

# SLG7SQ

GreenPAK™ Power Sequencer Standard Designs

## Description

[SLG7SQ](#) is a collection of the Renesas GreenPAK Power Sequencer standard designs. Each SLG7SQ design is a pre-configured, ready-to-use GreenPAK power-sequencing solution built on proven GreenPAK mixed-signal ICs - combining programmable logic, timers/counters, analog comparators, and GPIOs for sequencing and monitoring multiple power rails with fast, hardware-based fault response.

These standard designs span compact 1-channel sequencers up to advanced multi-rail solutions with I<sup>2</sup>C runtime configuration, Power-Good monitoring, and non-volatile fault logging - covering a wide range of CPU, GPU, FPGA, memory, and battery-powered system applications.

Every SLG7SQ standard design can be further customized to meet specific customer requirements - including channel count, timing, voltage thresholds, and fault-handling behavior - without the cost or lead time of a full custom IC.

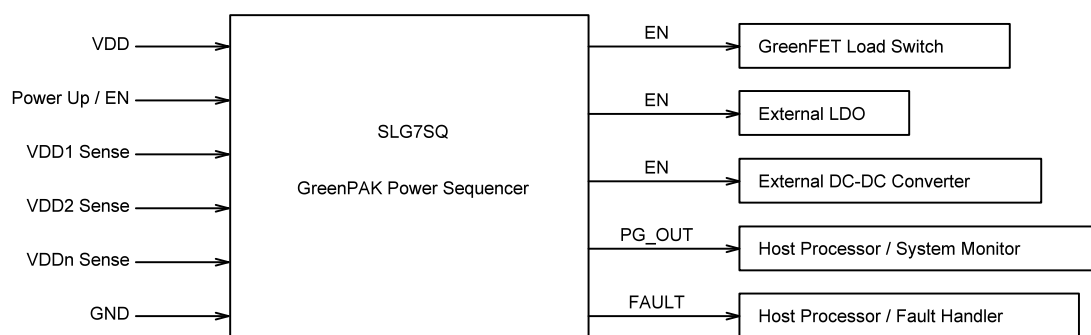
Full datasheets for individual standard designs are available upon request. Contact [greenpak@renesas.com](mailto:greenpak@renesas.com).

## Features

- Pre-configured, ready-to-use GreenPAK power-sequencing designs
- Output channels from 1 up to 10+ rails, cascadable for larger systems
- Fixed-delay, Power-Good, voltage-monitoring, and I<sup>2</sup>C-acknowledge sequencing methods
- Integrated analog comparators for undervoltage/overvoltage fault detection
- Nanosecond-scale asynchronous fault response - no firmware required
- Non-volatile fault logging for simplified system debugging
- I<sup>2</sup>C runtime configuration on select devices for field-adjustable timing and thresholds
- Ultra-low standby power and compact package options
- Fully customizable to exact customer sequencing requirements

## Applications

- CPU, GPU, AI accelerator, FPGA, and ASIC power sequencing
- DDR4/DDR5 memory rail sequencing
- Battery-powered and portable/wearable systems
- Server and industrial power management
- Multi-rail Power-Good monitor and fault protection circuits



**Figure 1. SLG7SQ Power Sequencer – Typical Application Block Diagram**

The complete, up-to-date list of available standard designs is published in the Product Options section of the SLG7SQ product page. Each design is ready for evaluation and can be further customized to meet specific customer requirements. Individual datasheets are available on request via [greenpak@renesas.com](mailto:greenpak@renesas.com).