



Figure: I/O Module Block Diagram

# Xmega I/O System

- ▶ New I/O port functionality improves the programming model and electrical choices
- ▶ I/O pins are grouped into I/O ports of 8 pins
- ▶ I/O pins are controlled by 12 different registers!
- ▶ I/O pins can be one of eight different electrical configurations
- ▶ Basic functionality still set by OUT, DIR, and IN registers
- ▶ These registers are given new power by a direct *set*, *clear* and *toggle* registers.

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- ▶ Mention bit mask, bit position, group configuration

```
PORTA.DIRSET = (PIN6_bm | PIN0_mb);
```

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- ▶ New Stuff goes here