

WDT2USB - Watchdog with USB interface

A watchdog WDT2USB is an electronic equipment that is used to detect and recover from computer malfunctions. During normal operation, the computer regularly restarts the WDT2USB prevent it from elapsing, or "timing out". If, due to a hardware fault or program error, the computer fails to restart the watchdog, the internal timer from a WDT2USB will elapse and generate a timeout signal. The timeout signal is used to initiate corrective action or actions.

The corrective actions include placing the computer system in a safe state and restoring normal system operation.

A restoring normal system operating:

- a) reset
 - WDT2USB connection with the RESET button
- b) power down (sleep) and reclosing (Reboot Operating System)
 - WDT2USB connection with the PWR-BTN (Power Button)

Peripheral WDT2USB Features:

- USB interface (virtual port: 4800bps, Parity No, 8bits)

Special WDT2USB Features:

- USB interface - sophisticated chip FT232RL
- Wide operating voltage range (3 - 6V)
- Low power (Operating 0.4mA, Sleep <5nA)
- Power saving Sleep mode
- Precision internal oscillator
- High-Endurance Flash cell (50 year data retention)
- Internal Rechargeable battery (charging from USB)



Drivers for operating systems:

Before connecting WDT2USB to your computer, download the driver for your system.

- Windows7 / Vista: <http://www.selfcontrol.cz/win7driver.zip>
- Windows XP: <http://www.selfcontrol.cz/R11806.zip>
- Windows98: <http://www.selfcontrol.cz/R10906.zip>

Updated drivers:

<http://www.ftdichip.com/Drivers/VCP.htm>.

INSTRUCTION SET SUMMARY

Each WDT2USB instruction is a ASCII string divided into an specify the operation of the instruction and one operand which further specify the operation of the instruction.

Description

The Watchdog Timer is a free running oscillator. During normal operation, a WDT time out generates a puls Reset. The WDT has a nominal time-out period X seconds.

The wdtXXXXs instructions clear the WDT and prevent it from timing out and generating a signal Reset.

- **wdtXXXXs ...** Set Watchdog Timer Time out Period (seconds)

wdtXXXXs instruction presets the Watchdog Timer on a XXXX value (range from 1 to 9999).
Instruction should be sent more frequently than the value of X.

Example: **wdt60s ...** set WDT timer on a 60 seconds (1 minute)

- **wdtporYYYYs ...** Set Watchdog Timer – first Time out Period (seconds)

wdtporYYYYs instruction presets the Watchdog Timer on a first POR YYYY value.
Recommended value YYYY: 300 to 9999 seconds.

Example: **wdtpor900s ...** set WDT timer on a 15 minutes after restart (Power On Reset).
Sufficient time to reboot the operating system (Windows / Linux, BSD, ...). Default (wdtpor900s). The parameter is stored in Flash memory.

- **wdtlevelXXXXms** ... reset pulse width (milliseconds). The parameter is stored in Flash memory. XXXX must be in the range of 100 to 9900 ms.

Example: **wdtlevel500ms** ... reset pulse 500ms.

- **wbreaks** ... time stop Timing out (wdtXXXXs ... start Timing out from a new value XXXX).

Appendix:

Active Power- ON

- Turn off the computer and connect the USB connector to the computer.
- Multi- connector plug instead of the power-on button to the mainboard.
- Up to 20 seconds watchdog computer turns on

No function POWER –ON

- Turn off the computer and connect the USB connector to the computer.
- Multi- connector plug instead of the reset button to the mainboard.
- Turn on your computer manually.

NOTE: The red LED lights up when the power supply is present on the USB connector, the yellow LED flashes all the time while your computer running. Furthermore, the yellow LED lights up briefly after receipt of the order wdtXXXXs . In other aficionados instructions blinks twice.

For LINUX : SW control - echo wdt120s > / dev/ttyS0

Or use a ready-made script from our site. This script must be saved to a batch that is executed immediately after boot time (eg / etc / rc.d / rc.sysinit) . Next, set 4800bps and turn off handshaking (**crtsets**) on the serial port, you can also command **stty - crtsets -F/dev/sttyX**

<http://www.selfcontrol.cz/wdt2usb.htm>