



**THE DATASHEET OF
LH75401N0M100C0**



APPLICATIONS:
 Medical
 Industrial Control
 Instrumentation
 Test & Measurement
 Security



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

LH75401 16/32-bit Microcontroller with Color LCD Controller

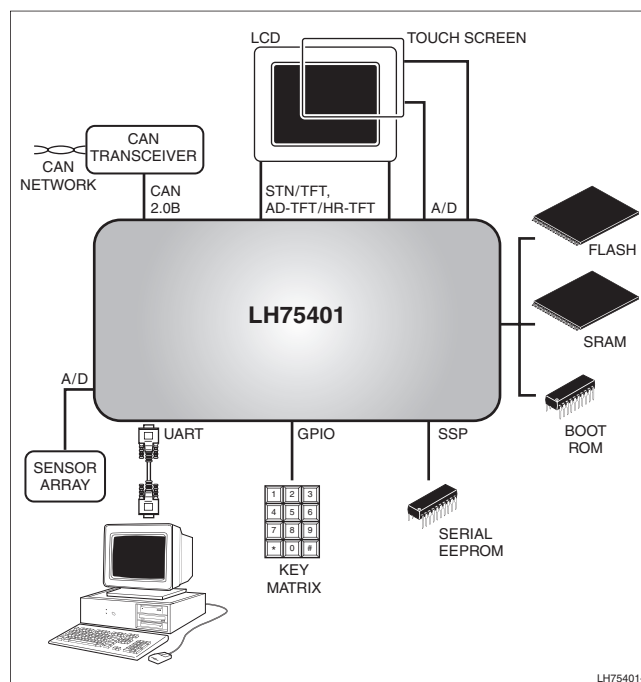
FEATURES

- 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
- Color and Grayscale LCD Controller
 - 12-bit (4,096) Direct Mode Color
 - Up to VGA (640 × 480)
 - 8-bit (256) Direct or Palletized Color
 - Up to SVGA (800 × 600)
 - 4-bit (16) Direct Mode Color/Grayscale
 - Up to XGA (1,204 × 768)
 - Supports STN, TFT, HR-TFT, AD-TFT 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
- CAN Version 2.0b*
- 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 LH75401 is a low cost microcontroller that utilizes the ARM7TDMI-S core integrated with a wide variety of functions including the ability to control STN, color STN, TFT, HR-TFT, and Advanced-TFT displays with up to 4,096 colors. Other functions include: 32KB of on-chip SRAM, three UARTs, SSP, CAN version 2.0b, three 16-bit Counter/Timers, Analog to Digital Converter with integrated touch screen controller, Watchdog Timer, and Low Voltage Detector. The LH75401 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

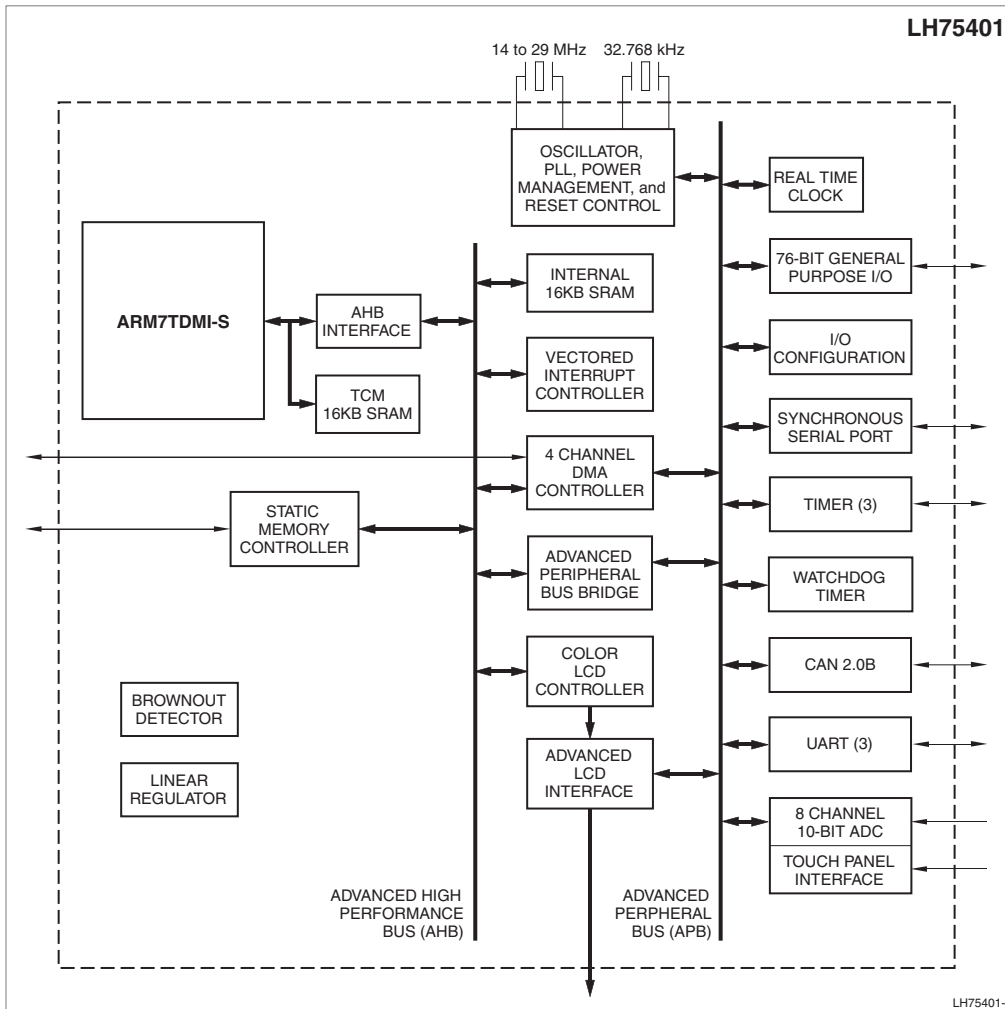


*Controller Area Network (CAN)

PRODUCT INFORMATION

SHARP

LH75401 BLOCK DIAGRAM



SHARP[®]

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