Sharp’s LH77790B is an ARM7DI™ RISC-based microcontroller designed to meet the requirements of advanced portable systems with monochrome LCD panels. Its high level of integration — including instruction/data cache and static RAM — makes it ideal for handheld, battery-operated devices required to deliver high-speed performance and low power consumption. It also provides direct interface capability to monochrome LCDs, keyboards, non-volatile memory (typically Flash), RAM, and other communications ports and external peripherals.

By serving as an application-ready, ‘system-on-chip’ solution, the LH77790B gives designers substantial opportunity to reduce external components, save area, reduce power requirements and lower system cost.

It comes complete with valuable features like an LCD controller, no-glue memory interface (SRAM/DRAM/EEPROM/Flash), UARTs with infrared capability, PWMs, parallel I/O, counter/timers and power management.

The LH77790B is fabricated using Sharp’s low-cost, high-volume 0.65 µm process technology. The 176-pin thin quad flat pack (TQFP) package offers easy integration in space constrained designs. Complete tools for hardware and software design speed development and drastically reduce design turnaround time.
Features:

- Highly Integrated Single Chip
- 32-Bit ARM7DI™ CPU Core
- 2KB Data/Instruction Cache
- 2KB Static RAM (4KB Without Cache)
- Programmable Clock and Power Management
- Programmable LCD Controller (passive, simple color, DMTN)
- On-Chip Interrupt Controller
- Three UARTS — 16450-class
- IrDA/DASK Infrared Interface
- Three Pulse Width Modulator Channels
- No-Glue Memory Interface
- On-Chip DRAM Controller
- 24-Bit Programmable Peripheral Interface
- Three 16-Bit Counter/Timer Channels
- Hardware Watchdog Timer
- Dual Voltage Range Operation
- 5 V TTL — 25 MHz
- 3.3 V LVTTL — 16.7 MHz
- Package: 176-Pin TQFP

Applications:

- Point-of-Sale
- Handheld Inventory Control Systems
- Barcode Scanners
- Industrial Instrumentation
- Medical Equipment
- GPS
- Handheld Communication Devices
- Games
- Personal Digital Assistants

For more information, call your nearest Sharp Microelectronics of the Americas regional sales office or 1-800-642-0261, Ext. ARM, or visit our web site at www.sharpsma.com

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