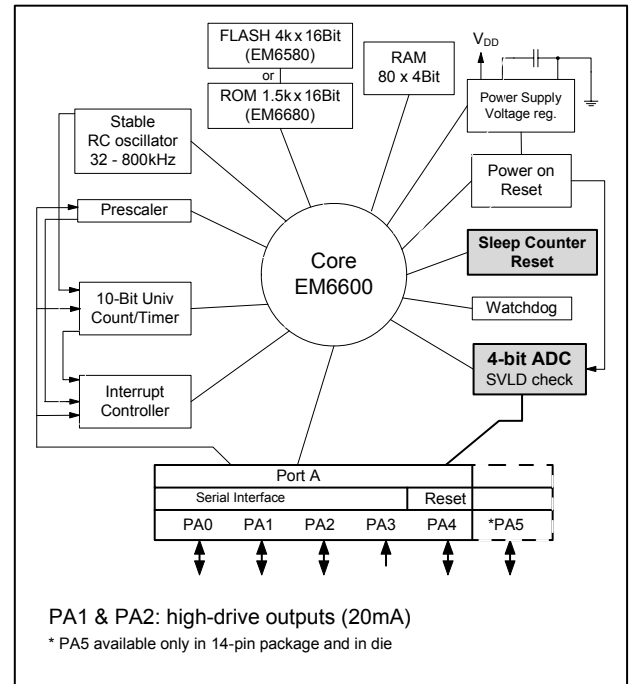
	EM6580	EM6680
<b>Memory</b>	Flash 4k x 16 bit	ROM 1536 x 16 bit
<b>Supply voltage</b>	2.3 V to 5.5 V	1.2 V to 3.6 V
<b>Current</b>		
active	5.8 $\mu$ A	4.0 $\mu$ A
standby	3.3 $\mu$ A	3.5 $\mu$ A
sleep	0.32 $\mu$ A	0.35 $\mu$ A
<b>Serial ID #</b>	yes	no
<b>Package</b>	SO-8/14*	SO-8/14* TSSOP-8/14*

### Tools & Services

- ❑ Easy to use, well-proven simulator and emulator
- ❑ Windows-based software programs
- ❑ Programmer available from third party (EM6580)
- ❑ Demoboard

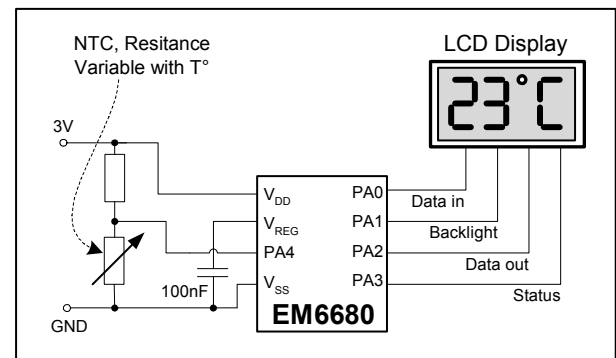


Pin Configuration



Block Diagram

### Example of Application



4-bit ADC in Temperature Sensing Application

### Typical Applications

- ❑ Domestic Appliances & Toys
- ❑ Safety and security devices
- ❑ Automotive controls
- ❑ Communication
- ❑ Sensor interfaces
- ❑ Watchdog
- ❑ Intelligent ADC
- ❑ Driver (LED, triac)