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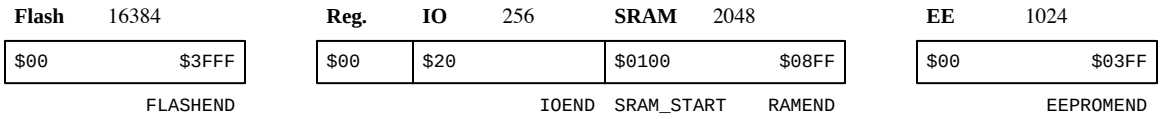
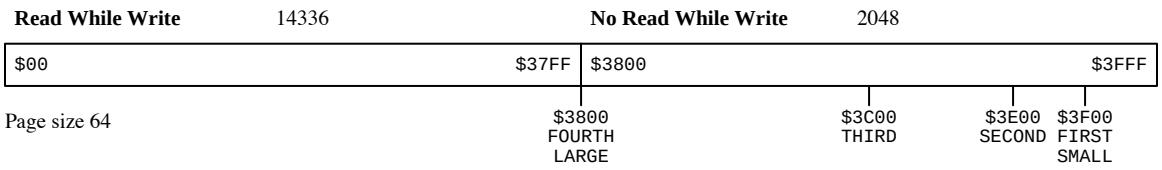
Memory



Boot Start



I/O Registers

Name	Type	7	6	5	4	3	2	1	0
ACSR	i/o	ACD	ACBG	ACO	ACI	ACIE	ACIC	ACIS1	ACIS0
ADCH	mem	ADCH7	ADCH6	ADCH5	ADCH4	ADCH3	ADCH2	ADCH1	ADCH0
ADCL	mem	ADCL7	ADCL6	ADCL5	ADCL4	ADCL3	ADCL2	ADCL1	ADCL0
ADCSRA	mem	ADEN	ADSC	ADATE	ADIF	ADIE	ADPS2	ADPS1	ADPS0
ADCSRB	mem	.	ACME	.	.	.	ADTS2	ADTS1	ADTS0
ADMUX	mem	REFS1	REFS0	ADLAR	.	MUX3	MUX2	MUX1	MUX0
ASSR	mem	.	EXCLK	AS2	TCN2UB	OCR2AUB	OCR2BUB	TCR2AUB	TCR2BUB
CLKPR	mem	CLKPCE	.	.	.	CLKPS3	CLKPS2	CLKPS1	CLKPS0
DDRB	bit	DDB7	DDB6	DDB5	DDB4	DDB3	DDB2	DDB1	DDB0
DDRC	bit	.	DDC6	DDC5	DDC4	DDC3	DDC2	DDC1	DDC0
DDRD	bit	DDD7	DDD6	DDD5	DDD4	DDD3	DDD2	DDD1	DDD0
DIDR0	mem	.	.	ADC5D	ADC4D	ADC3D	ADC2D	ADC1D	ADC0D
DIDR1	mem	.	.	.	.	.	.	AIN1D	AIN0D
EEARH	i/o	.	.	.	.	.	.	EEAR9	EEAR8
EEARL	i/o	EEAR7	EEAR6	EEAR5	EEAR4	EEAR3	EEAR2	EEAR1	EEAR0
EECR	bit	.	.	EEPM1	EEPM0	EERIE	EEMPE	EEPE	EERE
EEDR	i/o	EEDR7	EEDR6	EEDR5	EEDR4	EEDR3	EEDR2	EEDR1	EEDR0
EICRA	mem	.	.	.	.	ISC11	ISC10	ISC01	ISC00
EIFR	bit	.	.	.	.	.	.	INTF1	INTF0
EIMSK	bit	.	.	.	.	.	.	INT1	INT0
GPIOR0	bit	GPIOR07	GPIOR06	GPIOR05	GPIOR04	GPIOR03	GPIOR02	GPIOR01	GPIOR00
GPIOR1	i/o	GPIOR17	GPIOR16	GPIOR15	GPIOR14	GPIOR13	GPIOR12	GPIOR11	GPIOR10
GPIOR2	i/o	GPIOR27	GPIOR26	GPIOR25	GPIOR24	GPIOR23	GPIOR22	GPIOR21	GPIOR20
GTCCR	i/o	TSM	.	.	.	.	.	PSRASY	PSRSYNC
ICR1H	mem	–	–	–	–	–	–	–	–
ICR1L	mem	–	–	–	–	–	–	–	–
MCUCR	i/o	.	.	.	PUD	.	.	IVSEL	IVCE
MCUSR	i/o	.	.	.	.	WDRF	BORF	EXTRF	PORF
OCR0A	i/o	OCR0A_7	OCR0A_6	OCR0A_5	OCR0A_4	OCR0A_3	OCR0A_2	OCR0A_1	OCR0A_0
OCR0B	i/o	OCR0B_7	OCR0B_6	OCR0B_5	OCR0B_4	OCR0B_3	OCR0B_2	OCR0B_1	OCR0B_0
OCR1AH	mem	–	–	–	–	–	–	–	–
OCR1AL	mem	–	–	–	–	–	–	–	–
OCR1BH	mem	–	–	–	–	–	–	–	–
OCR1BL	mem	–	–	–	–	–	–	–	–
OCR2A	mem	OCR2A_7	OCR2A_6	OCR2A_5	OCR2A_4	OCR2A_3	OCR2A_2	OCR2A_1	OCR2A_0
OCR2B	mem	OCR2B_7	OCR2B_6	OCR2B_5	OCR2B_4	OCR2B_3	OCR2B_2	OCR2B_1	OCR2B_0
OSCCAL	mem	CAL7	CAL6	CAL5	CAL4	CAL3	CAL2	CAL1	CAL0
PCICR	mem	.	.	.	.	.	PCIE2	PCIE1	PCIE0
PCIFR	bit	.	.	.	.	.	PCIF2	PCIF1	PCIF0
PCMSK0	mem	PCINT7	PCINT6	PCINT5	PCINT4	PCINT3	PCINT2	PCINT1	PCINT0
PCMSK1	mem	.	PCINT14	PCINT13	PCINT12	PCINT11	PCINT10	PCINT9	PCINT8
PCMSK2	mem	PCINT23	PCINT22	PCINT21	PCINT20	PCINT19	PCINT18	PCINT17	PCINT16
PINB	bit	PINB7	PINB6	PINB5	PINB4	PINB3	PINB2	PINB1	PINB0
PINC	bit	.	PINC6	PINC5	PINC4	PINC3	PINC2	PINC1	PINC0
PIND	bit	PIND7	PIND6	PIND5	PIND4	PIND3	PIND2	PIND1	PIND0
PORTB	bit	PORTB7	PORTB6	PORTB5	PORTB4	PORTB3	PORTB2	PORTB1	PORTB0
PORTC	bit	.	PORTC6	PORTC5	PORTC4	PORTC3	PORTC2	PORTC1	PORTC0
PORTD	bit	PORTD7	PORTD6	PORTD5	PORTD4	PORTD3	PORTD2	PORTD1	PORTD0
PRR	mem	PRTWI	PRTIM2	PRTIM0	.	PRTIM1	PRSPI	PRUSART0	PRADC
SMCR	i/o	.	.	.	.	SM2	SM1	SM0	SE

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SPCR	i/o	SPIE	SPE	DORD	MSTR	CPOL	CPHA	SPR1	SPR0
SPDR	i/o	SPDR7	SPDR6	SPDR5	SPDR4	SPDR3	SPDR2	SPDR1	SPDR0
SPH	i/o	–	–	–	–	–	–	–	–
SPL	i/o	–	–	–	–	–	–	–	–
SPMCSR	i/o	SPMIE	RWWSB	.	RWWSRE	BLBSET	PGWRT	PGERS	SELFPRGEN
SPSR	i/o	SPIF	WCOL	.	.	.	.	.	SPI2X
SREG	i/o	I	T	H	S	V	N	Z	C
TCCR0A	i/o	COM0A1	COM0A0	COM0B1	COM0B0	.	.	WGM01	WGM00
TCCR0B	i/o	FOC0A	FOC0B	.	.	WGM02	CS02	CS01	CS00
TCCR1A	mem	COM1A1	COM1A0	COM1B1	COM1B0	.	.	WGM11	WGM10
TCCR1B	mem	ICNC1	ICES1	.	WGM13	WGM12	CS12	CS11	CS10
TCCR1C	mem	FOC1A	FOC1B	.	.	.	.	.	.
TCCR2A	mem	COM2A1	COM2A0	COM2B1	COM2B0	.	.	WGM21	WGM20
TCCR2B	mem	FOC2A	FOC2B	.	.	WGM22	CS22	CS21	CS20
TCNT0	i/o	TCNT0_7	TCNT0_6	TCNT0_5	TCNT0_4	TCNT0_3	TCNT0_2	TCNT0_1	TCNT0_0
TCNT1H	mem	–	–	–	–	–	–	–	–
TCNT1L	mem	–	–	–	–	–	–	–	–
TCNT2	mem	TCNT2_7	TCNT2_6	TCNT2_5	TCNT2_4	TCNT2_3	TCNT2_2	TCNT2_1	TCNT2_0
TIFR0	bit	.	.	.	.	.	OCF0B	OCF0A	TOV0
TIFR1	bit	.	.	ICF1	.	.	OCF1B	OCF1A	TOV1
TIFR2	bit	.	.	.	.	.	OCF2B	OCF2A	TOV2
TIMSK0	mem	.	.	.	.	.	OCIE0B	OCIE0A	TOIE0
TIMSK1	mem	.	.	ICIE1	.	.	OCIE1B	OCIE1A	TOIE1
TIMSK2	mem	.	.	.	.	.	OCIE2B	OCIE2A	TOIE2
TWAMR	mem	TWAM6	TWAM5	TWAM4	TWAM3	TWAM2	TWAM1	TWAM0	.
TWAR	mem	TWA6	TWA5	TWA4	TWA3	TWA2	TWA1	TWA0	TWGCE
TWBR	mem	TWBR7	TWBR6	TWBR5	TWBR4	TWBR3	TWBR2	TWBR1	TWBR0
TWCR	mem	TWINT	TWEA	TWSTA	TWSTO	TWWC	TWEN	.	TWIE
TWDR	mem	TWD7	TWD6	TWD5	TWD4	TWD3	TWD2	TWD1	TWD0
TWSR	mem	TWS7	TWS6	TWS5	TWS4	TWS3	.	TWPS1	TWPS0
UBRR0H	mem	.	.	.	.	UBRR11	UBRR10	UBRR9	UBRR8
UBRR0L	mem	UBRR7	UBRR6	UBRR5	UBRR4	UBRR3	UBRR2	_UBRR1	_UBRR0
UCSR0A	mem	RXC0	TXC0	UDRE0	FE0	DOR0	UPE0	U2X0	MPCM0
UCSR0B	mem	RXCIE0	TXCIE0	UDRIE0	RXEN0	TXEN0	UCSZ02	RXB80	TXB80
UCSR0C	mem	UMSEL01	UMSEL00	UPM01	UPM00	USBS0	UCSZ01	UCSZ00	UCPOL0
UDR0	mem	UDR0_7	UDR0_6	UDR0_5	UDR0_4	UDR0_3	UDR0_2	UDR0_1	UDR0_0
WDTCSR	mem	WDIF	WDIE	WDP3	WDCE	WDE	WDP2	WDP1	WDP0

Interrupt Vectors

Address	Name	Description	Address	Name	Description
$00	RESET	Reset	$1A	OVF1	Timer/Counter1 Overflow
$02	INT0	External Interrupt Request 0	$1C	OC0A	TimerCounter0 Compare Match A
$04	INT1	External Interrupt Request 1	$1E	OC0B	TimerCounter0 Compare Match B
$06	PCI0	Pin Change Interrupt Request 0	$20	OVF0	Timer/Couner0 Overflow
$08	PCI1	Pin Change Interrupt Request 0	$22	SPI	SPI Serial Transfer Complete
$0A	PCI2	Pin Change Interrupt Request 1	$24	URXC	USART Rx Complete
$0C	WDT	Watchdog Time-out Interrupt	$26	UDRE	USART, Data Register Empty
$0E	OC2A	Timer/Counter2 Compare Match A	$28	UTXC	USART Tx Complete
$10	OC2B	Timer/Counter2 Compare Match A	$2A	ADCC	ADC Conversion Complete
$12	OVF2	Timer/Counter2 Overflow	$2C	ERDY	EEPROM Ready
$14	ICP1	Timer/Counter1 Capture Event	$2E	ACI	Analog Comparator
$16	OC1A	Timer/Counter1 Compare Match A	$30	TWI	Two-wire Serial Interface
$18	OC1B	Timer/Counter1 Compare Match B	$32	SPMR	Store Program Memory Read

Locks and Fuses

Name	7	6	5	4	3	2	1	0
Lock bits	.	.	BLB12	BLB11	BLB02	BLB01	LB2	LB1
Low fuse	CKDIV8	CKOUT	SUT1	SUT0	CKSEL3	CKSEL2	CKSEL1	CKSEL0
High fuse	RSTDISBL	DWEN	SPIEN	WDTON	EESAVE	BOOTSZ1	BOOTSZ0	BOOTRST
Extended	.	.	.	.	.	BODLEVEL2	BODLEVEL1	BODLEVEL0

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DIP Pinout

PCINT14		/RESET	PC6	1	28	PC5	ADC5	SCL	PCINT13
PCINT16		RXD	PD0	2	27	PC4	ADC4	SDA	PCINT12
PCINT17		TXD	PD1	3	26	PC3	ADC3		PCINT11
PCINT18		INT0	PD2	4	25	PC2	ADC2		PCINT10
PCINT19	OC2B	INT1	PD3	5	24	PC1	ADC1		PCINT9
PCINT20	XCK	T0	PD4	6	23	PC0	ADC0		PCINT8
			Vcc	7	22	Gnd			
			Gnd	8	21	Aref			
PCINT6	TOSC1	XTAL1	PB6	9	20	AVcc			
PCINT7	TOSC2	XTAL2	PB7	10	19	PB5	SCK		PCINT5
PCINT21	OCOB	T1	PD5	11	18	PB4	MISO		PCINT4
PCINT22	OCOA	AIN0+	PD6	12	17	PB3	MOSI	OC2A	PCINT3
PCINT23		AIN1-	PD7	13	16	PB2	/SS	OC1B	PCITN2
PCINT0	CLKO	ICP1	PB0	14	15	PB1		OC1A	PCINT1