

PRELIMINARY PRODUCT INFORMATION

SHARP



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

APPLICATIONS:	
PDA's	Pocket PCs
Handheld Games	Smart Phones
Media Players	Web Pads
Thin Client	Test and Measurement
GPS	Point of Sale

LH7A404 System-on-Chip

FEATURES

- ARM922T™ Core:
 - 32-bit ARM9TDMI™ RISC Core (200 MHz)
 - 16KB Cache: 8KB Instruction Cache and 8KB Data Cache
 - MMU (WinCE™ Enabled)
- 80KB On-Chip Memory
- Vectored Interrupt Controller
- External Bus Interface
 - 100 MHz
 - Asynchronous SRAM/ROM/Flash
 - Synchronous DRAM/Flash
 - PCMCIA
 - CompactFlash
- Clock and Power Management
 - 32.768 kHz and 14.7456 MHz Oscillators
 - Programmable PLL
- Low Power Modes
 - Run (200 mA), Halt, Standby (35 µA)
- Programmable LCD Controller
 - Up to 1,024 × 768 Resolution
 - Supports STN, Color STN, AD-TFT, HR-TFT, TFT
 - Up to 64 k Colors and 15 Gray Shades
- 10 Channel, 10-bit A/D Converter
 - Touch Screen Controller
 - Brownout Detector
- DMA (12 Channels)
 - External DMA Channels
 - AAC (AC97)
 - MMC
 - USB
- USB Host and Device Interface (USB1.1)
- Synchronous Serial Port (SSP)
 - Motorola SPI™
 - Texas Instruments SSI
 - National Semiconductor MICROWIRE™

- PS/2 Keyboard/Mouse Interface (KMI)
- Three Programmable Timers
- Three UARTs
 - Classic IrDA (115 kbit/s)
- Smart Card Interface (ISO7816)
- DC-to-DC Converters
- MultiMediaCard Interface with Secure Digital (MMC 2.11/SD 1.0)
- AAC (AC97) Codec Interface
- Smart Battery Monitor Interface
- Real Time Clock (RTC)
- Up to 64 General Purpose I/Os
- Watchdog Timer
- JTAG Debug Interface and Boundary Scan
- Operating Voltage
 - 1.8 V Core
 - 3.3 V Input/Output (1.8 V I/O Optional*)
- Temperature
 - -40°C to +85°C Industrial
- Sampling As: 324-Ball PABGA 24 mm × 24 mm
Production As: 324-Ball CABGA 17 mm × 17 mm

DESCRIPTION

The advent of 3G technology opens the door for a wide range of Multimedia applications in mobile information appliances. These appliances require high processing performance and low power consumption. The LH7A404 is designed from the ground up to provide high processing performance, low power consumption, and a high level of integration.

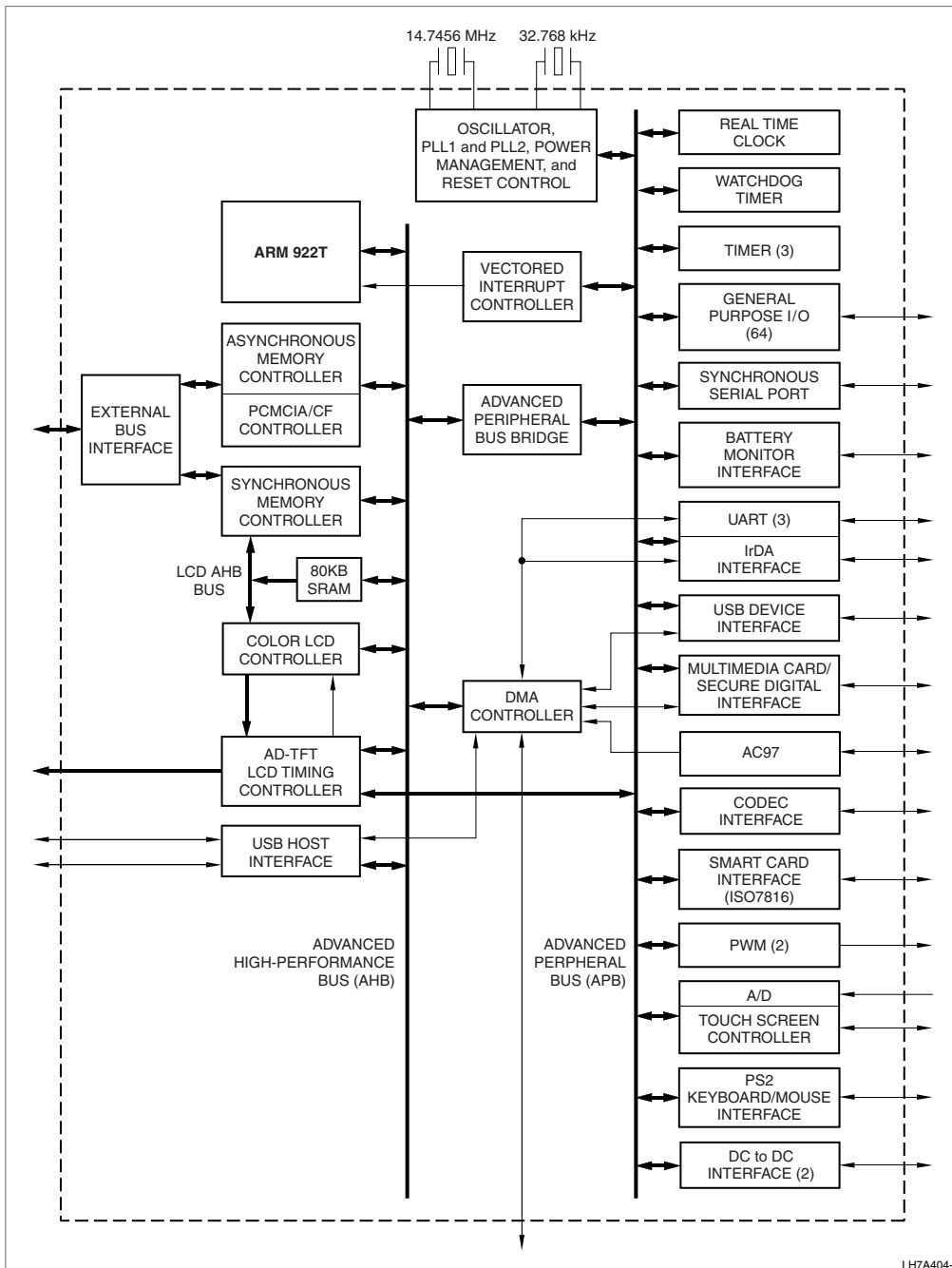
The LH7A404 contains a high performance 32-bit ARM922T Core. Power consumption is reduced by the high level of integration, 80KB on-chip SRAM, fully static design, power management unit, low voltage operation (1.8 V Core, 3.3 V or 1.8 V* I/O) and on-chip PLL.

NOTE: *Under development. Results pending further characterization.

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LH7A404 BLOCK DIAGRAM



SHARP[®]

MICROELECTRONICS OF THE AMERICAS

Regional Sales Offices

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

Pittsburgh, PA
 Ph (412) 381-1191
 Fax (412) 381-1192
 Yardley, PA
 (215) 321-5530
 (215) 321-5534

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

Central

Schaumburg, IL
 Ph (847) 925-9150
 Fax (847) 925-9172
 Auburn Hills, MI
 Ph (248) 391-5404
 Fax (248) 391-6165
 Austin, TX
 Ph (512) 349-7262
 Fax (512) 349-7002

East

Ft. Lauderdale, FL
 Ph (954) 267-8883
 Fax (954) 267-0254
 Burlington, MA
 Ph (781) 270-7979
 Fax (781) 229-9117
 Carey, NC
 Ph (919) 460-0695
 Fax (919) 460-0795
 New York, NY
 Ph (212) 945-9410
 Fax (212) 945-9412

Irving, TX
 Ph (972) 870-4452
 Fax (972) 870-4450
 Houston, TX
 Ph (281) 955-9909
 Fax (281) 955-9910
 Muskego, WI
 Ph (414) 529-9568
 Fax (414) 529-9569

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>

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