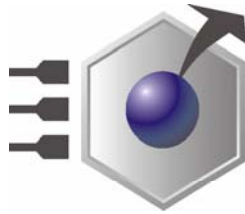


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An0020

CPU-1220; Memory I/O IRQ DMA Maps

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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

Mode of the register:

R/W: Read and write register.

RO : Read only register.

W : Meaning of the register when written.

R : Meaning of the register when read.

Name ranges:

A name followed by a range in brackets, for example Name[0:2], represent a range of logically related entities.

Hex Number:

Hexadecimal numbers are represented with a 'h' suffix. (for example 11Ch)

Contents

Conventions	3
Contents	5
Foreword	7
Tables.....	7
<i>Memory space</i>	7
<i>I/O space</i>	8
<i>IRQ assignment</i>	9
<i>DMA assignment</i>	9

Foreword

In the following tables, this Application note describes, the Memory map, the I/O map, the IRQ map, the DMA map and the PCI Configuration space for the CPU-1220.

Tables

Memory space

Start address (Hex)	End Address (Hex)	Area Amount	Device name and/or function	Physical Device or Bus selected
0	9FFFF	640Kbyte	System Memory Used by operating system	Onboard SDram
A0000	BFFFF	128Kbyte	video frame buffer area used by VGA video system	Onboard VGA Memory
C0000	CFFFF	64Kbyte	Free area	Isa bus
D0000	DFFFF	64Kbyte	Free area	Isa bus
E0000	E7FFF	32Kbyte	Free area	Isa bus
E8000	EFFFF	32Kbyte	Bios paging system and DOC area	Onboard Flash
F0000	FFFFF	64Kbyte	Bios area	Onboard Flash
100000	7FFFFF	7Mbyte	System Memory Used by operating system	Onboard SDram
800000	1FFFFFF	24Mbyte	System Memory Used by operating system (if module has 32Mbyte Sdram)	Onboard Sdram
			Free area (if module has 8Mbyte Sdram)	PCI bus
2000000	FFFEFFFF	3.8Gbyte	Free area	PCI bus
FFFF0000	FFFFFFFF	64Kbyte	Bios area	Onboard Flash

I/O space

Start address (Hex)	End Address (Hex)	Area Amount	Device name and/or function	Physical Device selected
0000	000F	16 byte	8237 DMA controller 1 registers.	STPC
0020	0021	2 byte	8259 Interrupt controller 1 registers.	STPC
0022	0022	1 byte	STPC specific configuration registers index port	STPC
0023	0023	1 byte	STPC specific configuration registers data port	STPC
0040	0043	4 byte	8254 Timer/Counter registers. 1	STPC
0060	0064	5 byte	Keyboard shadow registers. 1	STPC
0070	0071	2 byte	NMI Mask control registers. 1	STPC
0080	008F	16 byte	DMA Page registers.	STPC
0094	0094	1 byte	Mother-board VGA enable. 2	STPC
00A0	00A1	2 byte	8259 Interrupt controller 2 registers. 1	STPC
00C0	00DF	32 byte	8237 DMA controller 2 registers. 1	STPC
00E0	00EF	16 byte	Flash paging system control registers	Control Device
0102	0102	1 byte	VGA setup register.	STPC
0170	0177	8 byte	Secondary IDE controller (Not used)	STPC
01F0	01F7	8 byte	Primary IDE controller	STPC
0278	027B	4 byte	LPT possible address or free	SuperIO
02E8	02EF	8 byte	COM possible address or free	SuperIO
02F8	02FF	8 byte	COM possible address or free	SuperIO
0370	0371	2 byte	SuperIO setup registers	SuperIO #2
0376	0376	1 byte	IDE controller	STPC
0378	037B	4 byte	LPT possible address or free	SuperIO
03BC	03BF	4 byte	LPT possible address or free	SuperIO
03B4h,03B5h,03Bah 03C0h-03CFh 03D4h,03D5h,03Dah			VGA registers	STPC
03E8	03EF	8 byte	COM possible address or free	SuperIO
03F0	03F1	2 byte	SuperIO setup registers	SuperIO #1
0CF8	0CF8	1 byte	PCI configuration Address register.	STPC
0CFC	0CFF	4 byte	VGA add-in mode enable register.	STPC

Note that STPC register from 0 to FFh use a 10 bit I/O address decode.

For example the DMA register is replicated at address 400..40Fh, 800...80Fh, and so on for each alias of the range 0...3FFh

IRQ assignment

Hardware Irq	Assignment	Physical source
0	System timer	STPC
1	Keyboard	SuperIO
2	Second programmable interrupt controller cascade	STPC
3	COM or LPT possible or free	SuperIO
4	COM or LPT possible or free	SuperIO
5	COM or LPT possible or free	SuperIO
6	Standard Floppy Disk controller	SuperIO
7	COM or LPT possible or free	SuperIO
8	Real Time Clock / Cmos	SuperIO
9	Ethernet or COM or LPT possible or free	SuperIO
10	Ethernet or COM or LPT possible or free	SuperIO
11	Ethernet or COM or LPT possible or free	SuperIO
12	Ethernet or COM or LPT or Mouse PS/2 possible or free	SuperIO
13	Reserved	
14	Primary IDE controller	STPC
15	COM or LPT possible or free	SuperIO

DMA assignment

Hardware DMA	Assignment	Physical source
0	LPT possible	SuperIO
1	Free	
2	Standard Floppy Disk controller	SuperIO
3	LPT possible	SuperIO
4	DMA controller Cascade	STPC
5	Free	
6	Free	
7	Free	