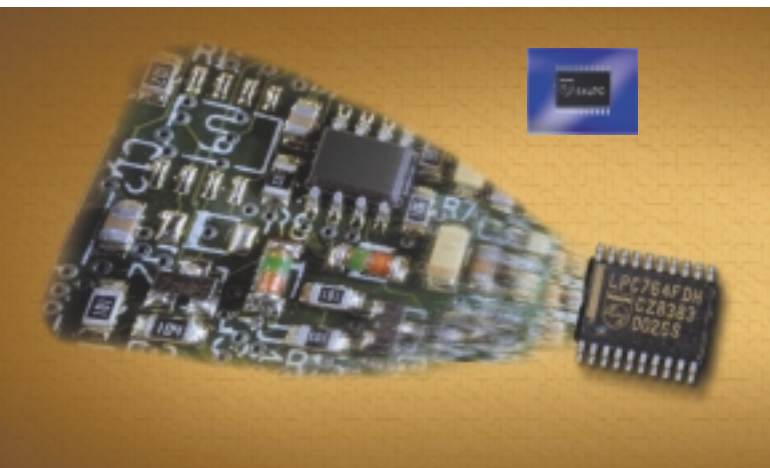


Measuring 4.4 mm wide, the TSSOP
Microcontroller reduces footprint by 1/3

TSSOP

87LPC762 / 764

20-Pin TSSOP Microcontroller



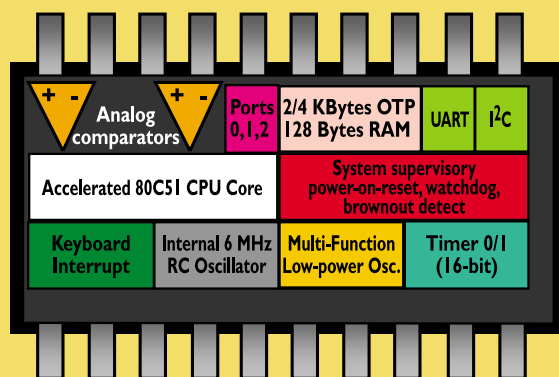
Philips 51LPC microcontroller (inset actual size)

The on-chip features of the Philips 51LPC micro replace separate components for:

- Oscillator
- Brown-out detection
- Power-on reset
- UART/I²C serial communications
- Comparators
- Keypad wake-up
- LED drivers
- Watchdog timer

Key Features

- 20-pin TSSOP packaging
4.4 mm x 6.5 mm x 1.1 mm
- Fast 300 ns instructions
- Low Power: 2.7 V to 6.0 V



Philips Semiconductors has extended its 80C51 microcontroller industry leadership with the industry's smallest 80C51-based 8-bit microcontroller package, which reduces the footprint by 1/3. Measuring 4.4 mm by 6.5 mm x 1.1 mm, the 20-pin TSSOP packaging for the 87LPC762 and 87LPC764 devices delivers a smaller footprint with less material, improved Electro Magnetic Compatibility (EMC), and extremely low power. With more embedded features, this device provides lower parts count and lower systems cost - with fast execution, configurable oscillator and advanced brown-out detection for leading-edge portable applications.

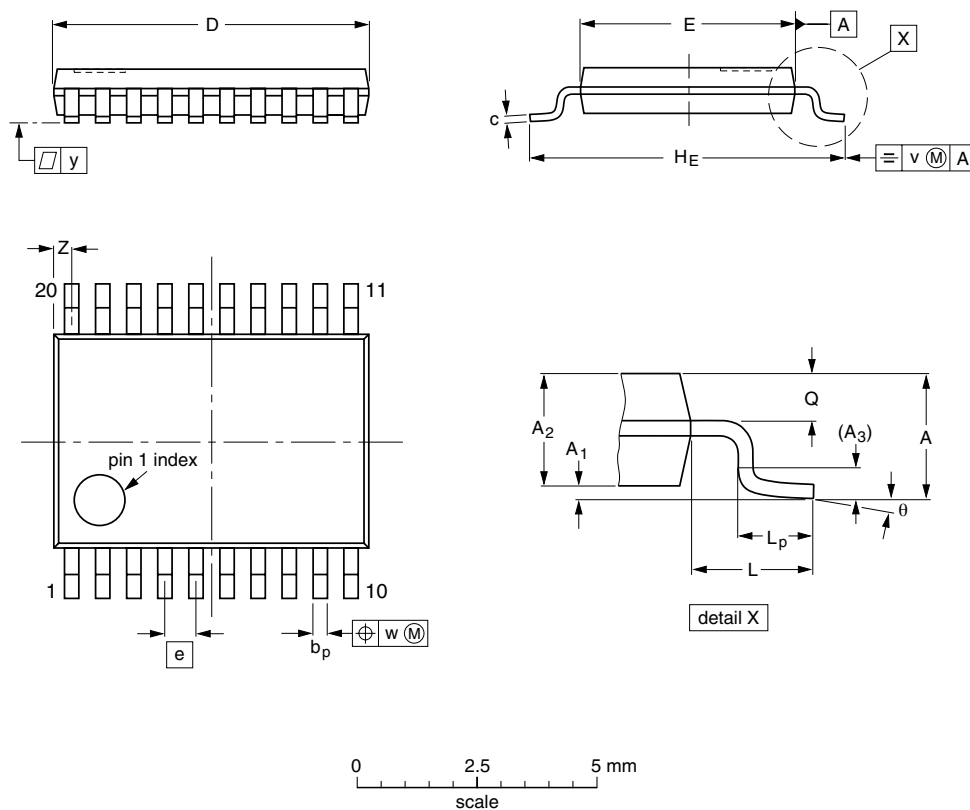
Packaged in the incredibly small TSSOP, the 87LPC762 and 87LPC764 microcontrollers are ideal for portable and subminiature device applications. This solution adds more momentum to Philips Semiconductors' market innovation in microcontrollers.

The 20-pin TSSOP delivers on Philips Semiconductors' historic commitment to reducing the environmental impact of its products. As a result of its industry leading form-factor, the 20-pin TSSOP will significantly diminish the environmental impact of our customer's designs by reducing both silicon and package material that could reach the environment.

The 87LPC762 and 87LPC764 devices achieve extremely fast execution, effectively doubling performance over traditional 80C51 devices. Supporting operating ranges from 2.7 V to 6.0 V, these devices achieve 20 MHz operation above 4.5 V and 10 MHz below 4.5 V. The 87LPC762 and 87LPC764 feature user-configurable oscillator control, with multi-speed crystal/resonator and on-chip RC oscillator. Both devices incorporate UART and I²C serial communications.

In addition to the oscillator and serial communications, the 87LPC762 and 87LPC764 also feature several supervisory functions such as brown-out detection, power-on reset and a watchdog timer that operates over a wide voltage range. When combined, these features provide a significant impact in minimizing the parts count which reduces the system cost on the design. Philips Semiconductors' 51LPC family of devices executes at twice the speed of traditional 80C51 devices, operates using six clocks instead of twelve, thereby minimizing power consumption and overall EMI.

TSSOP20 (SOT360-I): plastic thin shrink small outline package; 20 leads; body width 4.4 mm



Dimensions (mm are the original dimensions)

Unit	A _{max}	A ₁	A ₂	A ₃	b _p	c	D ⁽¹⁾	E ⁽²⁾	e	H _E	L	L _p	Q	V	W	Y	Z ⁽¹⁾	θ
mm	1.10	0.15 0.05	0.95 0.80	0.25	0.30 0.19	0.2 0.1	6.6 6.4	4.5 4.3	0.65	6.6 6.2	1.0	0.75 0.50	0.4 0.3	0.2	0.13	0.1	0.5 0.2	8° 0°

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