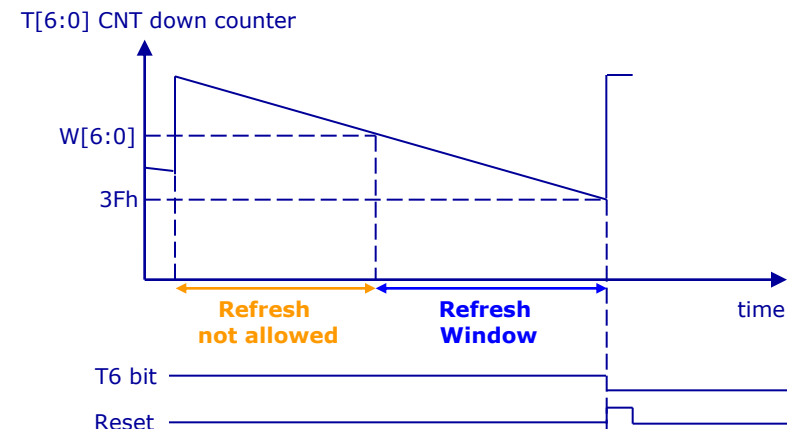
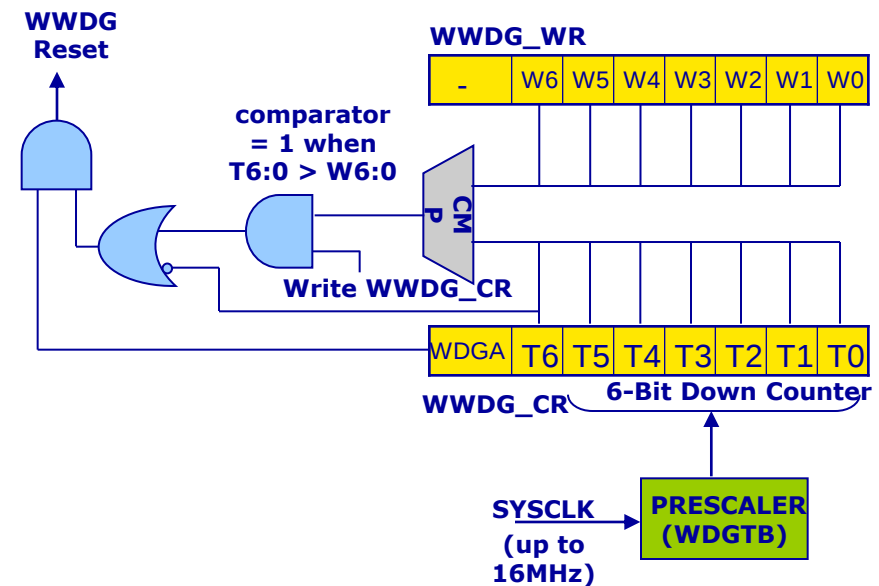
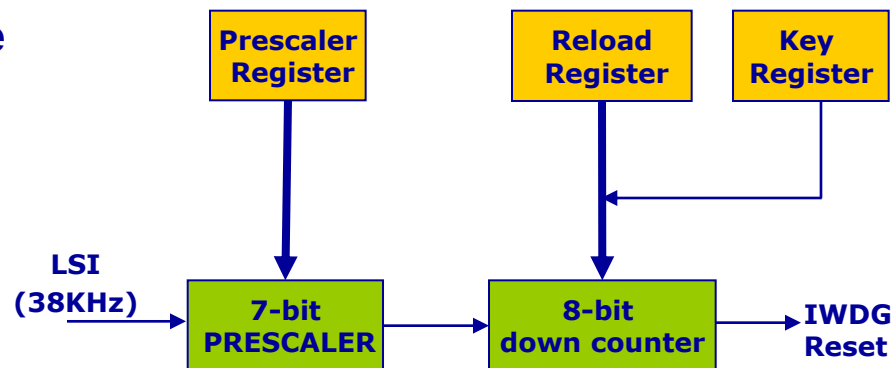


Watchdog's

- Window Watchdog can be activated by Hardware (Option byte) or Software (setting WDGA bit in CR register)
- Configurable time-window, can be programmed to detect abnormally early or late application behavior
- Conditional reset
 - Reset when the down counter value becomes less than 40h (T6=0)
 - Reset if the down counter is reloaded outside the time-window
- To prevent WWDG reset: write T[6:0] bits at regular intervals while the counter value is lower than the time-window value (W[6:0])
- WWDG reset flag (in RST_SR) to inform when a WWDG reset occurs
- Min-max timeout value @16MHz : 0.77ms/49.15ms by step of ~0.768ms



- Selectable HW/SW start through option byte
- Advanced security features:
 - IWDG clocked by its own dedicated low-speed clock (LSI) and thus stays active even if the main clock fails
 - Once enabled the IWDG can't be disabled (LSI can't be disabled too)
 - Safe Reload Sequence (by key)
 - IWDG is operational in all low power modes (it's enabled in Halt through option byte)
- To prevent IWDG reset: write IWDG_KR with AAh key value at regular intervals before the counter reaches 0
- IWDG reset flag (in RST_SR) to inform when an IWDG reset occurs
- Min-max timeout value @LSI 38KHz: 0.1ms / 1.73s



Best suited to applications which require the watchdog to run as a totally independent process outside the main application

CONFIDENTIALITY OBLIGATIONS:

THIS DOCUMENT CONTAINS SENSITIVE INFORMATION.

IT IS CLASSIFIED "MICROCONTROLLERS, MEMORIES & SECURE MCUs (MMS) RESTRICTED AND ITS DISTRIBUTION IS SUBMITTED TO ST/MMS AUTHORIZATION

AT ALL TIMES YOU SHOULD COMPLY WITH THE FOLLOWING SECURITY RULES:

- DO NOT COPY OR REPRODUCE ALL OR PART OF THIS DOCUMENT
- KEEP THIS DOCUMENT LOCKED AWAY
- FURTHER COPIES CAN BE PROVIDED ON A "NEED TO KNOW BASIS", PLEASE CONTACT YOUR LOCAL ST SALES OFFICE OR DOCUMENT WRITTER.

Information furnished is believed to be accurate and reliable. However, STMicroelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of STMicroelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is registered trademark of STMicroelectronics
All other names are the property of their respective owners

© 2015 STMicroelectronics - All Rights Reserved

STMicroelectronics group of companies Australia - Brazil - Canada - China - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States.

www.st.com