

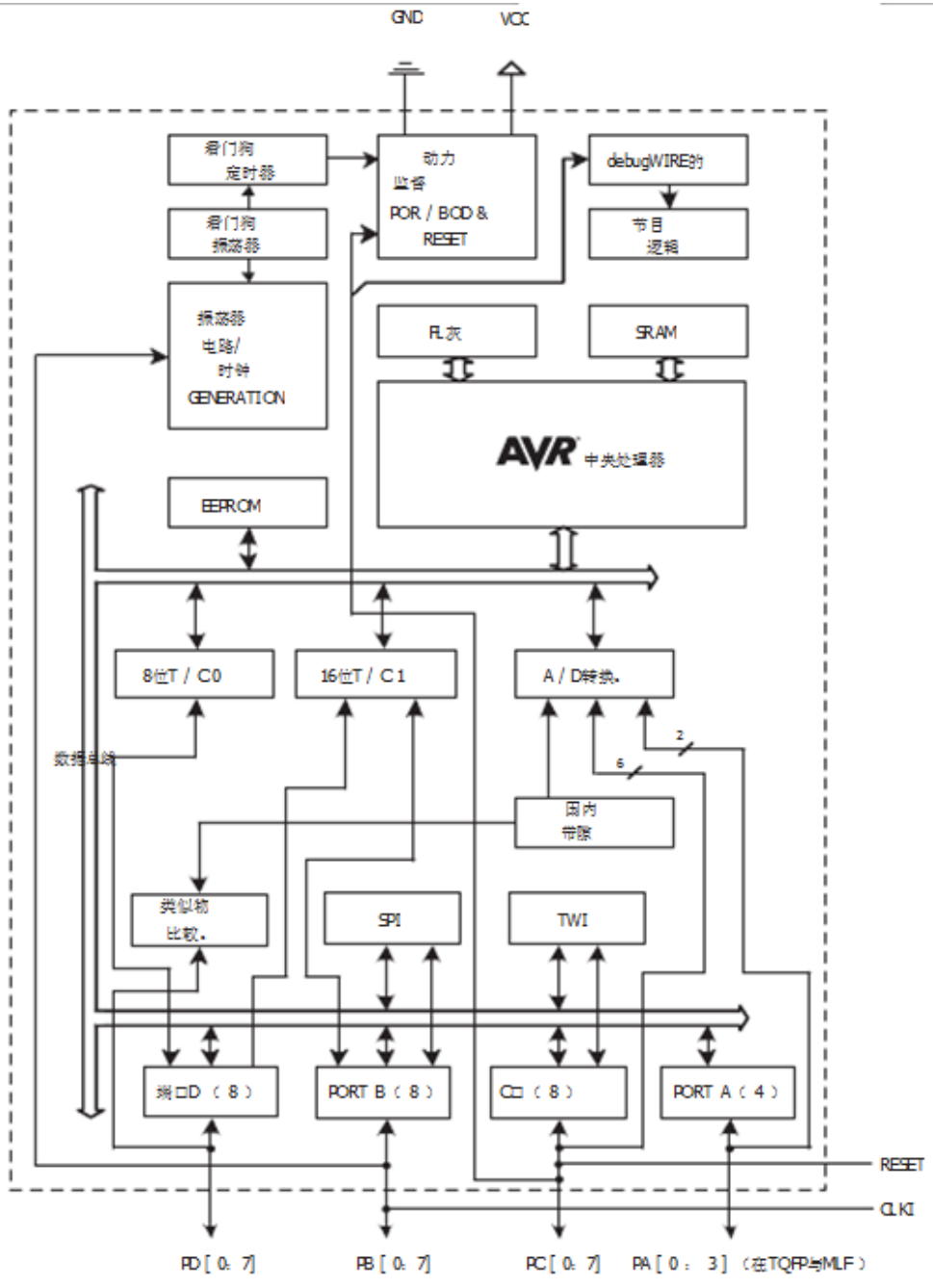
Features

- High Performance, Low Power AVR[®] 8-Bit Microcontroller
- Advanced RISC Architecture
 - 123 Powerful Instructions – Most Single Clock Cycle Execution
 - 32 x 8 General Purpose Working Registers
 - Fully Static Operation
- High Endurance Non-volatile Memory Segments
 - 4K/8K Bytes of In-System Self-Programmable Flash Program Memory
 - 64/64 Bytes EEPROM
 - 256/512 Bytes Internal SRAM
 - Write/Erase Cycles: 10,000 Flash/100,000 EEPROM
 - Data Retention: 20 years at 85°C / 100 years at 25°C
 - Programming Lock for Software Security
- Peripheral Features
 - One 8-bit Timer/Counter with Separate Prescaler and Compare Mode
 - One 16-bit Timer/Counter with Prescaler, and Compare and Capture Modes
 - 6- or 8-channel 10-bit ADC
 - Master/Slave SPI Serial Interface
 - Byte-oriented 2-wire Serial Interface (Philips I²C Compatible)
 - Programmable Watchdog Timer with Separate On-Chip Oscillator
 - On-Chip Analog Comparator
 - Interrupt and Wake-up on Pin Change
- Special Microcontroller Features
 - debugWIRE On-Chip Debug System
 - In-System Programmable via SPI Port
 - Power-On Reset and Programmable Brown-Out Detection
 - Internal Calibrated Oscillator
 - External and Internal Interrupt Sources
 - Three Sleep Modes: Idle, ADC Noise Reduction and Power-Down
 - On-Chip Temperature Sensor
- I/O and Packages
 - 24 Programmable I/O Lines:
 - 28-pin PDIP
 - 28-pad QFN
 - 28 Programmable I/O Lines:
 - 32-lead TQFP
 - 32-pad QFN
 - 32-ball UFBGA
- Operating Voltage:
 - 1.8 – 5.5V
- Temperature Range:
 - -40°C to +85°C
- Speed Grade:
 - 0 – 4 MHz @ 1.8 – 5.5V
 - 0 – 8 MHz @ 2.7 – 5.5V
 - 0 – 12 MHz @ 4.5 – 5.5V
- Low Power Consumption
 - Active Mode: 1 MHz, 1.8V: 240 µA
 - Power-Down Mode: 0.1 µA at 1.8V

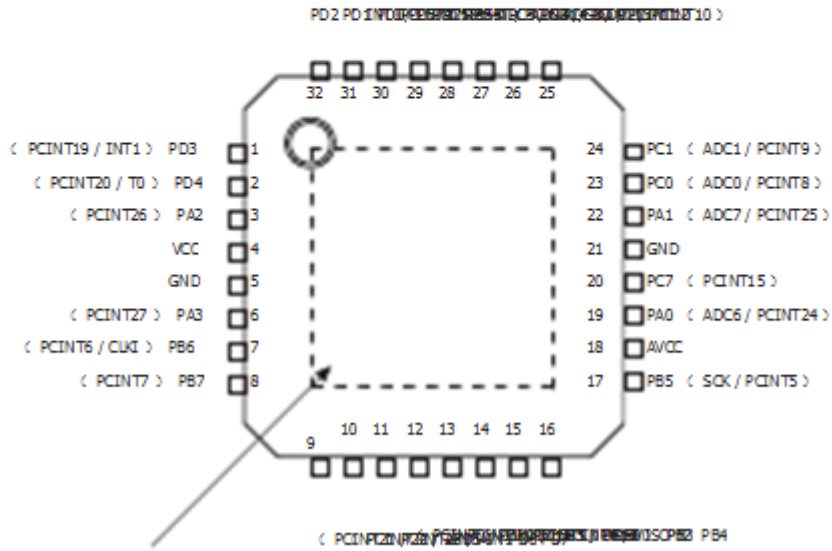


8-bit **AVR[®]**
Microcontroller
with 4/8K Bytes
In-System
Programmable
Flash

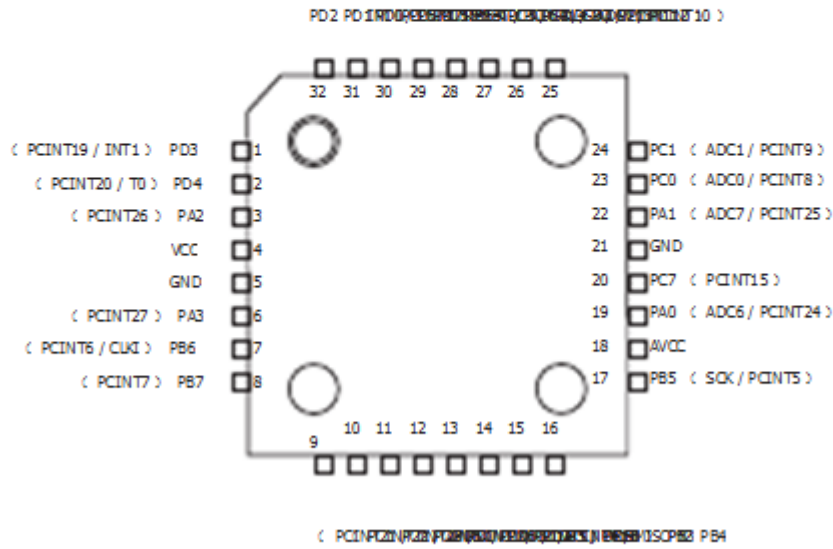
ATtiny48/88



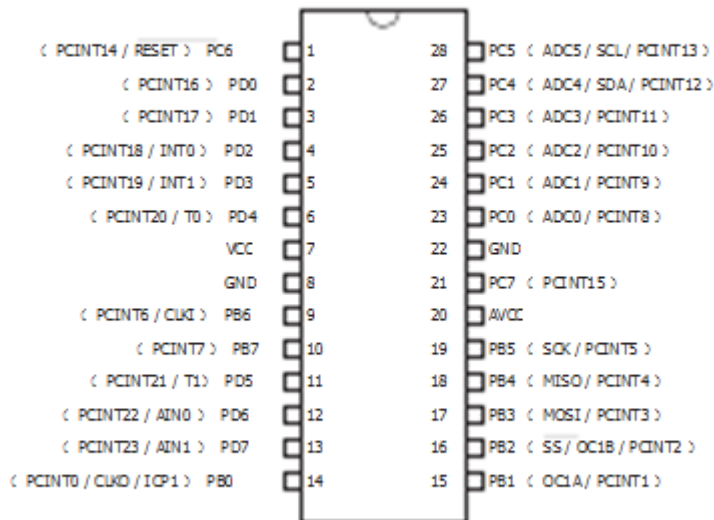
32 QFN顶视图



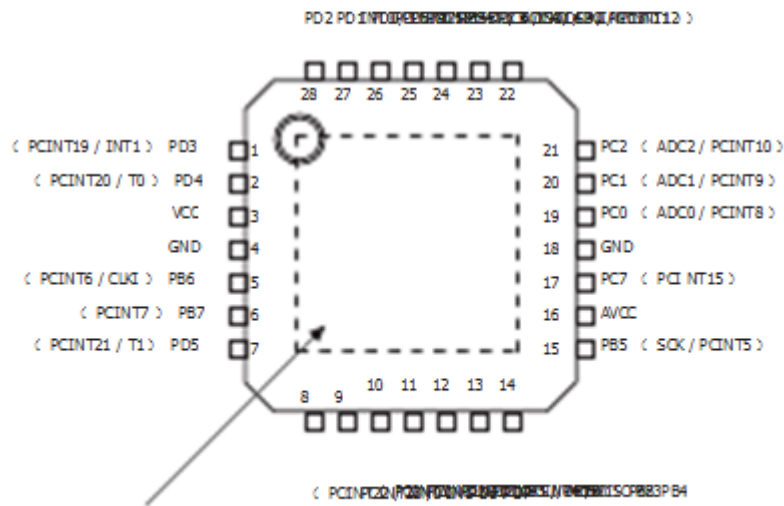
TQFP顶视图



PDIP



28 QFN顶视图



注：引脚功能请查阅手册。