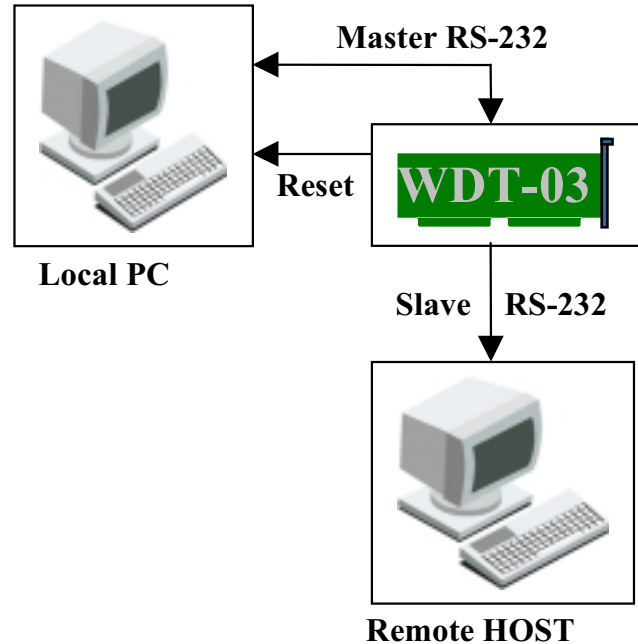


WDT-03

Advance Watchdog Timer & Monitoring System



The WDT-03 is a advance watchdog timer & monitoring, WDT, designed for ISA/PCI bus or any bus with RS-232 port. After the watchdog timer is enable, the WDT-03 will monitor the operations of software and hardware in the most inexpensive cost. It will reset the CPU if there is any software or hardware problem.

For traditional WDT card, user has to modify his application program to enable/disable/refresh WDT card. The WDT-03, advance WDT system, equips a auto monitoring utility for windows which allow the user's application program can be work perfect with WDT system without any modification.

The WDT-03 equips two RS-232 ports, one is master port and another one is slave port. The master RS-232 port is designed to communicate with the local PC which can enable/disable/refresh/read-back the watchdog timer. The slave RS-232 device is used to send information to the remote-HOST for monitoring. So the remote HOST will get information immediately if the local PC has any software or hardware problem, even the local power is failure.

Features & Specifications

- Advance WDT system
- Without modify user's application program
- Bus free for PCI bus, ISA bus or any bus
- Harsh environment warning before system crash
- Cost effective total solution
- Dos/Windows/Linux driver support
- OEM/ODM acceptable

Watchdog timer

- Software enable/disable watchdog timer
- Form 0.01 second to 167772.15 seconds

Bus Voltage monitoring: 3.3V, 5V, 12V, -5V, -12V

Fan Speed monitoring: 3 channels

Temperature monitoring: 3 channels

EEPROM

- 63 bytes for user read/write
- read/write cycles:100,000 times

Interface

- RS-232 * 1 for local CPU
- RS232 * 1 for remote HOST(monitor the local CPU)

RS-232

- Baud rate: 2400 ~ 115.2K programmable
- Data format: N81
- Command format: 7000 family compatible

Reset Mechanism

- Power good signal for PC system
- Reset signal to simulate external reset-key pressed

Mounting

- ISA/PCI bus for PC
- Four through-hole mounting for any system

Dimensions: 140mm x 70mm

Power Consumption: 2W

Operating Temperature: 0°C ~ 60°C

Storage Temperature: -20°C ~ 75°C

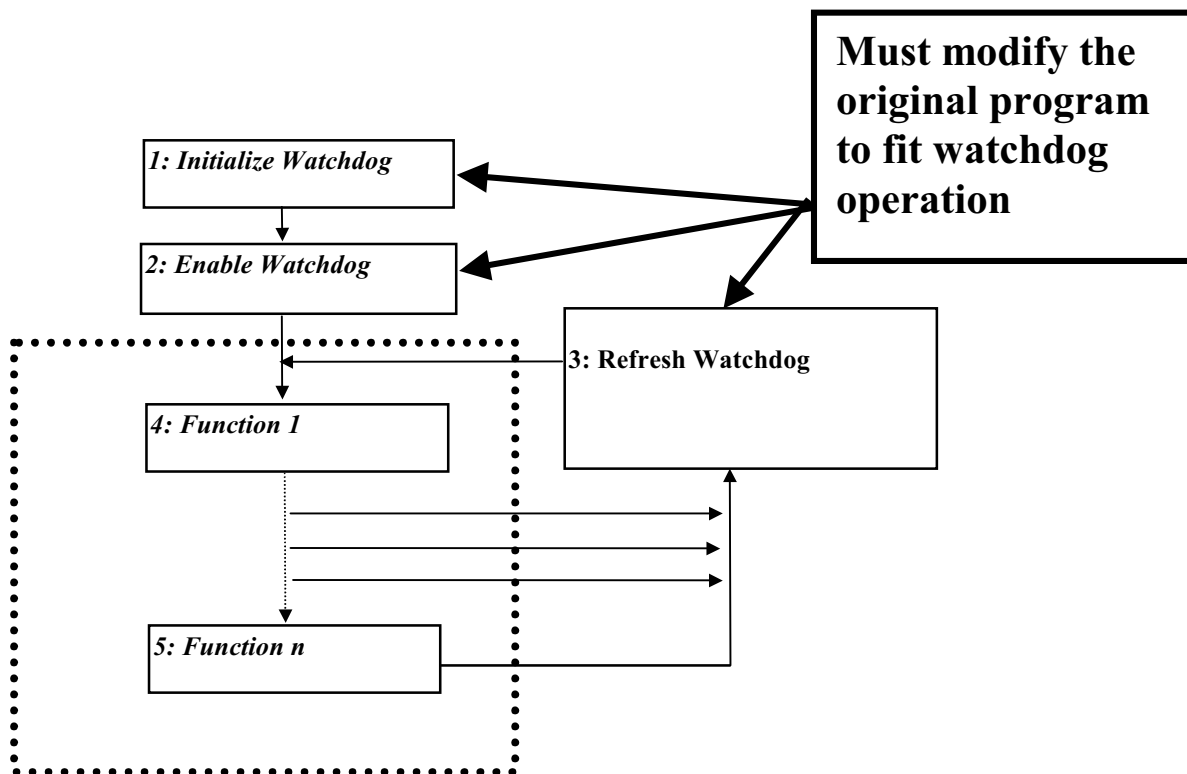
Software

Auto monitoring utility for windows
Support Dos/windows/Linux driver

Order Description

WDT-03: Advance WDT system

Traditional Watchdog Timer & Monitoring System



Traditional WDT System

The traditional WDT cards equip a hardware watchdog for application program to start & refresh it in the normal operation. If the host-PC is failure for software or hardware problem, the refresh operation will be discontinue & the hardware watchdog can reset the host-PC.

So the software engineer has to add three parts of program into his original program as follows:

1. initialize the hardware watchdog
2. start the hardware watchdog
3. continue refresh the hardware watchdog

Sometimes, the application program is hard to modify as follows:

1. The application program is finished & hard to modify
2. It is a well-designed commercial package, so user can use it but can not modify it.
3. No time to modify the original program

So we need an **advance WDT system** as following:

- **Don't have to modify the user's application program**
- **Can be used in ISA bus, PCI bus & any system with RS-232 interface**
- **Harsh environment detection & warning before system crash**
- **Cost Effective Solution**

Advance WDT System, WDT-03

1. Don't have to Modify User's Application Program

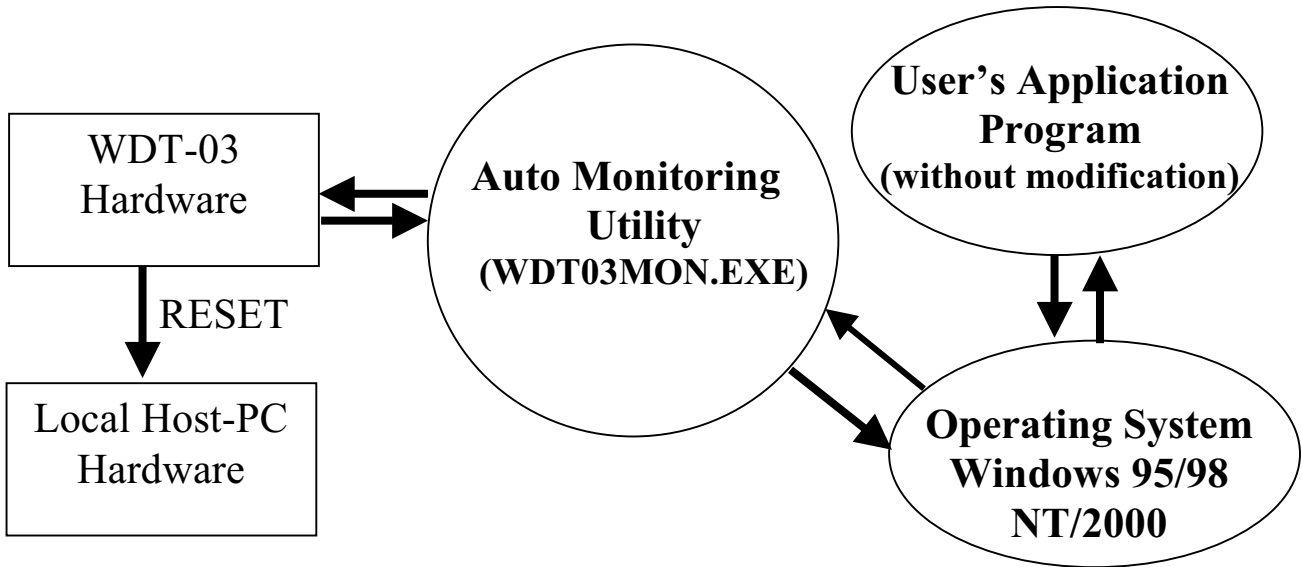
The traditional WDT system has to modify the original program. Sometimes, the application program is hard to modify. The working steps of using an advance WDT system are given as follows:

1. Hardware installation & diagnostic, refer to Sec. 1.10.1 of "WDT-03 User's Manual"
2. Reset mechanism installation & diagnostic, refer to Sec. 1.10.2 of "WDT-03 User's Manual"
3. Install auto monitoring utility, refer to Sec. 2.5 of "WDT-03 User's Manual"
4. Install & execute user's application program, refer to Sec. 1.10.3 of "WDT-03 User's Manual"

From the above steps, you can find that the user's application program can be executed without modification. The auto monitoring utility will monitors the operating system & user's application program automatically. If system is frozen by any software or hardware problems, the dual-watchdog mechanism will reset this frozen system immediately & restart the user's application program to work continuously.

The block diagram between auto monitoring utility, user's application program, operating system & WDT-3 is given as following:

Advance Watchdog Timer & Monitoring System



2. Harsh Environment Detection & Warning before System Crash

There are many couple noise or energy transient in industry application environment. The host-PC may be failure if these noises are really too large.

The application environment will change without any notice. So a stable system in yesterday can not be guaranteed stable in tomorrow. Refer to Sec. 5.4 for harsh environment detection & warning. If a harsh environment is detected, the system engineer can check what is happening immediately. So the harsh environment can be improved to a normal environment before the crash of host-PC

3. Can be used in ISA bus, PCI bus & any system with RS-232 interface

An advance WDT system can be used in ISA bus, PCI bus or any bus with 4-holes mounting. Refer to Sec. 1.3 of "WDT-03 User's Manual" for more information.

4. Cost Effective Solution

The WDT-03 is the most cost-effective solution of available products in the world. Call the local dealer for price information.

