ORDER NUMBERS:

LPC47B272QFP FOR 100 PIN, QFP PACKAGE

LPC47B272-MS FOR 100 PIN, QFP GREEN, LEAD-FREE ROHS COMPLIANT PACKAGE

80 ARKAY DRIVE, HAUPPAUGE, NY 11788 (631) 435-6000, FAX (631) 273-3123

General Description

The LPC47B27x* is a 3.3V PC98/PC99 compliant Super I/O controller. The LPC47B27x implements the LPC interface, a pin reduced ISA bus interface which provides the same or better performance as the ISA/X-bus with a substantial savings in pins used. The LPC47B27x provides fan control through two fan speed control output pins and two fan tachometer input pins. It also provides 37 general purpose input/output (GPIO) pins, a dual game port interface, MPU-401 MIDI support and ISA IRQ to Serial IRQ conversion.

The LPC47B27x incorporates a keyboard interface, SMSC's true CMOS 765B floppy disk controller, advanced digital data separator, two 16C550A compatible UARTs, one Multi-Mode parallel port which includes ChiProtect circuitry plus EPP and ECP, on-chip 12 mA AT bus drivers, one floppy direct drive support, and Intelligent Power Management including PME support. The true CMOS 765B core provides 100% compatibility with IBM PC/XT and PC/AT architectures in addition to providing data overflow and underflow protection. The SMSC advanced digital data separator incorporates SMSC's patented data separator technology, allowing for ease of testing and use. Both on-chip UARTs are compatible with the NS16C550A. The parallel port is compatible with IBM PC/AT architecture, as well as IEEE 1284 EPP and ECP. The LPC47B27x incorporates sophisticated power control circuitry (PCC) which includes support for keyboard, mouse and consumer infrared wake-up events. The PCC supports multiple low power-down modes.

The LPC47B27x supports the ISA Plug-and-Play Standard register set (Version 1.0a) and provides the recommended functionality to support Windows '95. The I/O Address, DMA Channel and hardware IRQ of each logical device in the LPC47B27x may be reprogrammed through the internal configuration registers. There are 480 (960 for Parallel Port) I/O address location options, a Serialized IRQ interface, and three DMA channels.

The LPC47B27x does not require any external filter components and is therefore easy to use and offers lower system costs and reduced board area. The LPC47B27x is software and register compatible with SMSC's proprietary 82077AA core.

*The “x” in the part number is a designator that changes depending upon the particular BIOS used inside the specific chip. “2” denotes AMI Keyboard BIOS and “7” denotes Phoenix 42i Keyboard BIOS.

PRODUCT PREVIEW

Block Diagram

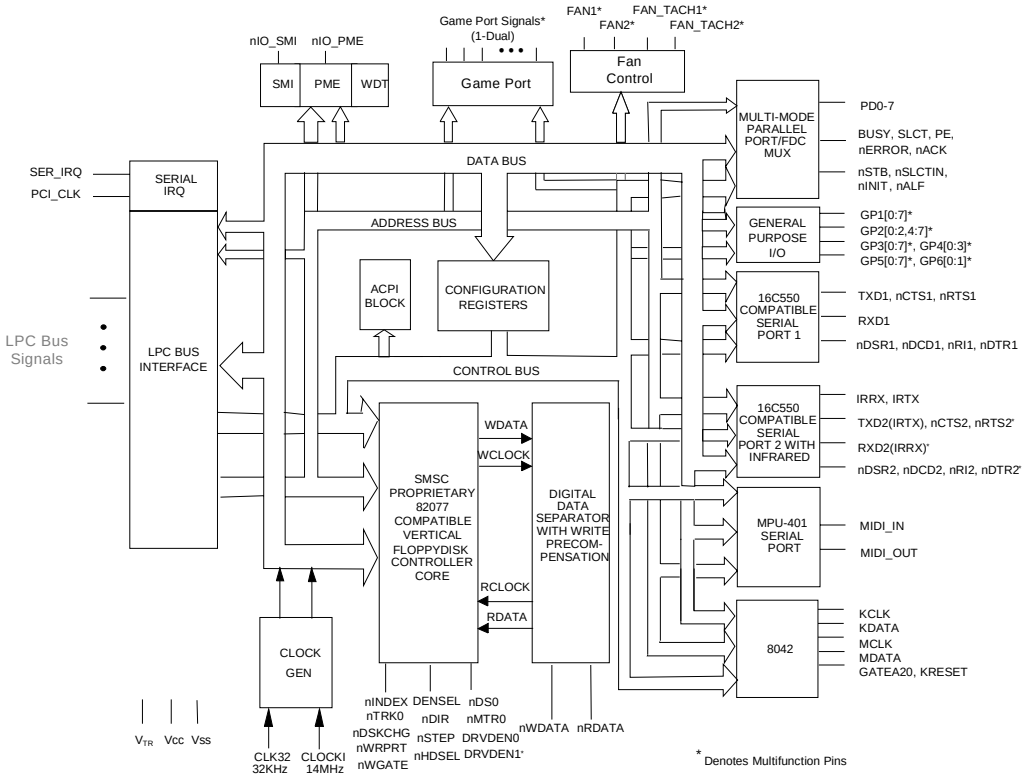

Figure 1 LPC47B27x Block Diagram

PRODUCT PREVIEW

Package Outline

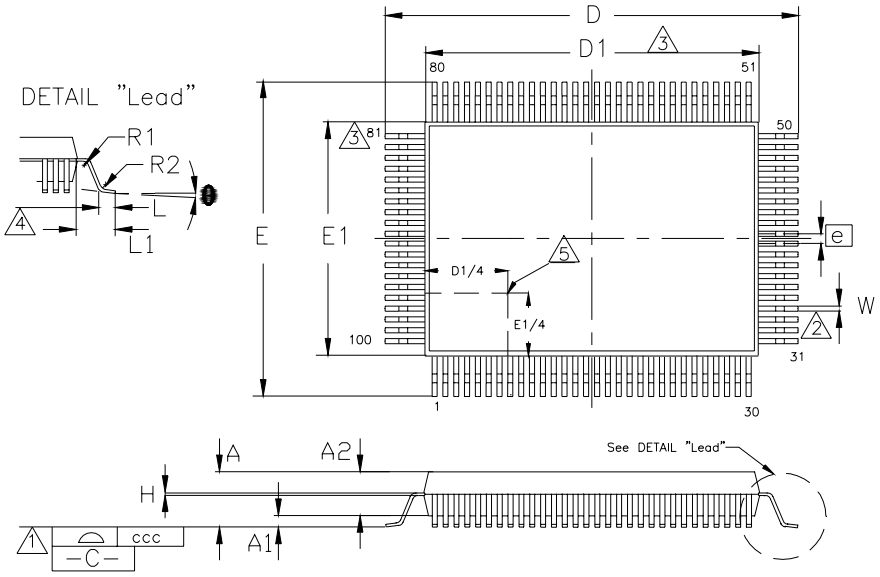

Figure 2 - LPC47B27x 100 Pin QFP Package Outline

Table 1 LPC47B27x 100 Pin QFP Package Parameters

	MIN	NOMINAL	MAX	REMARKS
A	~	~	3.4	Overall Package Height
A1	0.05	~	0.5	Standoff
A2	2.55	~	3.05	Body Thickness
D	23.65	~	24.15	X Span
D1	19.90	~	20.10	X body Size
E	17.65	~	18.15	Y Span
E1	13.90	~	14.10	Y body Size
H	0.11	~	0.23	Lead Frame Thickness
L	0.73	0.88	1.03	Lead Foot Length
L1	~	1.95	~	Lead Length
e	0.65 Basic			Lead Pitch
q	0^o	~	7^o	Lead Foot Angle
W	0.20	~	0.40	Lead Width
R1	0.10	~	0.25	Lead Shoulder Radius
R2	0.15	~	0.40	Lead Foot Radius
ccc	~	~	0.10	Coplanarity

Notes:

1. Controlling Unit: millimeter.
2. Tolerance on the true position of the leads is ± 0.065 mm maximum
3. Package body dimensions D1 and E1 do not include the mold protrusion. Maximum mold protrusion is 0.25 mm.
4. Dimension for foot length L measured at the gauge plane 0.25 mm above the seating plane.
5. Details of pin 1 identifier are optional but must be located within the zone indicated.

PRODUCT PREVIEW