

APPLICATIONS:
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**SHARP's New Line
of MCUs and
System-on-Chips**

LH75410 16/32-bit Microcontroller with Grayscale LCD Controller

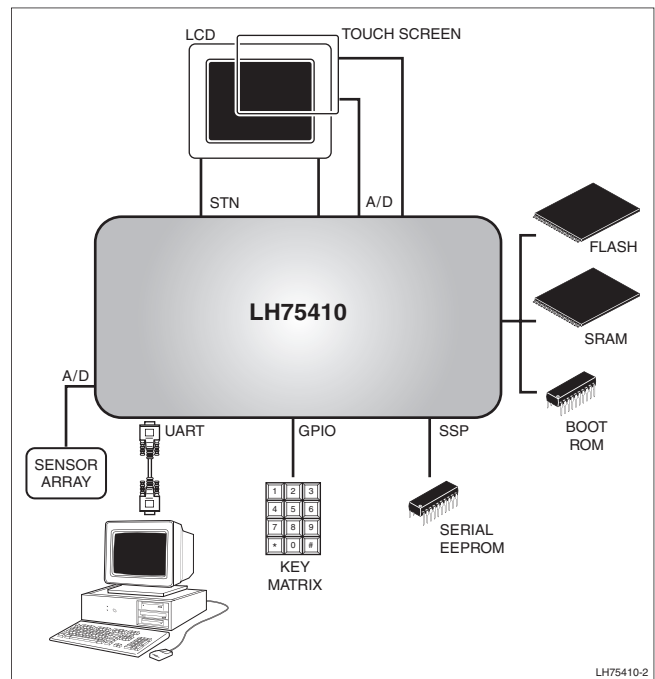
FEATURES

- ARM7TDMI-S™ Core
- High Performance (Up to 90 MHz)
 - Internal PLL-driven or External Clock
- 32KB On-chip SRAM
 - 16KB TCM (0 Wait State) SRAM
 - 16KB Internal SRAM
- Clock and Power Management
 - Low Power Modes: Standby, Sleep, Stop1, Stop2
- Grayscale LCD Controller
 - 4-bit (16 level) Grayscale
 - Up to XGA (1,024 × 768)
 - Supports STN Displays
- Eight channel, 10-bit A/D Converter
- Four DMA Channels
- Integrated Touch Screen Controller
- Serial Interfaces
 - 3 × UARTs
 - SSP
- Full-featured Real Time Clock (RTC)
 - Operates from 32 kHz XTAL
- Three 16-bit Counter/Timers with Capture/Compare/PWM Capability
- Watchdog Timer
- Low Voltage Detector
- JTAG Debug Interface and Boundary Scan
- 3.3 V Operating Voltage
- -40°C to +85°C Operating Temperature
- 144-pin LQFP Package

DESCRIPTION

The LH75410 is a low cost microcontroller that utilizes the ARM7TDMI-S core integrated with a wide variety of functions including the capability to control black and white and grayscale LCD displays with up to 16 levels of gray. Other functions include: 32KB of on-chip SRAM, three UARTs, SSP, three 16-bit Counter/Timers, Analog to Digital Converter with integrated touch screen controller, Watchdog Timer, and Low Voltage Detector. The LH75410 operates up to 90 MHz at 3.3 V over the industrial temperature range of -40°C to +85°C and is offered in a 144-pin LQFP package.

SYSTEM APPLICATION EXAMPLE

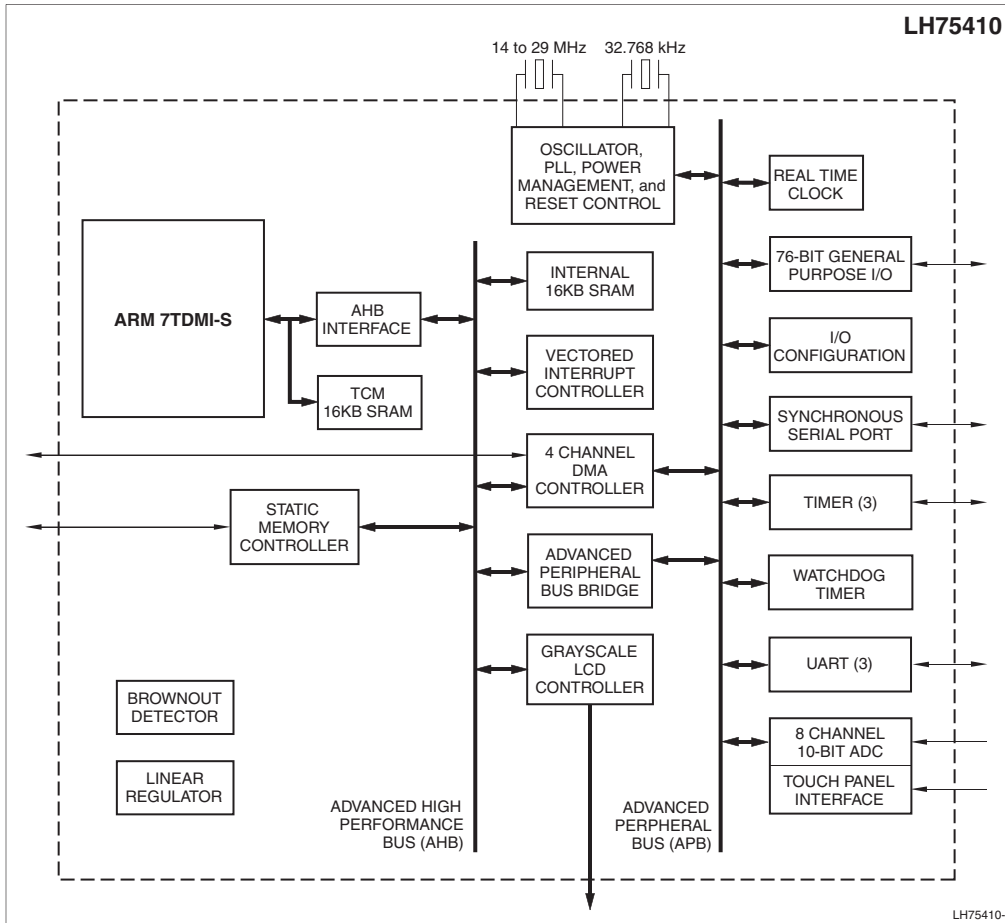


LH75410-2

PRODUCT INFORMATION

SHARP

LH75410 BLOCK DIAGRAM



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