

PRELIMINARY
8-bit Flash Microcontroller
CRD89C51HD1T

Features:

- Working voltage: 2.7V ~ 3.6V or 4.5V ~ 5.5V
- Working temperature: -40°C to 85°C
- Max clock speed: 24 MHz
- High-speed architecture with 1T operating mode (1 instruction/clock) with a 2T option
- Instruction set compatible with MCS-51
- 64KB on-chip Flash memory
- 256 bytes of standard 8052 RAM
- 1K bytes of on-chip extended RAM (using MOVX instruction access)
- Dual 16-bit data pointers (DPTR0 & DPTR1)
- PCA: 4 capture/compare units
- ISP/IAP function, no boot program required
- On-Chip ICE function
- 56 Input/Output ports
- I2C: Master/Slave mode
- SPI: Master/Slave mode
- 4 channel PWM: 12-bit, 10bits, 8bits option
- Standard 12T interface for external data memory by MOVX instruction access
- Dual UARTs in full duplex mode (UART0 & UART1):
 - (1) Synchronous mode, fixed baud rate, Serial 0 only
 - (2) 8-bit UART mode, variable baud rate
 - (3) 9-bit UART mode, fixed baud rate, Serial 0 only
 - (4) 9-bit UART mode, variable baud rate
 - (5) Additional Baud Rate Generator for Serial 0
- Three 16-bit Timer/Counters: T0, T1, T2
- KBI (Keyboard Interrupt)
- External interrupt: INT0 and INT1
- Programmable watchdog timer
- EEPROM: byte addressable EEPROM size = flash size – code size
- EMI reduction: (1) ALE output disable (2) XTAL2 swing reduction
- Fast multiplication-division unit (MDU): (1) 16-bit*16-bit, (2) 32-bit/16-bit, (3) 16-bit/16-bit, (4) 32-bit L/R shifting (5) 32-bit normalization
- Clock source option: external crystal, external OSC or embedded OSC
- Embedded POR/PDF
- High ESD IO PAD: over 6KV
- Code protect: full 64KB protect
- Power management unit: IDLE and Power-Down modes