Beacon EmbeddedWorks - CENGLH7A400-10-504HI Datasheet

Welcome to E-XFL.COM

Understanding Embedded - Microcontroller, Microprocessor, FPGA Modules

Embedded - Microcontroller, Microprocessor, and FPGA Modules are fundamental components in modern electronic systems, offering a wide range of functionalities and capabilities. Microcontrollers are compact integrated circuits designed to execute specific control tasks within an embedded system. They typically include a processor, memory, and input/output peripherals on a single chip. Microprocessors, on the other hand, are more powerful processing units used in complex computing tasks, often requiring external memory and peripherals. FPGAs (Field Programmable Gate Arrays) are highly flexible devices that can be configured by the user to perform specific logic functions, making them invaluable in applications requiring customization and adaptability.

Applications of Embedded - Microcontroller,

Details	
Product Status	Obsolete
Module/Board Type	MPU Core
Core Processor	ARM922T, LH7A400
Co-Processor	-
Speed	200MHz
Flash Size	32MB
RAM Size	64MB
Connector Type	SO-DIMM-144
Size / Dimension	2.37" x 2.67" (60.2mm x 67.8mm)
Operating Temperature	-40°C ~ 85°C
Purchase URL	https://www.e-xfl.com/product-detail/logic-pd/cenglh7a400-10-504hi

LH7A400 CARD ENGINE

CARD ENGINE ADVANTAGE

- Reduce TIme to Market
  → 6 to 9 month savings
- Product-Ready Hardware Platform
- Production Quality Software
- Engineering Support

PRODUCT HIGHLIGHTS

- Ready to run Windows® CE BSP Bootloader/Monitor
- Board Support Packages
- Custom Linux or Windows CE
- device driver deveopment

ORDERING INFORMATION

- Zoom™ Starter Development Kit (Model # SDK-LH7A400-10-6416)

CUSTOMER SUPPORT

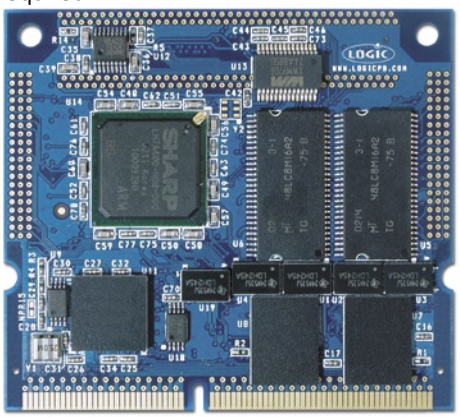
Logic provides technical support for Application Development Kits. Various support packages are available; contact us for more information.

CONTACT

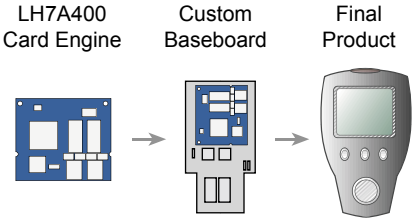
For more information on our Embedded Product Solutions, please contact Logic Sales at www.logicpd.com or 612.672.9495.

The LH7A400 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 use of custom application/peripheral boards make the Card Engine the ideal foundation for OEMs developing embedded computing products. The Card Engine includes BSPs that integrate seamlessly with OS development tools. The Card Engine provides a common reference pin-out on its expansion connectors, which enables customers to easily migrate to next generation microprocessors and technology, when new functionality or performance is required.



Actual Size (2.37" x 2.67")



- **Processor** Sharp LH7A400 32 bit ARM922TDMI RISC microprocessor
  - Running up to 200 MHz (0 to 70 Degrees C) with 100 MHz bus speed
  - Running up to 166 MHZ (-40 to 85 Degrees C) with 83 MHz bus speed
- **SDRAM Memory** 32 or 64 MBytes
- **Flash Memory** NOR or NAND
  - 0, 16, or 32 Mbytes NOR
  - 0, 64, or 128 Mbytes NAND
- **Display** Programmable color LCD controller
  - Built in driver supports up to 800 x 600 x 16 bpp color (1024 x 768 x 8 bit color)
  - Supports STN, Color STN, HR-TFT, AD-TFT, TFT
- **Touch Screen** Four wire resistive touch controller (ADS7843)
- **Network Support** 10/100 BASE-T Ethernet controller (application/debug)
  - SMSC LAN 91C111 (MAC & PHY)
- **Audio** Audio Codec (Wolfson WM9708)
- **Memory Card Expansion**
  - CompactFlash Type 1 card (memory mode only)
  - PCMCIA of CF (2 slots)
  - Smart Card Interface (ISO7816)
  - MMC
- **USB** 1 device interface (USB 2.0 Full Speed)
- **Serial Ports** 3 X 16C550 like, standard UARTS
- **IrDA** SIR supports up to 115.2 Kbps
- **GPIO** Programmable depending on peripheral requirements
- **SPI**
- **Real TIme Clock**
- **Software**
  - BSPs: Windows CE, Linux[1], VxWorks[1]
  - 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
  - Zoom™ Integrated Development Kit (Avail Q3' 04)

[1] *Third Party ports available from Sharp*

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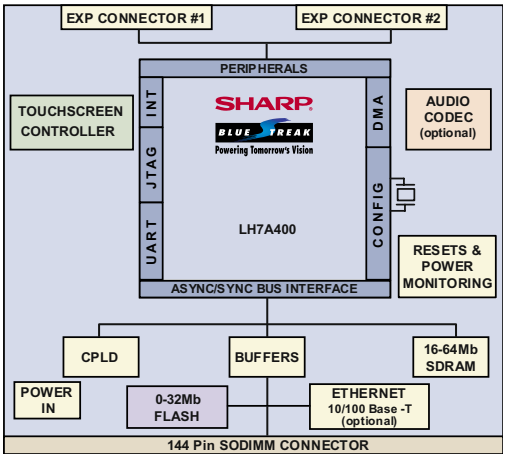
PN: 70000028 Rev F

System on Module Block Diagram



Actual size (60.2mm x 67.8 mm)

The Card Engine CPLD provides the following functionality:

- CF Card Support (memory mode only)
- ISA-like bus interface
- SMSC LAN91C111 wired LAN bus interface and power control logic
- Buffer control logic
- Chip select decoder logic
- Flash program control logic
- Processor mode control logic
- IC code revision register
- PCMCIA Support logic

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 for more information.

Standard System on Module Configuration

Logic Model Number	SDRAM	Nor Flash (MB)	NAND Flash (MB)	Ethernet	Audio	Touch	Temp. Rating
CENGLH7A400-10-400BC	32	0	0	-	-	Y	0 to 70 deg C
CENGLH7A400-10-403EC	32	16	0	-	Y	Y	0 to 70 deg C
CENGLH7A400-10-402HC	32	8	0	Y	Y	Y	0 to 70 deg C
CENGLH7A400-10-503HC	64	16	0	Y	Y	Y	0 to 70 deg C
CENGLH7A400-10-504HC	64	32	0	Y	Y	Y	0 to 70 deg C
CENGLH7A400-10-402HI	32	8	0	Y	Y	Y	-40 to 85 deg C
CENGLH7A400-10-504HI	64	32	0	Y	Y	Y	-40 to 85 deg C

Please contact Logic for custom configurations and availability

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

Zoom™ Starter Development Kit (SDK)

SDKs simplify:
- *Application specific code development*
- *Evaluation of the MCU / System on Module*
- *The transfer of application code, OS and BSPs into production*

Card Engine (with common footprint)

Card Engine complete with:
- *Board Support Packages (Windows CE, Linux, and other RTOS)*
- *Bootloader provides in-field device management, manufacturing, and test capabilities*

Custom Baseboard (with Card Engine)

Baseboard provides:
- *Power*
- *Connectors*
- *Custom peripherals*
- *Custom form factor*

Final Product

Final Product results:
- *Accelerated time to market*
- *Reduced development cost*
- *Customer focuses on core competencies*

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