PRELIMINARY PRODUCT INFORMATION



SHARP's New Line of MCUs and System-on-Chips APPLICATIONS: • White Goods • Industrial Control • Smart Toys

LH79525 16/32-bit System-on-Chip with Color LCD Controller

FEATURES

- ARM720Т^{тм} Core
 - High Performance (77.4 MHz)
 - 8KB cache
 - MMU
- 16KB On-chip SRAM
- 10/100 BaseT Ethernet MAC
- USB 2.0 Full Speed Device
- Clock and Power Management
- Low Power Modes Active, Standby, Sleep, Stop1, Stop2
- Color LCD Controller
 - 12-bit (4,096) Direct Mode Color
 - Up to VGA (800×600)
 - 8-bit (256) Direct or Palletized Color
 - Up to XGA (1,024 \times 768)
 - 12-bit Video Bus
 - Supports STN, TFT, HR-TFT, AD-TFT
- Ten Input, 10-bit A/D Converter with Integrated Touch Screen Controller
- Four DMA Channels
- SDRAM Controller
- NAND Flash Support
- Serial Interfaces
 - Three 16C550 UARTs, with 9-bit capability
 - Classic IrDA (115 Kbit/s)
 - SSP
 - I²C
 - I²S Codec Interface
- External Bus Interface
 - Six Chip selects Providing Glueless Interface to Off-Chip Memories and Peripherals
 - 24 Address Bits
 - 16 Data Bits

- Real Time Clock (RTC)
 - Operates from 32 kHz XTAL
- 72 GPIO, 8 GPI
- 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
- On-chip 3.3 V to 1.8 V Linear Regulator
- -40°C to +85°C Operating Temperature
- 176-pin LQFP Package

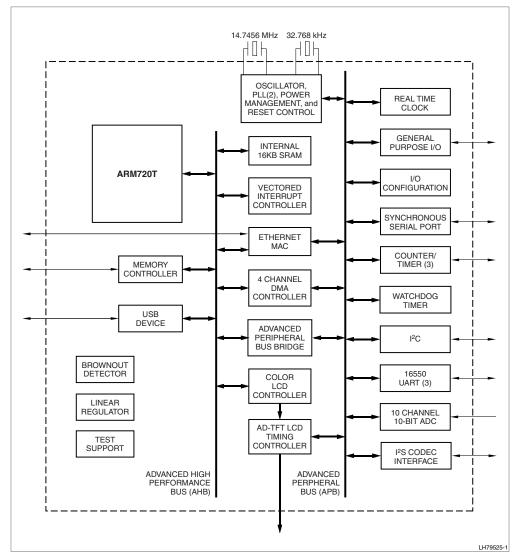
DESCRIPTION

The LH79525 is a low cost microcontroller that utilizes the ARM720T core integrated with a wide variety of functions including the capability to control STN, color STN, TFT, HR-TFT, and AD-TFT displays with up to 4,096 colors. Other functions include: 16KB of on-chip SRAM, 10/100 BaseT Ethernet MAC, USB 2.0 Full Speed Device, three UARTs, SSP, I²C, I²S, three 16-bit Counter/Timers, Analog to Digital Converter with integrated touch screen controller, SDRAM Controller, Watchdog Timer, and Low Voltage Detector. The LH79525 operates up to 77.4 MHz at 3.3 V over the industrial temperature range of -40°C to +85°C and is offered in a 176-pin LQFP package.

SHARP's LH79525 design provides low power, exceptional performance, good flexibility, and great value in a 32-bit processor with a 16-bit external data bus.

PRELIMINARY PRODUCT INFORMATION

LH79525 BLOCK DIAGRAM



SHARP MICROELECTRONICS OF THE AMERICAS

Central

Schaumburg, IL

Ph (847) 925-9150

Fax (847) 925-9172

Regional Sales Offices

North American Headquarters Camas, WA Ph (360) 834-2500 Fax (360) 834-8903 West

West Huntington Beach, CA Ph (714) 903-4600 Fax (714) 903-0295 San Diego, CA Ph (858) 597-0982 Fax (858) 597-8701 San Jose, CA Ph (408) 436-4900

Fax (408) 436-0924

Auburn Hills, MI Ph (248) 391-5404 Fax (248) 391-6165 Austin, TX Ph (512) 349-7262 Fax (512) 349-7002 DFW Airport, TX Ph (972) 456-8560 Fax (972) 456-8560 Fax (972) 456-9360 Houston, TX Ph (281) 955-9909 Fax (281) 955-9909 Fax (281) 955-9909 Muskego, WI Ph (414) 529-9568 Fax (414) 529-9569

East

Boca Raton, FL Ph (561) 347-8690 Fax (561) 347-8692 Burlington, MA Ph (781) 229-9117 Carey, NC Ph (919) 460-0695 Fax (919) 460-0695 Fax (919) 460-0795 New York, NY Ph (212) 945-9410 Fax (212) 945-9410 Fax (212) 945-9412 Pittsburgh, PA Ph (412) 381-1191 Fax (412) 381-1192

Europe

SHARP Microelectronics Europe Hamburg, Germany Ph (49) 40-2376-2286 Fax (49) 40-2376-2232

Asia

SHARP Corporation Osaka, Japan Ph (81) 6-6621-1221 Fax (81) 6117-725300

Product Information: 1-800-642-0261 World Wide Website: http://www.sharpsma.com

Specifications are subject to change without notice. Suggested applications (if any) are for standard use; See Important Restrictions for limitations on special applications. See Limited Warranty for SHARP's product warranty. The Limited Warranty is in lieu, and exclusive of, all other warranties, express or implied. ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR USE AND FITNESS FOR A PARTICULAR PURPOSE, ARE SPECIFICALLY EXCLUDED. In no event will SHARP be liable, or in any way responsible, for any incidental or consequential economic or property damage.

