**What's a watchdog? What is the purpose of a watchdog?**

[Abstract] What's the point of a watchdog? What's a watchdog? The watchdog in question here is not our common animal dog, but an electronic product that has the role of an animal dog, in a way, aka watchdog timer.

What's a watchdog for? What's a watchdog? The watchdog here is not our common animal dog, but an electronic product, in a way, there is the role of animal dogs, also known as watchdog timer, essentially is a timer circuit, generally has an input and an output, where the input is called feed dog, the output is generally connected to another part of the reset terminal, another part is to be The processing part, let's call it MCU for now.

 When the MCU is working normally, it outputs a signal to the dog feeder every once in a while to clear the watchdog circuit, and if the dog is not fed for more than the specified time, the WDT timing timeout will return a reset signal to reach the MCU, which will reset the MCU and prevent it from crashing. Overall, the watchdog circuit works to prevent the program from having a dead loop, or program runaway.

 The basic working principle of WDT is as follows: after the whole system runs, the watchdog counter is started, and the watchdog starts to time itself automatically, if it doesn't clear to zero after a certain time, the watchdog counter will overflow and cause the watchdog to interrupt, causing the system reset. The hardware watchdog is using a timing circuit to monitor the operation of the main program. During the running of the main program, we have to reset the timer before the timer time arrives.

 What is the use of a watchdog? As I'm sure you've learned from the above, the watchdog is actually used to prevent the program from running indefinitely and causing a dead loop. It can be used in the processing of receiving and sending data timeout, to protect data and protect the circuit.

The watchdog function has been widely used in our fiber optic switches, POE switches, routers and other products.

For more special function, pls visit our website：http://www.htopto.com