

Functional Overview

- **High performance and low power consumption 8 Place LGT8XM Kernel**
- **advanced RISC Architecture**
 - 131 Instruction, 80% More than a single cycle execution
 - 32x8 General purpose working registers
 - 32MHz Up work 32MIPS Efficiency in the implementation
 - Internal single-cycle multiplier (8x8)
- **Non-volatile program and data memory space**
 - 32Kbytes On-chip online programming **FLASH** Program Memory
 - 2Kbytes Internal data **SRAM**
 - Programmable E2PROM Analog interface, support byte access new program encryption algorithms to ensure user safety codes
- **Peripheral Controller**
 - Two independent prescaler 8 Bit timer, output compare mode support
 - Two independent prescaler 16 Bit timers, support for input capture and output compare
 - internal 32KHz Can be calibrated RC Oscillator real-time counter function
 - Supports up to 9 road PWM Output, three complementary set of programmable dead-band control
 - 12 aisle 12 Bit high-speed ADC (ADC)**
 - Optional internal, external reference voltage
 - Programmable Gain (X1 / 8/16/32) Differential amplifier input channels
 - Automatic threshold voltage monitoring mode
 - Two analog comparators (**AC**) And support from ADC Extended input channels
 - internal 1.024V / 2.048V / 4.096V \pm 1% May be calibrated reference voltage source
 - One 8 Bit programmable **DAC** , It may be used to generate a reference voltage
 - source programmable watchdog timer (**WDT**) Programmable synchronous / asynchronous serial interface (**USART / SPI**) Synchronous Peripheral Interface (**SPI**), Programmable master / slave mode of two-wire serial interface (**I2C**), compatible
 - I2C** Master-slave mode
 - 16 Digit arithmetic acceleration unit (**DSC**) , Direct support 16 Bit data access access
- **Special Function Processor**
 - SWD** Double-chip debug / production interrupt source and an external interface I / O Change interrupt
 - support the built-in power-on reset circuit (**POR**) And programmable low voltage detection circuit (**LVD**)
 - Built-in 1% Can be calibrated 32MHz RC Oscillator frequency output Built-in support 1% Can be calibrated 32KHz RC Oscillator external support 32.768KHz as well as 400K ~ 32MHz Crystal Input
 - 6x High current push-pull drive IO Support high-speed PWM application



8-bit LGT8XM

RISC Microcontroller with
In-System Programmable FLASH
Memory

LGT8F88P

LGT8F168P

LGT8F328P

Data book
Version 1.0.4

Applications

Motor-driven

automation and

control home appliances

- **I / O And Packaging:** QFP48 / 32L, SSOP20L
- **Low power consumption:** 1uA@3.3V
- **working environment**
 - Operating Voltage: 1.8V ~ 5.5V
 - working frequency: 0 ~ 32MHz
 - Operating temperature: - 40C ~ + 85C HBM
 - ESD: > 4KV