|  |  |  |  | **BIT [7:0]** | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Offset** | **Name** | **Port name** | **Description** | **7** | **6** | **5** | **4** | **3** | **2** | **1** | | **0** |
| 0x23 | [PINB](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-6b3fc707-a941-45a9-8429-73bc2ade2ff9&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | PORTB | Input pins | PINB7 | PINB6 | PINB5 | PINB4 | PINB3 | PINB2 | PINB1 | | PINB0 |
| 0x24 | [DDRB](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-5fda4b5d-927f-4a62-880e-1d228c925ed5&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data direction | DDRB7 | DDRB6 | DDRB5 | DDRB4 | DDRB3 | DDRB2 | DDRB1 | | DDRB0 |
| 0x25 | [PORTB](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-33bb20b5-b8f8-470e-9c81-6243d9ee943d&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data Register | PORTB7 | PORTB6 | PORTB5 | PORTB4 | PORTB3 | PORTB2 | PORTB1 | | PORTB0 |
| 0x26 | [PINC](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-1ad93478-df91-43b6-9200-469e15213f1f&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | PORTC | Input pins |  | PINC6 | PINC5 | PINC4 | PINC3 | PINC2 | PINC1 | | PINC0 |
| 0x27 | [DDRC](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-292a8722-1cc5-4905-a88c-d03ac93e0422&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data direction |  | DDRC6 | DDRC5 | DDRC4 | DDRC3 | DDRC2 | DDRC1 | | DDRC0 |
| 0x28 | [PORTC](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-afcc7935-06d3-4388-8bb2-7f76fed8e84d&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data Register |  | PORTC6 | PORTC5 | PORTC4 | PORTC3 | PORTC2 | PORTC1 | | PORTC0 |
| 0x29 | [PIND](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-b5eaa1eb-f0c1-4d46-a6fd-fc86cca89092&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | PORTD | Input pins | PIND7 | PIND6 | PIND5 | PIND4 | PIND3 | PIND2 | PIND1 | | PIND0 |
| 0x2A | [DDRD](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-ca5fc83d-768f-4612-9974-46d942d130ec&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data direction | DDRD7 | DDRD6 | DDRD5 | DDRD4 | DDRD3 | DDRD2 | DDRD1 | | DDRD0 |
| 0x2B | [PORTD](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-34052419-a29e-4912-a2b3-3b720b08b8be&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data Register | PORTD7 | PORTD6 | PORTD5 | PORTD4 | PORTD3 | PORTD2 | PORTD1 | | PORTD0 |
| 0x2C 0x34 | Reserved | | | | | | | | | | | |
| 0x35 | [TIFR0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-b39686d4-1e4c-4e51-a97b-88bcacbe9dfc&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | TIMER0 | Timer INT Flag Register |  |  |  |  |  | OCFB | OCFA | TOV | |
| 0x36 | [TIFR1](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-157d7bcf-c7be-4290-b10c-8a8e898e7c29&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | TIMER1 | Timer INT Flag Register |  |  | ICF |  |  | OCFB | OCFA | TOV | |
| 0x37 | [TIFR2](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-86d4494d-f167-429e-ae8e-51a1fd7ee201&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | TIMER2 | Timer INT Flag Register |  |  |  |  |  | OCFB | OCFA | TOV | |
| 0x38 0x3A | Reserved | | | | | | | | | | | |
| 0x3B | [PCIFR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-e8a84799-a79a-4f43-acfd-905174cd70fb&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | PININT | Pin Change Interrupt Flag Register |  |  |  |  |  | PCIF2 | PCIF1 | PCIF0 | |
| 0x3C | [EIFR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-f2ab7023-0708-45b8-bd46-2c612b2fb8af&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | EXTINT | External Interrupt Flag Register |  |  |  |  |  |  | INTF1 | INTF0 | |
| 0x3D | [EIMSK](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-52a63940-e5bb-4fb8-ace5-051761ee2552&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | External Interrupt Mask Register |  |  |  |  |  |  | INT1 | INT0 | |
| 0x3E | [GPIOR0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-111e880a-b9d1-47f8-8f9c-eef942d14bd5&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | GPIO | General Purpose I/O Register | GPIOR0[7:0] | | | | | | | | |
| 0x3F | [EECR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-f98caf39-493f-4498-abda-481cd8e49fe4&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | EEPROM | EEPROM Control Register |  |  | EEPM1 | EEPM0 | EERIE | EEMPE | EEPE | EERE | |
| 0x40 | [EEDR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-bc0d04e8-7ff6-4d9d-9338-5b4e4f2d84e3&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | EEPROM Data Register | EEDR[7:0] | | | | | | | | |
| 0x41 | [EEARL](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-91a9be92-5786-42fa-a9f7-4bfab309cb94&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | EEPROM Address Register Low Byte | EEAR7 | EEAR6 | EEAR5 | EEAR4 | EEAR3 | EEAR2 | EEAR1 | EEAR0 | |
| 0x42 | [EEARH](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-55d2b236-4480-437a-851b-20f6d9f0bdf5&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | EEPROM Address Register High Byte |  |  |  |  |  |  | EEAR9 | EEAR8 | |
| 0x43 | [GTCCR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-bb602010-2ce6-4551-bdc6-578f048000e6&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | General Timer/Counter Control Register | TSM |  |  |  |  |  | PSRASY | PSRSYNC | |
| 0x44 | [TCCR0A](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-22f731ac-76ed-4858-b39d-d61810df512f&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | TIMER0 | Control Register A | COM0A1 | COM0A0 | COM0B1 | COM0B0 |  |  | WGM01 | WGM00 | |
| 0x45 | [TCCR0B](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-cbf7c889-f7f8-410c-81c1-940af9b150f6&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Control Register B | FOC0A | FOC0B |  |  | WGM02 | CS0[2:0] | | | |
| 0x46 | [TCNT0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-7cf8fe25-d12e-493d-be26-db80afec9c48&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Counter | TCNT0[7:0] | | | | | | | | |
| 0x47 | [OCR0A](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-c5d13780-940b-42f5-9890-cd0ca099e8aa&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Output compare A | OCR0A[7:0] | | | | | | | | |
| 0x48 | [OCR0B](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-e1fde7f2-265f-4206-aaa7-f456c77f5715&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Output compare B | OCR0B[7:0] | | | | | | | | |
| 0x49 | Reserved | | | | | | | | | | | |
| 0x4A | [GPIOR1](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-451411a1-95fc-4f76-8eb1-6e18c4b2d3e0&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | General Purpose I/O Register 1 | GPIOR1[7:0] | | | | | | | | |
| 0x4B | [GPIOR2](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-4175fc37-f304-4ec7-b9af-1b12f5f5bc47&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | General Purpose I/O Register 2 | GPIOR2[7:0] | | | | | | | | |
| 0x4C | [SPCR0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-7ff3bfec-825e-4e68-9a40-014d0ca1a51a&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | SPI | Control Register 0 | SPIE0 | SPE0 | DORD0 | MSTR0 | CPOL0 | CPHA0 | SPR01 | SPR00 | |
| 0x4D | [SPSR0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-1281a435-ed6b-453c-afb0-e5034b04681a&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Status Register 0 | SPIF0 | WCOL0 |  |  |  |  |  | SPI2X0 | |
| 0x4E | [SPDR0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-b15b98f7-b27a-48b9-9513-07425c7b8607&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data Register 0 | SPID[7:0] | | | | | | | | |
| 0x4F | Reserved | | | | | | | | | | | |
| 0x50 | [ACSR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-67ee35c9-97a4-4672-b874-b05b979f7bc6&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Analog Comparator Control Status | ACD | ACBG | ACO | ACI | ACIE | ACIC | ACIS1 | ACIS0 | |
| 0x51 | [DWDR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-e1021f67-9bc7-43e5-8c52-288286552958&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | DebugWire Register | DWDR[7:0] | | | | | | | | |
| 0x52 | Reserved | | | | | | | | | | | |
| 0x53 | [SMCR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-9f64cca7-d7ea-4882-94bb-6a9a29be9d36&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | MCU | Sleep mode control |  |  |  |  | SM2 | SM1 | SM0 | SE | |
| 0x54 | [MCUSR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-8551916f-1d05-4dfd-8f36-84f068a76d37&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | MCU Status |  |  |  |  | WDRF | BORF | EXTRF | PORF | |
| 0x55 | [MCUCR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-c2a7839f-cd00-47b7-a358-e30aefe8aee0&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | MCU Control |  | BODS | BODSE | PUD |  |  | IVSEL | IVCE | |
|  |  |  |  |  |  |  | Pull-up Disable |  |  |  |  | |
| 0x56 | Reserved | | | | | | | | | | | |
| 0x57 | [SPMCSR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-0eadc01b-fba4-41ff-a0e9-018635389ca6&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Store Program Memory Control and Status | SPMIE | RWWSB | SIGRD | RWWSRE | BLBSET | PGWRT | PGERS | SPMEN | |
| 0x58 0x5C | Reserved | | | | | | | | | | | |
| 0x5D | [SPL](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-c56e817f-ffb4-42b8-a414-80d0806b836e&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | STACK | Stack pointer low | (SP[7:0]) SPL[7:0] | | | | | | | | |
| 0x5E | [SPH](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-6ba0da6f-4b0a-4514-8540-a8864641b57d&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Stack pointer high |  | | | | | (SP[10:8]) SPH[2:0] | | | |
| 0x5F | [SREG](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-aa9d6dfc-8257-40e6-a44d-1f5f3eb23c11&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Status register | I | T | H | S | V | N | Z | C | |
| 0x60 | [WDTCSR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-0fe5d226-2f6b-4aab-ba12-69a6e55f6e2b&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | WATCHD | Watchdog Control | WDIF | WDIE | WDP[3] | WDCE | WDE | WDP[2:0] | | | |
| 0x61 | [CLKPR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-49a1d917-62f6-47e0-805d-e04fbca31ac6&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Clock prescaler | CLKPCE |  |  |  | CLKPS3 | CLKPS2 | CLKPS1 | CLKPS0 | |
| 0x62 0x63 | Reserved | | | | | | | | | | | |
| 0x64 | [PRR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-cc48bcd9-d04e-4c58-96c9-28a3b6a11266&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Power reduction | PRTWI0 | PRTIM2 | PRTIM0 |  | PRTIM1 | PRSPI0 | PRUSART0 | PRADC | |
| 0x65 | Reserved | | | | | | | | | | | |
| 0x66 | [OSCCAL](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-4524c25f-5308-484c-a276-886335aed0cd&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Oscillator Calibration | CAL7 | CAL6 | CAL5 | CAL4 | CAL3 | CAL2 | CAL1 | CAL0 | |
| 0x67 | Reserved | | | | | | | | | | | |
| 0x68 | [PCICR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-9824bc39-e6c6-4974-b353-dc386a8ebafa&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Pin change interrupt control |  |  |  |  |  | PCIE2 | PCIE1 | PCIE0 | |
| 0x69 | [EICRA](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-18f1f9d9-57bb-4cb5-bbab-1e4a50538dc7&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | External interrupt Control A |  |  |  |  | ISC11 | ISC10 | ISC01 | ISC00 | |
| 0x6A | Reserved | | | | | | | | | | | |
| 0x6B | [PCMSK0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-44168a4d-db0d-4058-9200-9913d4221284&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Pin Change Mask 0 | PCINT7 | PCINT6 | PCINT5 | PCINT4 | PCINT3 | PCINT2 | PCINT1 | PCINT0 | |
| 0x6C | [PCMSK1](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-af8ba889-9f3b-4ebf-892e-7f4b989a9dca&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Pin Change Mask 1 |  | PCINT14 | PCINT13 | PCINT12 | PCINT11 | PCINT10 | PCINT9 | PCINT8 | |
| 0x6D | [PCMSK2](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-c9ef3d88-be20-4dff-a90a-6ee6b2bde3f2&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Pin Change Mask 2 | PCINT23 | PCINT22 | PCINT21 | PCINT20 | PCINT19 | PCINT18 | PCINT17 | PCINT16 | |
| 0x6E | [TIMSK0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-6f9ab112-70b4-4c29-8da8-d42c55980540&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | TC0 Interrupt Mask |  |  |  |  |  | OCIEB | OCIEA | TOIE | |
| 0x6F | [TIMSK1](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-ac40c3bd-152f-4fd7-b40e-e7604b4fee06&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | TC1 Interrupt Mask |  |  | ICIE |  |  | OCIEB | OCIEA | TOIE | |
| 0x70 | [TIMSK2](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-e8498093-6fea-4d79-b3a5-95f3ecf21464&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | TC2 Interrupt Mask |  |  |  |  |  | OCIEB | OCIEA | TOIE | |
| 0x71 0x77 | Reserved | | | | | | | | | | | |
| 0x78 | [ADCL](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-3e6ca0ba-6d0a-4030-903e-7c2d0e855ce4&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | ADC | Data low | ADC7 | ADC6 | ADC5 | ADC4 | ADC3 | ADC2 | ADC1 | ADC0 | |
| 0x79 | [ADCH](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-09bbacab-2f9f-4535-97e3-97224b95afb9&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data high |  |  |  |  |  |  | ADC9 | ADC8 | |
| 0x7A | [ADCSRA](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-df943212-5abc-492f-a9c2-cd47cd0d93b1&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Control and status A | ADEN | ADSC | ADATE | ADIF | ADIE | ADPS2 | ADPS1 | ADPS0 | |
| 0x7B | [ADCSRB](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-6709536a-5ead-4665-843c-8438d7ac270d&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Control and status B |  | ACME |  |  |  | ADTS2 | ADTS1 | ADTS0 | |
| 0x7C | [ADMUX](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-b3fa61ff-cd3e-4104-8cd3-3b83e2eb51a3&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Multiplex selection | REFS1 | REFS0 | ADLAR |  | MUX3 | MUX2 | MUX1 | MUX0 | |
| 0x7D | Reserved | | | | | | | | | | | |
| 0x7E | [DIDR0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-44616b06-5e06-40a9-8f79-435530e05c8e&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Digital input disable 0 | ADC7D | ADC6D | ADC5D | ADC4D | ADC3D | ADC2D | ADC1D | ADC0D | |
| 0x7F | [DIDR1](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-26dad3d0-44f3-43f9-832c-6610fcbe92c3&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Digital input disable 1 |  |  |  |  |  |  | AIN1D | AIN0D | |
| 0x80 | [TCCR1A](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-f7b3763a-1d97-4641-b390-0946d58ac531&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | TIMER1 | Control A | COM1 | COM1 | COM1 | COM1 |  |  | WGM11 | WGM10 | |
| 0x81 | [TCCR1B](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-61b4f993-8a71-4ecd-a683-a7dbe250e666&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Control B | ICNC1 | ICES1 |  | WGM13 | WGM12 | CS12 | CS11 | CS10 | |
| 0x82 | [TCCR1C](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-459e0ce6-e65d-4816-9ddb-afeb2761a048&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Control C | FOC1A | FOC1B |  |  |  |  |  |  | |
| 0x83 | Reserved | | | | | | | | | | | |
| 0x84 | [TCNT1L](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-ccbe3c9f-3ab8-45a3-9fcf-62b8afbed495&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | TIMER1 | Value low | TCNT1L[7:0] | | | | | | | | |
| 0x85 | [TCNT1H](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-79086e76-6e9e-40e9-8d57-ca15eafcc144&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Value high | TCNT1H[7:0] | | | | | | | | |
| 0x86 | [ICR1L](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-72e52e46-c44f-4842-b384-19a8c13f21c0&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Input capture low | ICR1L[7:0] | | | | | | | | |
| 0x87 | [ICR1H](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-89ecad54-d1cb-461a-987e-3ccb9a0a52eb&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Input capture hugh | ICR1H[7:0] | | | | | | | | |
| 0x88 | [OCR1AL](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-99325976-603d-4929-bfab-f391fca31e1b&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Output compare A low | OCR1AL[7:0] | | | | | | | | |
| 0x89 | [OCR1AH](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-fc9988bb-ae0e-4814-aea6-469336c240bf&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Output compare A high | OCR1AH[7:0] | | | | | | | | |
| 0x8A | [OCR1BL](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-b32f1f9e-cad2-45bb-9ecd-612d948a5a60&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Output compare B low | OCR1BL[7:0] | | | | | | | | |
| 0x8B | [OCR1BH](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-3653274f-6d6f-43ab-ba83-cdd34af2740a&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Output compare B high | OCR1BH[7:0] | | | | | | | | |
| 0x8C0xAF | Reserved | | | | | | | | | | | |
| 0xB0 | [TCCR2A](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-99c54b81-54cd-4f23-8435-2aaa1978aebc&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | TIMER2 |  | COM2A1 | COM2A0 | COM2B1 | COM2B0 |  |  | WGM21 | WGM20 | |
| 0xB1 | [TCCR2B](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-2a013642-eb1b-4283-9756-c2449ef0a5c2&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | FOC2A | FOC2B |  |  | WGM22 | CS2[2:0] | | | |
| 0xB2 | [TCNT2](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-e26d2139-4cc5-4111-a156-01c290ab45be&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | TCNT2[7:0] | | | | | | | | |
| 0xB3 | [OCR2A](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-c40da6f8-3e98-4d79-bb1d-287c7d879a85&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Output compare A | OCR2A[7:0] | | | | | | | | |
| 0xB4 | [OCR2B](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-e383995b-5598-42f1-b338-36093965a165&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Output compare A | OCR2B[7:0] | | | | | | | | |
| 0xB5 | Reserved | | | | | | | | | | | |
| 0xB6 | [ASSR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-b28c0250-be9e-49b7-8f2d-513da10d5980&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) |  | Async status |  | EXCLK | AS2 | TCN2UB | OCR2AUB | OCR2BUB | TCR2AUB | TCR2BUB | |
| 0xB7 | Reserved | | | | | | | | | | | |
| 0xB8 | [TWBR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-b3ba742b-faaf-4bd5-ad9d-951a6408ab04&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | I2C | Bit rate | TWBR7 | TWBR6 | TWBR5 | TWBR4 | TWBR3 | TWBR2 | TWBR1 | TWBR0 | |
| 0xB9 | [TWSR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-2f87ebe3-2a7f-49c7-9bb2-ed551f1cda14&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Status | TWS4 | TWS3 | TWS2 | TWS1 | TWS0 |  | TWPS1 | TWPS0 | |
| 0xBA | [TWAR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-0f34aa4d-a099-4f13-bf14-629431d1326b&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Slave address | TWA6 | TWA5 | TWA4 | TWA3 | TWA2 | TWA1 | TWA0 | TWGCE | |
| 0xBB | [TWDR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-4d1d8b14-b8e2-4361-9ff2-c95f40396d37&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Data register | TWD7 | TWD6 | TWD5 | TWD4 | TWD3 | TWD2 | TWD1 | TWD0 | |
| 0xBC | [TWCR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-d819bdc7-60fe-45ce-a2ec-dbbe98f4a2f9&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Control | TWINT | TWEA | TWSTA | TWSTO | TWWC | TWEN |  | TWIE | |
| 0xBD | [TWAMR](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-c96e2f22-a140-4792-bf51-3b0a1d42bb4f&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Slave address mask | TWAM6 | TWAM5 | TWAM4 | TWAM3 | TWAM2 | TWAM1 | TWAM0 |  | |
| 0xBE0xBF | Reserved | | | | | | | | | | | |
| 0xC0 | [UCSR0A](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-292afb57-4f86-4bab-a5d3-fa137047a790&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | UART | Control and status 0A | RXC0 | TXC0 | UDRE0 | FE0 | DOR0 | UPE0 | U2X0 | MPCM0 | |
| 0xC1 | [UCSR0B](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-e278d27d-241f-4233-88ac-35bc7025acd5&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Control and status 0B | RXCIE0 | TXCIE0 | UDRIE0 | RXEN0 | TXEN0 | UCSZ02 | RXB80 | TXB80 | |
| 0xC2 | [UCSR0C](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-2fa51fa2-2882-440d-8725-590740e50e00&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Control and status 0C | UMSEL01 | UMSEL00 | UPM01 | UPM00 | USBS0 | UCSZ01 / UDORD0 | UCSZ00 / UCPHA0 | UCPOL0 | |
| 0xC3 | Reserved | | | | | | | | | | | |
| 0xC4 | [UBRR0L](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-ffd32c08-18ff-426c-98a2-1f6842d30d69&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | UART | Baud rate 0 low | UBRR0[7:0] | | | | | | | | |
| 0xC5 | [UBRR0H](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-5918a1dd-61c4-447f-826c-52aeaa644b8e&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | Baud rate 0 high |  |  |  |  | UBRR0[3:0] | | | | |
| 0xC6 | [UDR0](ms-xhelp://?method=page&id=guid-f876c581-94b8-4d5c-a254-b650ac8c5d45-guid-ecc601ae-780d-4643-be2b-cb7717db713e&vendor=Atmel&topicVersion=-1&topicLocale=EN-US) | IO Data register 0 | TXB / RXB[7:0] | | | | | | | | |