Power Management

Outline

Sleep mode by turning off the system clock and a clock module, so as to reduce system power consumption. LGT8FX8P Provides a very flexible controller module and a sleep mode, the user can use to achieve the best low-power configuration.

LGT8FX8P Upon entering the sleep mode, and does not automatically close analog functional modules, such as ADC , DAC ,Comparators (AC) , A low voltage reset module (LVD) And so on, depending on the application software to be required, before entering into sleep off unneeded analog functions, and to restore the correct state after a system wake-up.

LGT8FX8P It supports multiple sleep modes, including ADC A noise eliminating mode for eliminating ADC Part of the digital conversion process ADC Supply disturbances. In addition, other power control modes are divided into five categories:

Sleep Mode	Function Description
Idle mode (IDLE)	Just close core clock, other peripheral modules work properly, all valid interrupt sources can be the kernel to wake up
Power-saving mode (Save)	versus DPS0 The same pattern, Save Mode and LGT8FX8D Compatibility
Power-down mode (DPS0)	versus Save The same model to support wakeup sources include: • All pin change • Watchdog Timer wake • Asynchronous mode TMR2 wake
Power-down mode (DPS1)	Close all the external oscillator, Supports wakeup sources include: • All external pin level change • External Interrupt 0/1 • Work on 32K LFRC Watchdog Timer
Power-down mode (DPS2)	Closed core power, Lowest power mode wakeup options supported include: • External reset • PORTD Pin Change • LPRC Timed wake-up (128ms / 256ms / 512ms / 1s) It should be noted, from DPS2 Wake-up process with the same power-on reset

LGT8FX8P Support Deep Sleep DPS2 In this mode, the internal LDO Is powered down, the kernel registers, and all peripheral controllers SRAM Etc. is powered down, Where the data will not be maintained. FLASH The storage unit will be in a powered down state, DPS2 System to achieve minimum power consumption mode. Power-down mode via port D (PORTD)

Pin change wake-up, you can choose 5 Level timing wake. For wake DPS2 Timers because it does not support the calibration accuracy 15% So, only suitable for the timed wake-up low accuracy applications.

System from DPS2 Wake-up, Will first open LDO This is the same process and power-on process. Perform a full chip power-on reset startup, loading configuration information, and the address of the reset vector from the program.

except DPS2 Than the other modes, the internal power supply will not, in the sleep process, all registers and information RAM Data will not be lost. After the wake, the kernel continues from the last instruction before sleep.