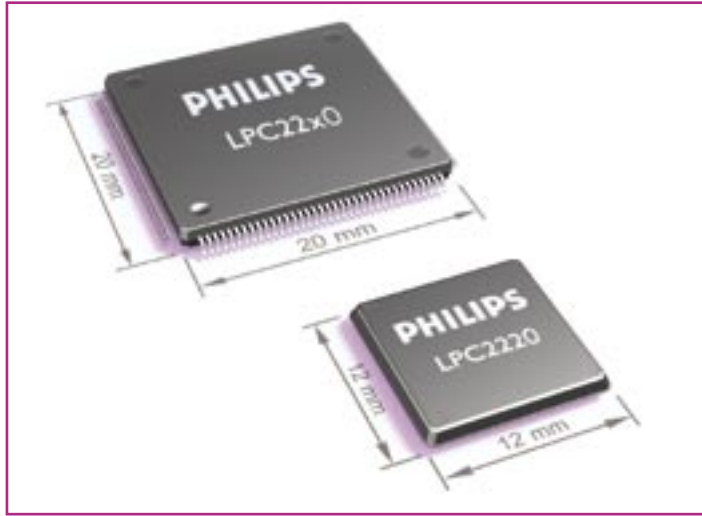


LPC22x0 family

These ARM-based microcontrollers improve performance in a variety of industrial, medical, communication, and general-purpose applications. They integrate up to 64 KB of on-chip RAM, Flashless, a 10-bit ADC, and an external memory interface.



Key features

- On-chip RAM memory
 - LPC2220: 64 KB RAM
 - LPC2290: 16 KB RAM (and 2x CAN bus)
 - LPC2210: 16 KB RAM
- External memory interfaces
- Two 32-bit timers, PWM unit, real-time clock, Watchdog™ timer
- Multiple serial interfaces: two UARTs, two Fast I²C-bus, two SPI
- Temperature range: -40 to +85 °C
- LQFP144 and TFBGA144 (LPC2220 only) packages

Applications

- Industrial control
- Medical systems
- Point-of-sale
- Communication gateways

Low-cost 16/32-bit ARM7TDMI-S™ processors with 75 MHz operation and up to 64 KB on-chip RAM



The LPC22x0 family is based on a 16/32-bit ARM7TDMI-S CPU architecture that allows code execution at a maximum clock rate of 75 MHz. Designed as a low-cost solution for applications that require large amounts of external memory, the LPC22x0 family eliminates on-chip Flash. It does, however, offer up to 64 KB of on-chip RAM.

Each microcontroller in the family has a configurable external memory interface with up to four banks and integrates an 8-channel, 10-bit A/D converter (ADC) that offers conversion times as low as 2.44 μs.

High-speed operation, along with the external bus interface and the large on-chip RAM, make the LPC22x0 family an excellent choice for applications that run complex real-time operating systems like uCLinux.

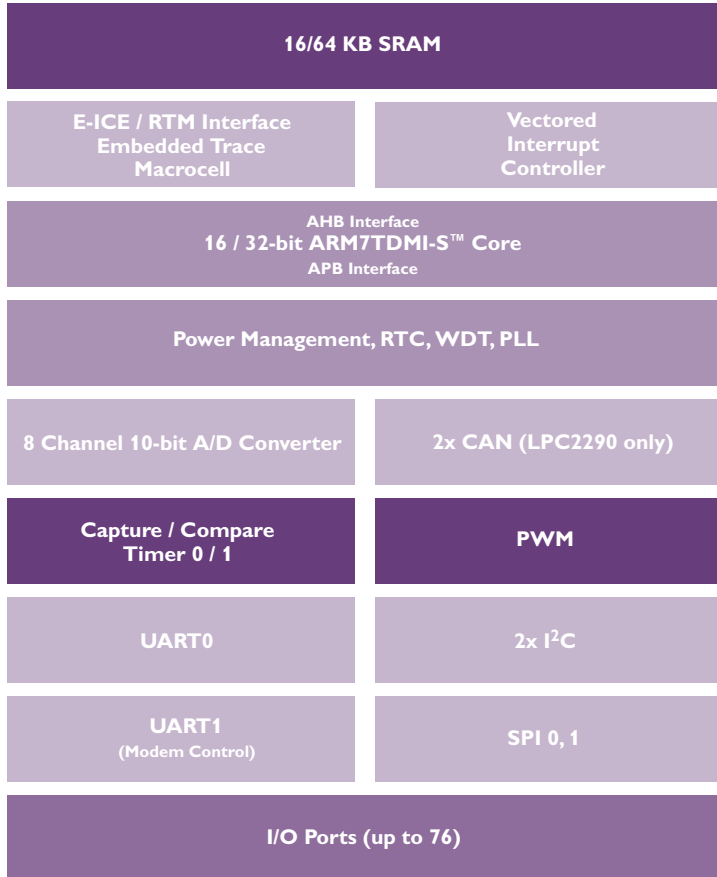
Multiple serial interfaces increase design flexibility. There are two 16C4550 UARTs, two Fast I²C-bus (400 kbps) interfaces, two CAN interfaces (LPC2290 only) and two SPI interfaces (one with capabilities for buffering and variable data length).

Additional features include two 32-bit timers (each with four capture and four compare channels), a PWM unit with six outputs, a real-time clock, and a Watchdog timer.

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LPC22x0 family

Low-cost 16/32-bit ARM7TDMI-S™ processors with 75 MHz operation and up to 64 KB on-chip RAM



LPC22x0 block diagram

Third-party development tools

Through third-party suppliers, Philips offers an extensive portfolio of development tools. For the most current listing of available tools, please visit www.philips.com/standardics.

Tool Name	Vendor
Emulators	
Multi-ICE	ARM
MultiTrace	ARM
RealView ICE	ARM
Genia	Ashling
Opella	Ashling
Vitra	Ashling
Tanto	Hitex
j-link	IAR Systems
ULINK	Keil
TRACE32-ICD	Lauterbach
TRACE32-PowerTrace	Lauterbach
EMUL-ARM-PC	Nohau
JTAGjet	Signum
Development & Evaluation Boards	
FA-EVBA-64	Ashling
MCB2100	Keil
TinyARM DIP50	Pasat

Tool Name	Vendor
Integrated Development Environment	
ADS	ARM
RealView	ARM
AsIDE ARM	Ashling
Embedded Workbench	IAR Systems
µVision3	Keil
CrossWorks	Rowley
Monitors/Debuggers/Simulators	
PathFinder-2100	Ashling
C-SPY	IAR Systems
µVision3	Keil
'Seehau'	Nohau
Universal Debug Engine	PLS
Chameleon	Signum Systems
Real-Time Operating Systems	
ChronOS	Interniche
µC/OSII	Micrium
TCP/IP Stacks	
NicheStack	Interniche

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