

# Resource Overview

## Rack PC 840, Box PC 840

**Assignment of I/O addresses:**

IO address (hex)		Size	Relevance	
from	to	byte	Basic function	Possible alternative function
0000	000F	16	DMA 1 Register Control	
0010	001F	16	reserved	
0020	0021	2	Interrupt Control 1 Control Register	
0022	002D	12	reserved	
002E	002F	2	Configuration port Ultra I/O	
0030	003F	16	reserved	
0040	0042	3	Timer Channels 0, 1, 2 ( Clock,Refresh,Speaker )	
0043		1	Timer Register Control	
0044	005F	28	reserved	
0060		1	Control for keyboard date	
0061		1	SystemControl Port B (Timer,Speaker control,NMI,Parity )	
0062	0063	2	reserved	
0064		1	Control for keyboard CMD / STATUS	
0065	006F	11	reserved	
0070		1	NMI enable, CMOS Index	
0071		1	CMOS Date	
0072		1	Ext. CMOS Index	
0073		1	Ext. CMOS Date	
0081	0083	3	DMA-Page Register Ch2, 3, 1	
0084	0086	3	reserved	
0087		1	DMA-Page Register Ch0	
0088		1	reserved	
0089	008B	3	DMA-Page Register Ch6, 7, 5	
008C	008E	3	reserved	
008F		1	DMA-Page Register Ch4	
0090	0091	2	reserved	
0092		1	System Control Port A ( Fast Reset,Fast A20)	
0093	009F	13	DMA-Page Register Ch4	
00A0	00A1	2	Interruptcontroller 2 Register Control	
00A2	00BF	30	reserved	
00C0	00DF	32	DMA-Controller 2 Control Register	
00E0	00E1	2	Configuration Register for MPI,COM,VGA,Progas,Trackball,etc.	
00E2	00EF	14	reserved	
00F0	00F1	2	Numeric Processor	
00F2	00F7	6	reserved	
00F8	00FF	8	Numeric Processor	
0100	010F	16	<b>available</b>	
0110	016F	96	<b>available</b>	
0170	0177	8	<b>available</b>	
0178	01EF	120	<b>available</b>	
01F0	01F7	8	Primary onboard IDE-channel	Can be disabled in Setup, then available
01F8	01FF	8	<b>available</b>	
0200	020F	16	reserved for Game Port	otherwise available
0210	0277	104	<b>available</b>	
0278	027B	4	reserved for LPT 2	
027C	02E7	108	<b>available</b>	
02E8	02EF	8	reserved for COM 4	
02F0	02F7	8	<b>available</b>	
02F8	02FF	8	COM2 ( / IRDA )	Can be disabled in Setup, then available
0300	031F	32	<b>available</b>	
0320	032F	16	reserved for SafeCard	otherwise available
0330	033F	16	<b>available</b>	
0340	035F	32	reserved for Higraph (CPU-) Hostinterface Expansion Card	SCSI-Adapter e.g. AHA1542C
0360	0367	8	reserved for PC-E-S5 (H1 Expansion Card)	otherwise available
0368	036F	8	<b>available</b>	
0370	0377	8	reserved for Floppy 2	available
0378	037F	8	LPT 1	Can be disabled in Setup, then available
0380	038F	16	<b>available</b>	
0390	0397	8	reserved for CP1413 (H1 Expansion Card)	otherwise available
0398	039F	8	<b>available</b>	
03A0	03AF	16	<b>available</b>	
03B0	03BB	12	Monochrome Monitor Card or EGA / VGA	
03BC	03BF	4	reserved for LPT x	

## SIMATIC PC / PG

IO address (hex)		Size	Relevance	
from	to	byte	Basic function	Possible alternative function
03C0	03CF	16	VGA- Register Control	
03D0	03DF	16	CGA / VGA Register Control	
03E0	03E1	2	PCMCIA Controller	Can be disabled in Setup, then available
03E2	03E7	6	<b>available</b>	
03E8	03EF	8	reserved for COM 3	
03F0	03F5	6	Onboard Floppy	
03F6		1	primary IDE-command	
03F7		1	primary IDE-status / Floppy Chg.	
03F8	03FF	8	COM1	Can be disabled in Setup, then available
0400	040A	11	<b>available</b>	
040B		1	EISA DMA Extended Mode Register	
040C	04D5	202	<b>Available</b>	
04D6		1	EISA DMA Extended Mode Register	
04D7	0777	673	<b>Available</b>	
0778	077A	3	ECP LPT 1	
077B	0CF7	1405	<b>available</b>	
0CF8	0CFB	4	PCI Config Index	
0CFC	0CFF	4	PCI Config Data	
0D00	0EFF	512	<b>available</b>	
0F00	0F7F	128	SuperIO	
0F80	0FFF	128	<b>available</b>	
1000	10FF	256	Assigned internally (ACPI / TCO)	
1180	11FF	128	Assigned internally	
1800	187F	128	Assigned internally (SMB / USB)	
1880	FEFF	59008	<b>PCI IO Address</b>	
FF00	FF0F	16	IDE-Bus Masterregister	

### Interrupt Assignment:

IRQ	Relevance	Comment
IRQ0	Timer output 0	assigned
IRQ1	Keyboard	assigned
IRQ2	Cascaded (IRQ9)	assigned
IRQ3	Serial port 2	can be disabled in Setup
IRQ4	Serial port 1	can be disabled in Setup
IRQ5	LPT2, PCI, not used	1)
IRQ6	FD-Controller	assigned
IRQ7	Parallel Port 1	can be disabled
IRQ8	Real Time Clock (RTC)	assigned
IRQ9	VGA, PCI, available	1)
IRQ10	PCI, available	1)
IRQ11	PCI, available	1)
IRQ12	PS-2 Mouse	can be disabled
IRQ13	Numeric-Processor	assigned
IRQ14	1. HD-Control 1	can be disabled in Setup
IRQ15	2. HD-Control 2	can be disabled in Setup

**Assignment Of Memory Addresses:**

From	To	Size	Description of basic functions	Possible alternative functions
0000 0000	0007 FFFF	512K	Conventional System Memory	
0008 0000	0009 8FFF	123K	Conventional System Memory Expansion	
0009 9C00	0009 FFFF	5K	XBDA, extended Bios Data Area	
000A 0000	000A FFFF	64K	VGA Refresh Memory	SMM for Power Management
000B 0000	000B 7FFF	32K	Monochrome Monitor Graphics/Text Refresh Memory	
000B 8000	000B FFFF	32K	VGA Monitor Graphics/Text Refresh Memory	
000C 0000	000C BFFF	48K	VGA-BIOS-Expansion	
000C C000	000C CFFF	4K	PXE	Always assigned
000C D000	000C DFFF	4K	<b>Optional PXE Part</b>	Can be disabled in SETUP, via EMM High DOS Memory
000C D000	000C FFFF	12K	<b>available</b> (Device driver or ISA hardware)	via EMM High DOS Memory
000D 0000	000D 7FFF	32K	<b>available</b> (Device driver or ISA hardware)	via EMM High DOS Memory
000D 8000	000D FFFF	32K	<b>available</b> (Device driver or ISA hardware)	via EMM High DOS Memory
000E 0000	000E 3FFF	16K	Legacy USB BIOS expansion, cannot be used for ISA cards!	via EMM High DOS Memory
000E 6000	000F FFFF	112K	System BIOS	
0010 0000	00EF FFFF	14M	System memory	
00F0 0000	00FF FFFF	16M-15M=1M	System memory or entire memory	via Setup ISA-Memory (Memory-Hole)
0100 0000	1FFF FFFF	Max. 512MB – 16MB	System memory, 512 kByte are reserved for USB.	Depending on memory configuration
2000 0000	FFF7 FFFF		PCI Memory Addresses	For PCI Expansion Card
FFF8 0000	FFFF FFFF		Firmware HUB	