



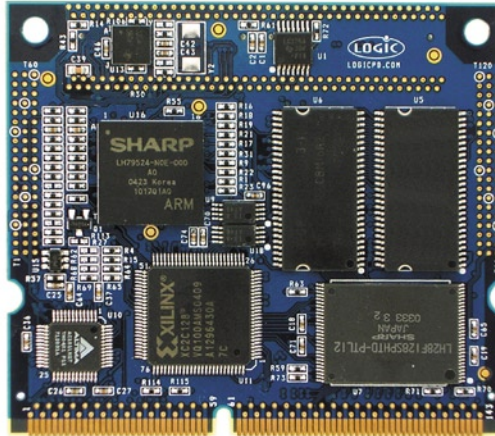
# LH79524 CARD ENGINE

The LH79524 Card Engine is a compact, product-ready hardware and software solution for developing embedded products with **less time, less cost, less risk ... more innovation.**

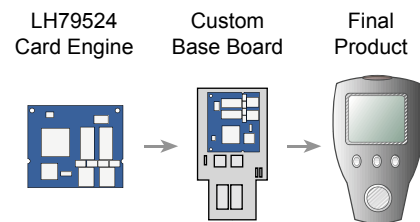
## CARD ENGINE ADVANTAGE

- Reduce Time to Market  
→ 6 to 9 month savings typical
- Product-Ready Hardware Platform
- Production Quality Software
  - Bootloader/Monitor
  - Board Support Packages
  - Supports other operating systems
- Engineering Support

The LH79524 Card Engine is a complete single board computer offering essential features for handheld and embedded networking applications in the industrial, consumer, and medical markets. The use of custom base boards makes the Card Engine the ideal foundation for OEMs developing handheld and compact products. The Card Engine provides a common reference pin-out on its expansion connectors, which enables customers to easily scale to next generation microcontroller Card Engines when new functionality or performance is required.



Actual Size (2.37" x 2.67")



## ORDERING INFORMATION

Zoom™ Starter Development Kit  
■ (Model # SDK-LH79524-10-3216)

## CUSTOMER SUPPORT

Logic provides technical support for Application Development Kits. Various support packages are available; contact us for more information.

## CONTACT

For more information on our EmbeddedProduct Solutions, please contact Logic Sales at [www.logicpd.com](http://www.logicpd.com) or 612.672.9495.

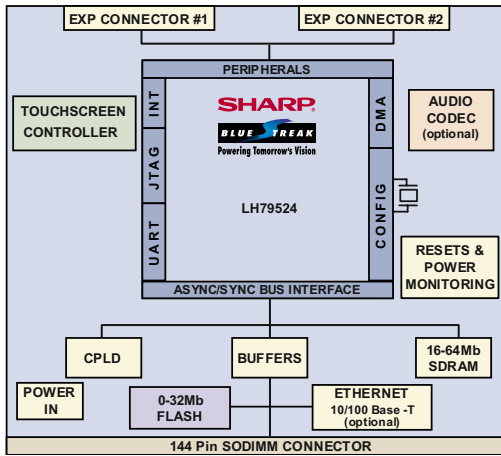
- **Processor** Sharp LH79524 32 bit ARM720T RISC processor running up to 77.414 MHz
- **SDRAM Memory** Up to 64 Mbytes
- **Flash Memory** NOR or NAND
  - 0 or 16 Mbytes NOR
  - 0, 64, or 128 Mbytes NAND
- **Display** Programmable color LCD controller
  - Built in driver supports up to 800 x 600 x 16 bit color
  - Supports STN, Color STN, HR-TFT, AD-TFT, TFT
- **Touch Screen** Processor Integrated
- **Network Support** 10/100 BASE-T Ethernet controller (application/debug)
- **Audio** Stereo Output Audio CODEC (TI TLV320DAC23)
- **PC Card Expansion** Compact Flash type 1 card (memory mode only)
- **Serial Ports** 2 X 16C550 like, standard UARTS
- **IrDA** SIR supports up to 115.2 Kbps
- **GPIO** Programmable depending on peripheral requirements
- **SSP** Supports either Motorola SPI™, National Semiconductor MICROWIRE™, TI SSI
- **USB 2.0 Full Speed** One Device
- **Software**
  - LogicLoader™ (bootloader/monitor)
- **Mechanical**
  - Compact Size: 2.37"(60.2 mm) long x 2.67"(67.8 mm) wide x 0.17"(4.4 mm) high
  - 144 pin SODIMM connector for connection to custom peripheral board
  - Two high density 80-pin expansion connectors for peripheral access
- **Application Development Kits**
  - Zoom™ Starter Development Kit (Model # SDK-LH79524-10-3216)

# SHARP

**BLUE TREAK**  
Powering Tomorrow's Vision



■ System on Module Block Diagram



Actual size (60.2mm x 67.8 mm)

The Card Engine CPLD provides the following functionality:

- SPI interface to onboard EEPROMS and Audio Codec
- CF Card Support (memory mode only)
- ISA-like bus interface
- Buffer control logic
- Chip select decoder logic
- Interrupt encoder logic
- Flash program control logic
- Processor mode control logic
- IC code revision register
- Additional GPIO
- Status indicator signals
- On-board power management signals
- Memory mapped NAND flash controller

The CPLD code is available free of charge for customers designing the Card Engine into their final product or for purchase if implementing in a custom board solution.

Please contact Logic Sales at [product.sales@logicpd.com](mailto:product.sales@logicpd.com) for more information.

■ Standard Configurations for LH79524

Logic Model Number	SDRAM	Nor Flash (MB)	NAND Flash (MB)	Ethernet	Audio	Touch	Temp. Rating
CENGLH79524-10-403HC	32	16	-	Y	Y	Y	0-70 deg C
CENGLH79524-10-402HC	32	8	-	Y	Y	Y	0-70 deg C
CENGLH79524-10-450HC*	32	-	64	Y	Y	Y	0-70 deg C

\*Please contact Logic for custom configurations and availability

**System on Module Advantage:** Less time, less cost, less risk ... More Innovation

