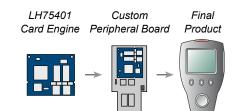# LOGIC

A B C

LH75401 CARD ENGINE

(PRELIMINARY)

The LH75401 Card Engine is a compact, product-ready hardware and software solution for developing embedded products with **less time, less cost, less risk ... more innovation.**

The LH75401 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 peripheral boards makes the Card Engine the ideal foundation for OEMs developing handheld and compact products. provides a common reference pin-out on its expansion connectors, which enables customers to easily scale to next generation micro controller Card Engines when new functionality or performance is required.

Developing embedded solutions is as simple as

A B C

A Application Development Kits

B Board Support Packages

C Card Engines

Actual Size (2.37" x 2.67")

LH75401 Card Engine → *Custom Peripheral Board* → *Final Product*

HARDWARE HIGHLIGHTS

- CAN Ready
- Processor integrated touch screen controller
- 5 Capture/Compare Timers, 2 Capture Timers

- **Processor** Sharp LH75401 16/32 bit ARM7TDMI RISC microprocessor running up to 51.6 MHz
- **SRAM Memory** Up to 2 Mbytes
- **Flash Memory** Up to 16 Mbytes on board
- **Display** Programmable color LCD controller
    - Built in driver supports up to 320 x 240 (QVGA) x 12 bit color
    - Supports STN, Color STN, HR-TFT, AD-TFT, TFT
- **Touch Screen** Processor integrated four or five wire resistive touch screen controller
- **Network Support** 10/100 BASE-T Ethernet controller (application/debug)
    - SMSC LAN 91C111 (MAC & PHY)
- **Audio** Audio Codec Stereo Output (TI TLV320DAC23)
- **PC Card Expansion** Compact Flash Type 1 card (memory storage only)
- **Serial Ports** 3 X UARTS
    - 2 X 16C550 like, standard UARTS
    - 1 CAN Version 2.0b or 1 82510 UART
- **SSP** Supports either Motorola SPI™, National Semiconductor MICROWIRE™, TI SSI
- **GPIO** Programmable depending on peripheral requirements
- **Software**
    - LogicLoader™ (bootloader/monitor) in executable format
- **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 - available Q1 '03
    - Zoom™ Integrated Development Kit - available Q2 '03

STRATEGIC PARTNER

SHARP

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APPLICATION DEVELOPMENT KITS | BSPS & SOFTWARE | CARD ENGINES | PRODUCT DEVELOPMENT SERVICES

Zoom™ STARTER DEVELOPMENT KIT

(PRELIMINARY)

The Zoom™ Starter Development Kit is a low-cost Application Development Kit for evaluating the functionality of the Card Engine. This results in an embedded product development cycle with **Less time, less cost, less risk ... More innovation.**

Application development is performed right on the product-ready Card Engine and software Board Support Package included in the kit, which enables customers to seamlessly transfer their application code and hardware into production. The Application Board has connections to all of the Card Engine specific peripherals via standard connectors or expansion headers. This allows easy connection for application development, prototyping, and debugging.

Developing embedded solutions is as simple as

A **B** **C**

A Application Development Kits
B Board Support Packages
C Card Engines

SHARP DISPLAY KITS

Logic offers the following display kits (bezel, inverter, touch panel, and cable assemblies included):

- LQ035Q7DB02
  3.5", QVGA, A-TFT

- LQ64D343
  6.4", VGA, TFT

- LQ121S1DG31
  12.1", SVGA, TFT

Cable assemblies are also available for other Sharp displays.

Integrated LCD/Touch/Inverter Connector

Expansion Headers: Access to all Card Engine signals
Standard 100-mil pitch for prototyping

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 embedded platform solutions, please contact Logic Sales at www.logicpd.com or 612.672.9495.

- **Card Engine** LH75401 Card Engine included
- **LCD Display Connector** 60 pin integrated LCD, touch & backlight connector (see Sharp Display Kits sidebar for ready-to-use LCD display options)
- **Network Support** One RJ45 Ethernet jack with magnetics (application/debug)
- **Audio** Stereo input and output jacks - 3.5mm diameter (stereo in not supported by LH75401)
- **PC Card Expansion** Compact Flash Type 1 (card slot memory storage only)
- **Serial Port** 115.2Kbps RS-232 debug serial port
- **Expansion Headers**
  - Standard 100 mil pitch header
  - Access to all Card Engine signals
- **Software**
  - LogicLoader™ (bootloader/monitor) in executable format
- **Mechanical**
  - 4"(102 mm) long x 6"(152 mm) wide x .66"(16.8 mm) high
- **Cables**
  - Serial cable (null modem)
  - Power supply and power adapters (UK, Europe, Japan, and USA)
- **Model Number** SDK-LH75401-10

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