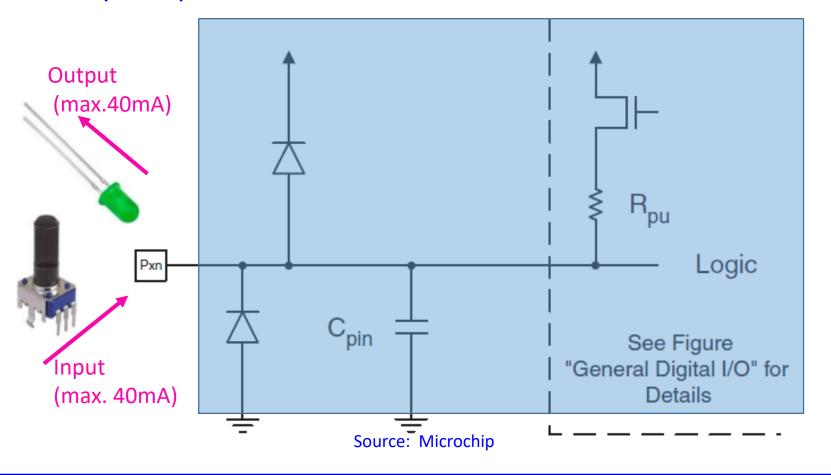
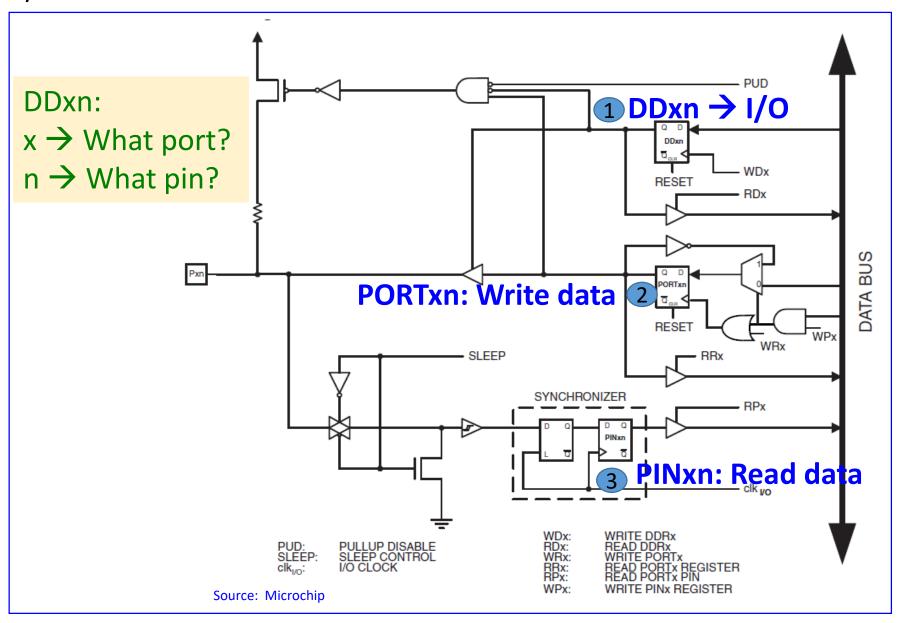
PORT B (8 bits) PORT C (6 bits) PORT D (8 bits) (PCINT14/RESET) PC6 ☐ 1 PC5 (ADC5/SCL/PCINT13) (PCINT16/RXD) PD0 ☐ 2 PC4 (ADC4/SDA/PCINT12) (PCINT17/TXD) PD1 PC3 (ADC3/PCINT11) (PCINT18/INT0) PD2 ☐ 4 PC2 (ADC2/PCINT10) (PCINT19/OC2B/INT1) PD3 PC1 (ADC1/PCINT9) (PCINT20/XCK/T0) PD4 PC0 (ADC0/PCINT8) \Box GND GND ☐ 8 AREF (PCINT6/XTAL1/TOSC1) PB6 (PCINT7/XTAL2/TOSC2) PB7 PB5 (SCK/PCINT5) (PCINT21/OC0B/T1) PD5 ☐ 11 ☐ PB4 (MISO/PCINT4) (PCINT22/OC0A/AIN0) PD6 4 12 PB3 (MOSI/OC2A/PCINT3) (PCINT23/AIN1) PD7 ☐ 13 PB2 (SS/OC1B/PCINT2) (PCINTO/CLKO/ICP1) PB0 PB1 (OC1A/PCINT1) 1 pin → 40mA All ports → 200mA



- > Input or Output
- ➤ True Read-Modify-Write → I/O each pin
- > Rpull-up









- Three I/O memory address locations are allocated for each port:
 - 1-Data Direction Register DDRx
 - 2-Data Register PORTx
 - 3-Port Input Pins PINx

PORTB - The Port B Data Register

Bit	7	6	5	4	3	2	1	0	_
0x05 (0x25)	PORTB7	PORTB6	PORTB5	PORTB4	PORTB3	PORTB2	PORTB1	PORTB0	PORTB
Read/Write	R/W	ı							
Initial Value	0	0	0	0	0	0	0	0	

DDRB - The Port B Data Direction Register

Bit	7	6	5	4	3	2	1	0	_
0x04 (0x24)	DDB7	DDB6	DDB5	DDB4	DDB3	DDB2	DDB1	DDB0	DDRB
Read/Write	R/W	•							
Initial Value	0	0	0	0	0	0	0	0	

PINB – The Port B Input Pins Address⁽¹⁾

Bit	7	6	5	4	3	2	1	0	
0x03 (0x23)	PINB7	PINB6	PINB5	PINB4	PINB3	PINB2	PINB1	PINB0	PINB
Read/Write	R/W								
Initial Value	NI/A	N/A							

Source: Microchip

Bit PUD in Register MCUCR disabled all the Pull-Up resistor overriding whatever configuration

MCUCR - MCU Control Register

Bit	7	6	. 5	4	3	2	1	0	_
0x35 (0x55)	-	BODS ⁽¹⁾	BODSE ⁽¹⁾	PUD	-	-	IVSEL	IVCE	MCUCR
Read/Write	R	R/W	R/W	R/W	R	R	R/W	R/W	•
Initial Value	0	0	0	0	0	0	0	0	

Notes: 1. BODS and BODSE only available for picoPower devices ATmega48PA/88PA/168PA/328P

Bit 4 – PUD: Pull-up Disable

When this bit is written to one, the pull-ups in the I/O ports are disabled even if the DDxn and PORTxn Registers are configured to enable the pull-ups ({DDxn, PORTxn} = 0b01). See "Configuring the Pin" on page 85 for more details about this feature.

Source: Microchip