

# Watchdog Timer for ACTi Cameras

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## Introduction

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**Watchdog timer – the perfect technological solution that makes your camera work all year round without failures of service!**

A **camera watchdog timer (WDT)**, similarly to a PC watchdog timer, is a camera hardware timing device that triggers a system reset if the main program, due to some fault condition, such as a hang, neglects to regularly service the watchdog. The intention is to bring the system back from the hung state into normal operation.

In addition to its main objective, which is to recover failed service, its secondary task is to collect valuable information about the causes of failure. Such information is very helpful for further troubleshooting and debugging.

## How Does Watchdog Timer Work

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A watchdog timer is based on a counter on camera's circuit board that counts down from some initial value to zero. The embedded firmware selects the counter's initial value and periodically restarts it. If the counter ever reaches zero before the software restarts it, the camera is presumed to be malfunctioning and the system reset signal is asserted. The camera will be restarted as if a human operator had cycled the power.

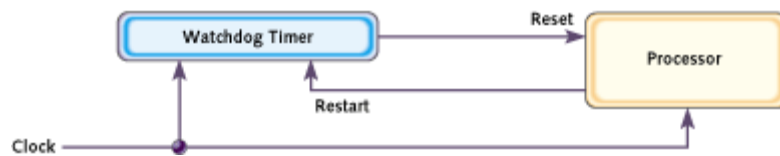


Figure 1 The basic scheme of Watchdog Timer

## The Benefits of Watchdog Timer

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- Cameras will be running smoothly in systems which are not frequently monitored by people.
- Cameras will running smoothly in systems that are physically difficult to be accessed for hard reboot.
- With the support of Watchdog Timer, the camera recovers from failures much faster than with the help of human assistance.
- Watchdog will create log file of anomalies of services for further debugging.
- Most importantly, **WDT increases the reliability of important camera systems where a failure is not an option.**

## ACTi Watchdog Timer Implementation

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ACTi Watchdog Timer can be controlled by camera firmware though Web Configurator. By default, the WDT is set “off” in order to avoid unexpected behavior of camera during installation process. The WDT service can be turned on via Web Configurator.

Please note that WDT cannot fully solve the problem of serious malfunction of the camera that causes repeated and endless errors. It is designed to handle rarely happening and unexpected failures. If the camera has a serious malfunction with repeating errors, the camera should undergo troubleshooting.