



8-bit Atmel tinyAVR Microcontroller with 16K Bytes In-System Programmable Flash

ATtiny1634

Summary

Features

- High Performance, Low Power AVR® 8-bit Microcontroller
- Advanced RISC Architecture
 - 125 Powerful Instructions – Most Single Clock Cycle Execution
 - 32 x 8 General Purpose Working Registers
 - Fully Static Operation
- High Endurance, Non-volatile Memory Segments
 - 16K Bytes of In-System, Self-Programmable Flash Program Memory
 - Endurance: 10,000 Write/Erase Cycles
 - 256 Bytes of In-System Programmable EEPROM
 - Endurance: 100,000 Write/Erase Cycles
 - 1K Byte of Internal SRAM
 - Data retention: 20 years at 85 °C / 100 years at 25 °C
 - Programming Lock for Self-Programming Flash & EEPROM Data Security
- Peripheral Features
 - Dedicated Hardware and QTouch® Library Support for Capacitive Touch Sensing
 - One 8-bit and One 16-bit Timer/Counter with Two PWM Channels, Each
 - 12-channel, 10-bit ADC
 - Programmable Ultra Low Power Watchdog Timer
 - On-chip Analog Comparator
 - Two Full Duplex USARTs with Start Frame Detection
 - Universal Serial Interface
 - Slave I²C Serial Interface
- Special Microcontroller Features
 - debugWIRE On-chip Debug System
 - In-System Programmable via SPI Port
 - Internal and External Interrupt Sources
 - Pin Change Interrupt on 18 Pins
 - Low Power Idle, ADC Noise Reduction, Standby and Power-down Modes
 - Enhanced Power-on Reset Circuit
 - Programmable Brown-out Detection Circuit with Supply Voltage Sampling
 - Calibrated 8MHz Oscillator with Temperature Calibration Option
 - Calibrated 32kHz Ultra Low Power Oscillator
 - On-chip Temperature Sensor
- I/O and Packages
 - 18 Programmable I/O Lines
 - 20-pad QFN/MLF, and 20-pin SOIC
- Operating Voltage:
 - 1.8 – 5.5V
- Speed Grade:
 - 0 – 2MHz @ 1.8 – 5.5V
 - 0 – 8MHz @ 2.7 – 5.5V
 - 0 – 12MHz @ 4.5 – 5.5V
- Temperature Range: -40 °C to +105 °C
- Low Power Consumption
 - Active Mode: 0.2mA at 1.8V and 1MHz
 - Idle Mode: 30µA at 1.8V and 1MHz
 - Power-Down Mode (WDT Enabled): 1µA at 1.8V
 - Power-Down Mode (WDT Disabled): 100nA at 1.8V