

**F71872****F71872F/FG**

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**Super H/W Monitor + LPC IO**

**Release Date: July, 2007**  
**Revision: V0.28P**

## F71872 Datasheet Revision History

Version	Date	Page	Revision History
0.20P	07/07/2004	-	Preliminary Release Version.
0.21P	07/28/2004	-	Revise PWM Frequency Range
0.22P	10/12/2004	-	Added BEEP/LED_VCC/LED_VSB/FANCTL Functions.
		-	Modified Application Circuit.
0.23P	02/25/2005	-	Added 24MHz Clock Input.
0.24P	04/15/2005	109	Added "Green Package" Ordering Information.
0.25P	08/16/2005	-	Added VID_OTF# Function for Vcore OTF use.
0.26P	09/05/2005	111	Updated Application Circuit.
0.27P	12/28/2006	5	Added Patent Note.
0.28P	07/05/2007	-	Company readdress

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### LIFE SUPPORT APPLICATIONS

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## Table of Contents

<b>1 GENERAL DESCRIPTION .....</b>	<b>4</b>
<b>2 FEATURES .....</b>	<b>4</b>
<b>3 KEY SPECIFICATIONS .....</b>	<b>5</b>
<b>4 PIN CONFIGURATION.....</b>	<b>6</b>
<b>5 PIN DESCRIPTIONS .....</b>	<b>6</b>
5.1 POWER PIN .....	7
5.2 LPC INTERFACE .....	7
5.3 FDC .....	8
5.4 UART PORT AND SIR.....	8
5.5 KBC I/F .....	9
5.6 IEEE 1284 PARALLEL PORT .....	10
5.7 H/W MONITOR .....	11
5.8 ACPI FUNCTION PINS .....	12
5.9 VID CONTROLLING PINS .....	13
<b>6 FUNCTION DESCRIPTION .....</b>	<b>14</b>
6.1 POWER ON STRAPPING OPTIONS.....	14
6.2 ACPI.....	14
6.3 PCI RESET AND PWROK SIGNALS .....	16
6.4 HARDWARE MONITOR .....	16
6.5 FDC .....	23
6.6 UART .....	24
6.7 PARALLEL PORT .....	24
6.8 KEYBOARD CONTROLLER .....	24
6.9 DYNAMIC VOLTAGE CHANGE APPLICATION .....	25
<b>7 REGISTER DESCRIPTIONS.....</b>	<b>27</b>
7.1 GLOBAL CONTROL REGISTERS .....	27
7.1.1 Software Reset Register —Index 02h .....	27
7.1.2 Logic Device Number Register —Index 07h.....	27
7.1.3 Chip ID Register —Index 20h .....	28
7.1.4 Chip ID Register —Index 21h .....	28
7.1.5 Vendor ID Register —Index 23h .....	28

7.1.6	Vendor ID Register —Index 24h .....	28
7.1.7	Software Power Down Register —Index 25h .....	28
7.1.8	UART IRQ Sharing Register —Index 26h .....	29
7.1.9	Port Select Register —Index 27h.....	29
7.1.10	Power LED Function Select Register —Index 28h.....	29
7.1.11	Multi Function Select 1 Register —Index 29h (Powered by VDD).....	30
7.1.12	Multi Function Select 2 Register —Index 2Ah (Powered by VDD).....	31
7.1.13	Multi Function Select 3 Register —Index 2Bh (Powered by VDD).....	32
7.1.14	Multi Function Select 4 Register —Index 2Ch (Powered by VSB3V).....	32
7.1.15	Multi Function Select 5 Register —Index 2Dh (Powered by VSB3V).....	33
7.2	FDC REGISTERS.....	34
7.2.1	Logic Device Number Register.....	34
7.2.2	FDC Configuration Registers.....	34
7.2.3	Device Registers .....	37
7.3	UART1 REGISTERS.....	52
7.3.1	Logic Device Number Register.....	52
7.3.2	UART 1 Configuration Registers.....	52
7.3.3	Device Registers .....	53
7.4	UART 2 REGISTERS .....	56
7.4.1	Logic Device Number Register.....	56
7.4.2	UART 2 Configuration Registers.....	57
7.4.3	Device Registers .....	58
7.5	PARALLEL PORT REGISTERS .....	62
7.5.1	Logic Device Number Register.....	62
7.5.2	Parallel Port Configuration Register .....	62
7.5.3	Device Registers .....	63
7.6	HARDWARE MONITOR REGISTERS.....	67
7.6.1	Logic Device Number Register.....	67
7.6.2	Hardware Monitor Configuration Registers.....	68
7.6.3	Device Registers .....	69
7.7	KEYBOARD REGISTER .....	88
7.7.1	Logic Device Number Register.....	88
7.7.2	KBC Configuration Registers .....	89
7.7.3	Device Registers .....	90
7.8	GPIO REGISTERS .....	91
7.8.1	Logic Device Number Register.....	91
7.8.2	Configuration Registers .....	92

**F71872**

7.9	VID REGISTER .....	100
7.9.1	Logic Device Number Register .....	100
7.9.2	VID Configuration Registers .....	100
7.9.3	Device Registers .....	101
7.10	ACPI AND PME REGISTERS .....	103
7.10.1	Logic Device Number Register .....	103
7.10.2	ACPI and PME Configuration Registers.....	104
<b>8</b>	<b>PCB LAYOUT GUIDE.....</b>	<b>106</b>
<b>9</b>	<b>ELECTRICAL CHARACTERISTICS .....</b>	<b>108</b>
9.1	ABSOLUTE MAXIMUM RATINGS .....	108
9.2	DC CHARACTERISTICS .....	108
9.3	AC CHARACTERISTICS .....	109
<b>10</b>	<b>ORDERING INFORMATION.....</b>	<b>109</b>
<b>11</b>	<b>PACKAGE DIMENSIONS.....</b>	<b>110</b>
<b>12</b>	<b>F71872 DEMO CIRCUIT.....</b>	<b>111</b>

## 1 General Description

The F71872 is the featured IO chip specifically for PC system. Equipped with one IEEE 1284 parallel port, two UART port and FDC. The F71872 provides SIR and key board controller compatible with PS/2 keyboard and mouse as well, integrated with hardware monitor, supports 11 sets of voltage sensor and 4 voltage fault signal outputs, 3 sets of creative auto-controlling fans and 3 temperature sensor pins for the accurate current type temp. Measurement for CPU thermal diode or external transistors 2N3906.

The F71872 provides flexible features for multi-directional application. For instance, supports CPU VID (Intel CPU On The Fly) controlling and comply with VRM10.0, provides 24 GPIO pins which include pulse/level mode selection, IRQ sharing function also designed in UART feature for particular usage and accurate current mode H/W monitor will be worth in measurement of temperature.

Furthermore, the F71872 supports an automatic/dynamic over-voltage function (Vcore change) for application of over-clocking or under clocking. This function provides a pin (VID\_OTF#) by external trigger signal to improve the CPU's performance by voltage (Vcore) changing automatically when system is going to run over-clocking or under-clocking. Due to achieve this action, suggest F75133S Loading Gauge can be the part detects system/CPU loading to decide when issues the over-clocking/under-clocking and dynamic signals for system executing. Briefly, user can gain more features on motherboard by these two parts which improve performance and efficiency.

The F71872 is powered by 3.3V voltage, with the LPC interface in the package of 128-QFP.

## 2 Features

### ● General Functions

- Comply with LPC Spec. 1.0
- Support DPM (Device Power Management), ACPI
- Support CPU VID (Intel CPU On The Fly) controlling and comply with VRM10.0
- Vcore monitoring supports dynamic VID
- Support automatic and dynamic vcore change function for over/under clocking use
- 24 GPIO Pins for flexible application
- 24/48 MHz clock input

### ● FDC

- Compatible with IBM PC AT disk drive systems
- Variable write pre-compensation with track selectable capability
- Support vertical recording format
- DMA enable logic
- 16-byte data FIFOs
- Support floppy disk drives and tape drives
- Detects all overrun and under run conditions
- Built-in address mark detection circuit to simplify the read electronics
- Completely compatible with industry standard 82077
- 360K/720K/1.2M/1.44M/2.88M format; 250K, 300K, 500K, 1M, 2M bps data transfer rate