Winbond Electronics Corp.

MONITOR MICROCONTROLLER

GENERAL DESCRIPTION

The W78E374 is an MCU with embedded 8031 microcontroller core. The W78E374 includes a 16 KB code memory, 384-byte internal data RAM, a 4-bit A/D converter, Watchdog Timer, sync Processor, DDC port, PWM output, dynamic waveform generator, and the other logic functions that are designed for the applications of multi-sync computer monitor controller.

The MCU is also available in mask type, W78C374. The W78E374 is especially useful in the engineering and pre-production stage of the monitor development. It provides the best time to market solution for your product.

FEATURES

- 80C31 MCU core included
- 16 KB of Flash memory
- 384 bytes of on-chip data RAM
- One external interrupt input
- Two timers/counters
- PWM Outputs:
  - Eight 8-bit SDACs (Static PWM output)
  - Three 8-bit DDACs (Dynamic PWM output)
- Four channels of 4-bit Analog to Digital converter
- Sync processor:
  - Horizontal & vertical polarity detector
  - Sync separator for composite sync
  - Horizontal & vertical frequency counter
  - Programmable dummy frequency generator
  - Programmable H-clamp pulse output
  - Safe operation area (SOA) interrupt
- One DDC port (master/slave mode I^2C, supports DDC1/DDC2B/2Bi/DDC2B+)
- Watchdog timer
- Two 15 mA output pins for driving LED
- Power-down reset
- Clock=8MHz~10MHz (instruction cycle=1.34MHz~1.67MHz)
- Three package types:
  - PLCC44 (W78E374BP), DIP32 (W78E374B)