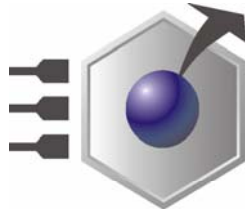


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An0006

CPU-1232 : I/O Memory Map

Rev.2.0

Sep. 2005

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ABOUT THIS MANUAL

This application note contains information regarding the I/O Memory map for the CPU-1232



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Conventions

The following table lists conventions used throughout this guide.

Icon	Notice Type	Description
	Information note	Important features or instructions
	Warning	Information to alert you to potential damage to a program, system or device or potential personal injury

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CPU-1232 I/O Port Map

On CPU-1232 the I/O address space from:

- 110h to 11Bh is used for internal glue logic
- 11Ch to 11Fh is used for PD71054 timer chip

These registers can be accessed with simple I/O operations.

However only the bits 0, 1 & 2 are useful, writing or reading to bits 4 thru 7 will make an undefined result.

The following tables give a brief description of each of these registers.

General Board Status, Control and Revision registers

I/O Port 110h, E1001_STATUS_Register_0

Reset value: 0XX

Bit	Mode	Name	Description
2	Read / Write	CLEAR_WDLED	0: Normal Behavior 1: Clear Watchdog LED
1	Read only	EXTBIOS_STATUS	0: Jumper External BIOS inserted 1: Jumper External BIOS left open
0	Read only	INVEE_EXTBIOS_STATUS	0: Jumper Ext BIOS or Invalid Setup inserted 1: Jumper Ext BIOS or Invalid Setup left open

I/O Port 111h, E1001_DETECTION

Reset value: 010

Bit	Mode	Name	Description
2:0	Read only	CPU123X_DETECT	010: Board is a CPU1232

I/O Port 112h, E1001_FlashCTRL

Reset value: x1x

Bit	Mode	Name	Description
2	Not Applicable	Reserved	
1	Read / Write	E1001_FLASHCTRL	0: Put Flash BIOS in Power down 1: Normal behavior
0	Not Applicable	Reserved	

I/O Port 113h, E1001_CNFG_BANK

Reset value: 000

Bit	Mode	Name	Description
2:0	Read / Write	E1001_CNFG_BANK	Choose the device present on SSD socket or the device decoded in E8000h window (32k wide) 000: None device selected 001: Flash BIOS on E8000h 010: DOC Eurom 011: SRAM 512k 100: N/A 101: ATMEL Flash Perom 110: N/A 111: N/A Note: The window for the D.O.C Eurom can be moved to another address through the E1001_DOC_WIN_SEL Register

I/O Port 114h (Read), E1001_REVL

Reset Value: Not Applicable

Bit	Mode	Name	Description
2:0	Read only	E1001_REVL (0:2)	Low byte of programmable revision level

I/O Port 114h (Write), E1001_ADDBL

Reset value: 000

Bit	Mode	Name	Description
2:0	Write only	E1001_ADDBL	Page address (ADDB16:14) for SSD socket and Flash Intel

I/O Port 115h (Read), E1001_REVH

Reset Value: Not Applicable

Bit	Mode	Name	Description
2:0	Read only	E1001_REVH (0:2)	High byte of programmable revision level

I/O Port 115h (Write), E1001_ADDBH

Reset Value: 000

Bit	Mode	Name	Description
2:0	Write only	E1001_ADDBH	Page address (ADDB19:17) for SSD socket and Flash Intel

Serial Control Registers

I/O Port 116h, E1001_SERIAL_CONTROL0

Reset Value: 000

Bit	Mode	Name	Description
2	Not Applicable	Not Applicable	Reserved
1:0	Read / Write	E1001_SERIAL_CONTROL0	Setting for first serial port (J5 connector) 00: Disabled 01: RS232 mode 10: RS422 mode 11: RS485 mode

I/O Port 117h, E1001_SERIAL_CONTROL1

Reset Value: 000

Bit	Mode	Name	Description
2:1	Not Applicable	Not Applicable	Reserved
0	Read / Write	E1001_SERIAL_CONTROL1	Setting for second serial port on J6 connector 00: Disabled 01: RS232 mode

External devices related registers

I/O Port 118h, E1001_IRQ_TIMER

Reset Value: xxx

Bit	Mode	Name	Description
2	Read / Write	E1001_IRQ_TIMER0	Enable the 3 rd channel to send an interrupt 0: Disable channel 2 interrupt 1: Enable channel 2 interrupt
1	Read / Write	E1001_IRQ_TIMER1	Enable the 2 nd channel to send an interrupt 0: Disable channel 1 interrupt 1: Enable channel 1 interrupt
0	Read / Write	E1001_IRQ_TIMER2	Enable the 1 st channel to send an interrupt 0: Disable channel 0 interrupt 1: Enable channel 0 interrupt

I/O Port 119h, E1001_DEVICE_CTRL

Reset value: x10

Bit	Mode	Name	Description
2	Not Applicable	Reserved	Reserved
1	Read / Write	E1001_CTRL_ETHERNET	00: Ethernet controller disabled 01: Ethernet controller enabled
0	Read / Write	E1001_CTRL_TIMER	Enable timer device to give an interrupt 0: Interrupt generation disabled 1: Interrupt generation enabled Note: The interrupt generated is IRQ10

I/O Port 11Ah, E1001_DS2430

Reset value: x10

Bit	Mode	Name	Description
2	Not Applicable	Reserved	Reserved
1	Read / Write	E1001_DS2430_CNTL	Direction of data to/from DS2430 0: output 1: input
0	Read / Write	E1001_DS2430_DATA	Data bit written to or read from DS2430. Note: Direction depends on E1001_DS2430_CNTL setting

I/O Port 11Bh, E1001_DOC_WIN_SEL

Reset value: 111

Bit	Mode	Name	Description
2:0	Read / Write	E1001_DOC_WIN_SEL	Selection of address window for the DOC Eurom 000: CC000h 001: D0000h 010: D4000h 011: D8000h 100: DC000h 101: E0000h 110: E4000h 111: E8000h Note: All the EUROM windows are 16k wide, except the last one that is 32k wide.

I/O Port 11Ch – 11Fh, E1001_TIMER_DATA_CNTL

Reset value: 111

Bit	Mode	Name	Description
2:0	Read / Write	Not Applicable	Reserved They are reserved as the Timer 71054 registers 11Ch: Counter 0 11Dh: Counter 1 11Eh: Counter 2 11Fh: Control word register

Related Documents

For further information on the CPU-1232 please refer to the following documentation:

- CPU-1232, User Manual.
- Application Notes:
 - An0009, AdditionalTimersCPU1232
 - An0027, CPU1232 Memory-IO-IRQ-DMA
 - An0031, CPU-1232 TFT Digital Interface
 - An0035, Cable Set for CPU-1232
 - An0039, CPU-1232 Soft power Management
 - An0048, CPU-1232 Expansion Socket

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