SSD202D
WDT Module Description

1. MODULE DESCRIPTION

1.1. Overview

The Watchdog Timer module is implemented to reset the entire system. When CPU gets stuck in some situation, it can help restart the system.

1.2. Function Description

The Timer has the following features:

- Contains a 32-bit counter
- The length of the WDT reset is adjustable
- Supports interrupt

1.3. Operating Flow

1. WDT ON/OFF/Re-start:
   - ON:
     WDT is enabled unless max register is equal to zero.
     Note that WDT is turned on and counts up from zero initially.
   - OFF:
     WDT is disabled when max register is equal to zero.
   - Re-start:
     WDT is re-started from zero after clear register is set.
2. WDT period:
   - Set max register for the length of WDT period.
3. WDT interrupt:
   - Enable interrupt register, if needed.
   - Interrupt is asserted when "WDT counter [31:16]" is equal to int register and "WDT counter[15:0]" is equal to 0x0000.
4. WDT Reset:
   - Set rst length register to adjust the length of the signal "WDT reset."
5. WDT Flag:
   - Read rst flag register to see if WDT reset ever occurred.

2. REGISTER DESCRIPTION

2.1. WDT Register (Bank = 30)

WDT Register (Bank = 30)				
Index (Absolute)	Mnemonic	Bit	Description	
00h (3000h)	REG3000	7:0	Default : 0x00	Access : WO
	-	7:1	Reserved.	
	WDT_CLR	0	Write '1' to re-start WDT.	
02h (3004h)	REG3004	7:0	Default : 0x00	Access : R/W
	-	7:1	Reserved.	
	WDT_RST_FLAG	0	Assert: WDT reset has occurred. Write "1" to clear.	
02h (3005h)	REG3005	7:0	Default : 0x09	Access : R/W
	WDT_RST_LEN[7:0]	7:0	Length of WDT reset. 0: One xtal clock. 1: Two xtal clocks 2.....	
03h (3006h)	REG3006	7:0	Default : 0xFF	Access : R/W
	WDT_INT[7:0]	7:0	WDT interrupt period; Interrupt asserts when "WDT counter [31:16]" is equal to WDT_INT and "WDT counter[15:0]" is equal to 0x0000.	
03h (3007h)	REG3007	7:0	Default : 0xFF	Access : R/W
	WDT_INT[15:8]	7:0	See description of '3006h'.	
04h (3008h)	REG3008	7:0	Default : 0xFF	Access : R/W
	WDT_MAX[7:0]	7:0	WDT period maximum value. WDT enable if WDT_MAX is not equal to 0x00000000.	
04h (3009h)	REG3009	7:0	Default : 0xFF	Access : R/W
	WDT_MAX[15:8]	7:0	See description of '3008h'.	
05h (300Ah)	REG300A	7:0	Default : 0xFF	Access : R/W
	WDT_MAX[23:16]	7:0	See description of '3008h'.	
05h (300Bh)	REG300B	7:0	Default : 0xFF	Access : R/W
	WDT_MAX[31:24]	7:0	See description of '3008h'.	